

FORM TWO

**HISTORY AND
GOVERNMENT**

TEACHER'S NOTES.

CHAPTER 1

TRADE

What is trade?

- ❖ It is exchange of goods for mutual benefit.
- ❖ It is a universal human activity that involves buying and selling.

Trade has existed in various forms since time in memorial. Long before community exchange became trade, goods were exchanged between communities of various environments such as:

- Between Mountain and Valley dwellers.
- Between Desert and Forest dwellers.
- Between Hunter-Gatherer communities and their more advanced neighbours.
- African communities were united through production and exchange of commodities like food and non-edibles like iron tools. As mankind and their needs became more advanced, trade goods changed. E.G. settled life led to trade in clothing.

Identify two methods of trade.

Basically, there are two methods of trade. These are:

- Barter trade
- Currency trade.

BARTER TRADE

What is Barter trade?

Barter trade is exchange of goods and services at local or international level. It is the oldest method of trade in human civilization.

Identify ancient instances of Barter trade.

- The forest pigmies in Africa exchanged forest products such as game-meat with agricultural produce from the communities at the edge of the forest.
- The Berbers from North Africa exchanged cloth, horses, salt, copper, glassware, beads, dried fruits, fire-arms and daggers for gold, slaves, ivory, kola nuts, animal skins and ostrich feathers from the people of western Sudan.
- The Akamba exchanged ivory and leopard-skins for cloth, brass-wire, copper-wire, cowries-shells and beads from the coastal Arabs.

Identify modern instances of Barter trade.

(Explain more recent instances when Barter trade was used).

More recently, Barter trade has been used in such instances as:

- When Nigeria exchanged petroleum for Brazilian tyres, steel, sugar and other goods in 1985.
- When Uganda got petroleum from Libya in exchange for coffee, hides and skins.
- When Cuba traded her sugar for oil from Venezuela.
- The Food-For-Work policy in Kenya and other countries, where labour is exchanged for food.
- The Oil-For-Food program between 1991-2003 when due to international economic sanctions against Iraq, Iraq exchanged her oil for food from the international community.

- The foods terms under the social Welfare programs in the Western countries.

What are the advantages of Barter trade?

- It is effective in meeting essential needs in the absence of other methods of trade.
- It suits in meeting the demands of people whose economy is at a subsistence level E.G. hunter-Gatherers.
- It is handy in communities where illiteracy is high and interpretation of currency in relation to a trade item is difficult.

Explain the limitations of Barter trade.

- Some trade items were bulky to transport as others such as fresh food were perishable.
- It was at times difficult to determine the value of trade goods.
- There was the problem of Double Coincidence of wants. For instance, to meet one with millet who needs a goat and one with a goat who needs millet might not always be easy.
- Some goods were not easily divisible into small quantities. For example, dividing a cow into small quantities for sale was impossible.

CURRENCY TRADE

What is Currency trade?

(Define Currency trade.)

Currency trade is the use of money to purchase commodities or to pay for services. It is a means of measuring value for goods and services.

Identify two types of Currency.

- Paper money (notes), which is divided into various denominations.
- Coins, into which precious metals were minted.

State the advantages of using Currency system of trade.

(What are the advantages of using Currency as a medium of exchange?)

- It is durable (can be kept for a long time).
- It can be accumulated for future use.
- It has intrinsic value (it is a store of value or wealth) as it is generally made from precious and rare metals.
- It is flexible in use and value (it is not bulky), which makes it convenient for exchange.
- It is easily divisible into smaller units.
- It represents an exact value for goods and services. E.G. one pair of shoes would cost 100sh and another 500sh.
- It is of different types, mainly paper money and coins, into which precious metals were minted.

Name four metals from which coins were and still are minted.

- ❖ Gold,
- ❖ Silver,
- ❖ Copper,
- ❖ Bronze.

Identify four major World currencies.

Major World currencies include:

- The US Dollar,
- The British Pound,
- The Euro,

- The Japanese Yen.

Identify other ways in which business could be transacted today apart from using Currency.

Apart from using currency, business today can be transacted through:

- Treasury bills,
- Bonds,
- Money orders,
- Cheques,
- Credit-cards,
- Electronic money transfer e.g. M-Pesa.

Describe three types of trade.

- ✓ There are three types of trade. These are Local, regional and International trade.

LOCAL TRADE

What is Local Trade?

- ✓ Local Trade is exchange of goods at the Village level, depending on people's needs. For example, in some villages, blacksmiths exchanged their implements for items they did not have. E.G. the Banyore and Maragoli in Western Kenya exchanged baskets and pots.

Briefly explain the origin and development of Local trade in pre-colonial Kenya.

(Explain the factors that contributed to the start of local trade.)

The following factors contributed to the start of local trade.

- Climatic and environmental conditions, which are not uniform and therefore affect distribution of resources, which are obtained through trade.
- Uneven distribution of natural resources, some of which are found in a few places but are required by every society E.G. Salt.
- Specialization, whereby some skills such as ironworking, basketry, pottery, cloth making, hunting, Agriculture and pastoralism were the preserve of a few.
- Local merchants, who financed the trade by investing their gains and more of their wealth in it, facilitating continuous supply and demand for goods.
- Surplus production, whereby people exchanged the excess of what they had for what they needed from other communities.
- Peaceful co-existence of neighbouring communities, which attracted more participants, with diverse goods and services.
- Regional and international trade, which widened and popularized it.

Explain how Local Trade was conducted.

(How was Local Trade organized)?

- It was conducted along a common Clan or Tribal border on a regular (weekly or fortnightly) basis.
- Trade-routes were established and became important as they facilitated movement of traders.
- Development of import and export goods to and from regional and international borders strengthened the trade.
- Barter system of exchange was used, though it was later replaced by the Currency system.

Explain the impact of Local trade.

(What were the results of Local Trade on the people involved?)

- Peaceful co-existence among the communities involved.
- Cultural exchange.

- Intermarriage among the communities involved.
- Urbanization I.E. emergence and growth of towns and cities.
- Availability of goods.
- Establishment of early industries, mainly in ironworking and basketry.
- Emergence of chiefdoms from taxation of traders.
- Development of regional and international trade.

Regional Trade

What is Regional Trade?

Regional trade is export and import of goods between two or more regions of a continent. It was mainly conducted by middlemen on behalf of the producers and investors. Unlike local Trade, regional trade did not have set timetables. Its good example is Trans-Saharan trade.

TRANS-SAHARAN TRADE

What was Trans-Saharan Trade?

Trans-Saharan trade was carried out between north and West Africa across the Sahara desert, which explains why it was called Trans-Saharan trade.

Identify the factors that led to origin and development of Trans-Saharan Trade.

- Capital provided by wealthy merchants.
- Local trade, which provided basis for regional trade.
- The Tuaregs, who provided security to the traders and maintained the oases,
- Use of horses and camels in transporting trade-goods.
- Development of trade-routes across the desert which eased movement of traders.
- Control of trade and protection of traders by kings such as mansa Musa.
- Demand for and availability of goods.

What role did the Tuaregs play in Trans-Saharan Trade?

(Explain the role played by the Tuaregs in Trans-Saharan Trade).

- They served as guides and guards to the caravans.
- They maintained the desert oases
- They assisted traders in getting food-stuffs.
- They served as interpreters.
- They helped in maintaining good relationship between the traders and the local communities.
- They occasionally served as middlemen in the trade.

How was Trans-Saharan Trade conducted?

(Describe the organization of Trans-Saharan Trade).

- Traders moved in large caravans for security purposes.
- Wealthy merchants from the north provided trade-goods, camels and horses.
- The Tuaregs and Berbers guided the traders and protected desert oases where camels and horses were watered. Tuaregs served as interpreters and assisted traders in getting food.
- Caravans left the north after the rains and sand-storms had subsided. They had agents, who sold goods on their behalf.
- A number of trade-routes developed between north and West Africa.
- Barter system was used as the traders lacked a common language and currency.

Name the Kingdoms that thrived due to Trans-Saharan Trade.

There existed strong kingdoms in the region within which trade was conducted such as:

- Ghana,
- Mali,
- Songhai.

The rulers of these kingdoms ensured protection to but taxed the traders who passed through their territories.

Into what two major divisions are trans-Saharan trade routes categorized?

(Name two types of trans-Saharan trade routes.)

Trans-Saharan trade-routes were divided into:

- Primary trade-routes,
- Secondary trade-routes.

Describe/Identify the Primary Trans-Saharan trade-routes.

Primary Trans-Saharan trade-routes included:

- The western Route, which linked Morocco with Senegal and the Upper Niger region.
- The Central Route, which ran from Tunisia through Ghadames, Chad and Agades in the desert to Hausa land.
- The eastern route, which started from Tripoli and went through Fezzan, Murzuk and Bilma and ended at Njimi in Karema Bornu.

Describe/name the Secondary Trans-Saharan trade-routes.

Among the Secondary trans-Saharan trade-routes were:

- That which started from Sigilmasa in Morocco and went to Agades through Taut and Gao and ended up in Timbuktu.
- That which went from Walata to Takeda, passing through Timbuktu and Ghao.
- That which ran from Cairo and joined the Eastern route in Murzuk.

Identify Trans-Saharan Trade goods.

- Goods from north Africa included salt, horses, glassware, beads, mirrors, needles, perfumes, spices, dried fruits, fire arms, daggers and cowrie shells.
- Goods from west Africa (western Sudan) included gold, slaves, kola-nuts, feathers, hides and skins, ivory, gum, dyed clothes and pepper.

Explain the impact of Trans-Saharan trade.

- Emergence of towns like Timbuktu, Taghaza, Kumbi Saleh, Gao and Kano.
- Rise of a class of wealthy merchants.
- Stimulation of gold and iron technology. Iron tools and weapons improved agriculture and increased warfare.
- Growth of empires such as Ghana, Mali and Songhai, whose kings collected taxes from traders and acquired fire arms through trade.
- Increased food production due to use of better tools.
- Population increase.
- Spread of Islam, Islamic and Arabic culture and Islamic law (Sharia).
- Introduction of Arabic architectural design.
- Introduction of camels and horses, which boosted transport.
- Introduction of schools and libraries E.G. the university of Timbuktu.
- Increased warfare due to slave raids.
- Development of militarily powerful states due to acquisition of horses and fire arms.
- Destruction of wildlife, especially elephants due to demand for ivory.
- killing, misery, insecurity and depopulation due to slave trade.

What problems did trans-Saharan Traders experience?

(Explain the problems encountered by trans-Saharan traders).

- Long journeys that took three months across the desert.
- Many lost their way and died in the desert.
- Sand-storms.
- Attacks by hostile desert communities.
- Scarcity of water and goods.
- Attacks from wild animals.
- Language barrier.
- Harsh temperatures and adverse weather conditions, leading to sickness.

Identify the factors that led to decline of Trans-Saharan trade.

The following factors led to the collapse of Trans-Saharan trade:

- Problems in north Africa.
- Competition from Trans-Atlantic trade.
- Exhaustion of trade goods.
- Insecurity and political instability in north and west Africa.

INTERNATIONAL TRADE

What is International Trade?

- International trade is trade that is not restricted to any geographical region.
- It is trade that involves traveling overseas, as was with Trans-Atlantic and Indian ocean trade.

TRANS-ATLANTIC TRADE

What was the Triangular Trade? (What was Trans-Atlantic Trade?)

It was trade that involved traveling overseas across the Atlantic ocean. It was also called The Triangular trade, for it involved Europe, Africa and the Americas. It was referred to as Trans-Atlantic Trade because ships from Europe to Africa and from Africa to the Americas crossed the Atlantic ocean.

Identify the factors that influenced origin and development of Trans-Atlantic Trade.

The origin and development of Trans-Atlantic trade was influenced by the following factors:

- Portuguese and Spanish exploration activities.
- Trade-links between west Africa and European nations.
- Discovery and colonization of the Americas in the 16th century.
- The beginning of mining and Plantation agriculture in Europe, which created an urgent need for cheap labor, which was obtained by provision of African slaves.
- Availability of trade goods.
- Introduction of fire arms in west Africa, which eased wars of conquest and raids and capture of slaves.
- Wealthy merchants, who invested their capital in the trade.
- Increased demand for raw materials by European industries.
- Ship-building at Bristol, Liverpool and other ports
- The 1510 Hispaniola incident, in which slaves were successfully ferried to Hispaniola, which paved way for direct shipping of slaves from Africa to the Americas.

Give two reasons why African slaves were most preferred.

- They were easy to get.
- Their complexion (skin color) prevented them from escaping.

Name five European countries that were major Trans-Atlantic trade participants.

- Portugal,
- Spain,
- Holland,
- Britain,
- France.

Identify Trans-Atlantic Trade goods.

- ✓ Africa exported gold, ivory, palm oil, pepper, gum, hides, bees-wax, and rice, ginger and, most important of all, slaves.
- ✓ European goods included cloth, ironware, copperware, glassware, fire arms and leaquer.
- ✓ From the Americas and Caribbean, sugar, tobacco and cotton were got.

Explain how Trans-Atlantic trade was conducted.

(Describe the organization of Trans-Atlantic Trade).

- From Africa, slaves were shipped to plantations in the Caribbean and the Americas.
- Raw materials from Africa, the Americas and the Caribbean were sent for processing in Europe.
- From the 16th century, slaves were the main commodity from the west African coasts
- Cheap manufactured goods were shipped from European ports such as Liverpool, Glasgow, Nantes, Bordeaux, Bristol and Amsterdam to middlemen on the west African coast.
- The middlemen held the merchandise in trust and used it to trade with slave-captors, who got slaves from the interior.
- Slaves and other trade items were transported to the west African coast, where they were given to middlemen in return for European manufactured goods.
- When European traders arrived in west Africa, agents of local rulers collected fees from them, entertained them and then gave them the slaves and other trade goods.

Explain how slaves were obtained from the West African interior.

(In what ways were slaves obtained during Trans-Atlantic Trade?)

- Prisoners of war were sold to slave dealers
- Children were enticed with sweets and were then captured and sold.
- Others were got through slave raids.
- Lone travelers were kidnapped.
- Criminals were sold by African leaders to slave dealers.
- People who were unable to pay their debts were sold as slaves in what was known as Panyarring.
- Weak citizens, particularly those of vassal states were sold as slaves.

Explain how slaves were transported from West Africa to the Americas.

- After their capture, slaves were transported to the west African coast by slave dealers, who gave them to middlemen in return for European manufactured goods.
- The middlemen sold the slaves to European traders, who moved the slaves to Barracoons, tents or forts, where they were branded before shipping. Lagos, Elmina, Accra and Dakar were major ports from which slaves departed. Slaves were mostly got from the coastal area of Benin, Nigeria and Angola.
- The slaves were chained together and tightly packed on ships, ready for a seven-week long voyage to the Americas. Many of them died of disease, starvation or cramped conditions. The dead were immediately thrown into the sea.

- On reaching the Caribbean or American coast the slaves were auctioned to plantation owners in return for industrial goods, with which the dealers returned to west Africa.

What were the results of Trans-Atlantic trade?

(Explain the consequences/impact of Trans-Atlantic trade.)

- Development of ports like Bristol and Liverpool.
- Emergence of a class of wealthy traders, who invested in plantations, which then facilitated the industrial revolution.
- Growth of Plantation economies in the Americas and the Caribbean.
- Settlement of Africans in the Americas, which led to emergence of Africans in the Diaspora.
- Establishment of the Pan African movement, which gave Africans a strong voice against colonial rule.

Discuss the impact of Trans-Atlantic trade on the people of West Africa.

Trans-Atlantic trade had the following impact on the people of west Africa:

- Massive depopulation as many were shipped out of the continent.
- Emergence of the Mulla population in Senegal due to intermingling between Africans and the Europeans.
- Growth of kingdoms such as Asante and Dahomey.
- Decline of African industries due to introduction of European manufactured goods.
- Africa was deprived of its labor force.
- Destruction of property due to slave raids.
- Emergence and development of port cities like Whydah, Lagos, Porto Novo and Elmina along the west African coast.
- Emergence of wealthy merchants and kings as was with Asante and Dahomey.
- Separation and displacement of families due to slave raids.
- Suffering, fear, misery, insecurity and killings.
- Enmity between communities due to slave raids.
- Change of roles in communities where women did the jobs of men, who had been sold into slavery.
- Abolition of slave trade
- Establishment of Sierra Leone and Liberia as centres for freed slaves.

Explain the factors that led to decline of Trans-Atlantic trade.

The following factors led to decline of Trans-Atlantic trade:

- Decline in demand for sugar after the French began producing cheaper sugar in 1775.
- The 1776 independence of the USA, which deprived Britain of profits from slave trade.
- The Industrial Revolution in Europe whereby machines replaced human labor.
- Antislavery movements set up by Christian missionaries and humanitarians in Britain in the 19th century.
- Influential economists, who successfully argued that men were more productive when free than when enslaved
- Victory of the northern states, which were against slave trade in the 1865 American Civil War, leading to abolition of slavery in the USA.
- Frequent slave revolts as was in Santa Domingo, Jamaica, Antigua, Haiti and British Guyana, where, in some cases, slaves killed their masters and set up republics.
- Condemnation of slave trade by leading African activists like king Nzinga Mbemba of Congo and Olaudah Equiano.

- European desire for raw materials and market for their goods, which would be provided if African populations remained intact.
- Public opinion in Britain, which condemned slave trade as evil.
- The 1789 French Revolution, which spread the ideas of liberty, Equality and Fraternity of all mankind, which made many people to question slavery and slave trade.
- Closure of the American slave market in 1865, which left slave dealers with nowhere to sell their slaves.
- The 1807 resolution by the British parliament to abolish slave trade.
- Signing of anti's lave trade treaties by Britain, which persuaded other European countries to stop slavery and slave trade.

Explain why the British championed the abolition of slave trade.

(Why were the British in favour of the abolition of slave trade?)

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CHAPTER 2

TRANSPORT & COMMUNICATION

What is Transport?

- Transport is movement of goods and people from one place to another over some distance.

What is Communication?

- Communication is the process by which information is passed from one point or person to another.

TRANSPORT

TRADITIONAL FORMS OF TRANSPORT

Identify/outline early forms of transport.

These were:

- Land transport I.E. human and animal transport.
- Water transport, which involved use of canoes, rafts and oar-driven boats.

ANIMAL TRANSPORT

Name any four Pack animals.

Animal transport involved Pack animals traditionally used by human beings such as the donkey, Ox, Horse, Mule, Camel, Dog, Llama, Alpaca, Elephant, Water-buffalo and Reindeer.

What are the advantages of animal transport?

- Animals can carry heavier weights than human beings.
- They can be used in inaccessible areas.
- They are cheap to maintain.
- They are safe as accidents are rare.
- They help maintain the ecological balance.
- Some animals are capable of sensing danger.

Identify the disadvantages of Animal Transport.

- Animal transport is slower and tedious.
- Pack animals could be attacked by wild animals.
- They cannot travel at night.
- They carry smaller loads than motor vehicles.
- Some like donkeys could be stubborn when tired as others like the Camel are only suitable for desert conditions.
- They are often attacked by disease-causing pests and parasites.
- They can only travel limited distances as they get fatigued.

Describe three wheelless vehicles.

Though crude, cumbersome and slow in movement, wheel less vehicles were another important step in the development of transport. They include:

- The sleigh (Sledge), which was commonly used in the snowy terrains of northern Europe and North America.
- The Travois, which was used in treeless and dry flat-terrained North America.
- The Sedan Chair, which was mainly used in European cities from the 17th century.

DEVELOPMENT OF THE WHEEL

Identify communities of early users of the wheel.

(Analyse the development of wheeled transport. Or: Explain how wheeled transport developed.)

- The wheel was invented by the Sumerians in 3000BC.
- It was also used in the Indus valley.
- It eventually reached/spread to Central Asia shortly before 2500BC.
- In 2000BC, the spoked wheel was invented. It matched the speed of the horse and was used in war-chariots by Indo-European communities like the Persians, Greeks and Romans against Egyptians and Middle Eastern civilizations. It was further improved by adding a rubber strip on its outer rim. Up to the 19th century, the spoked wheel was not superseded by any other.
- In Africa, use of the wheel was first introduced in Egypt in 1800BC when Egypt was invaded by the Hyksos from south-east Asia. Apart from Shadoofs in irrigation, the Egyptians used the wheel to make their own carts.
- By 1227BC, the Berbers in present day Libya were using wheeled transport. By 600BC, four-wheeled chariots had reached the area to the north of the Niger River.
- In Europe, the Greeks were the first to use the wheel, with which they made military chariots and wheeled carriages.
- Having learnt the use of the wheel from the Greeks, the Romans made two-wheeled carts for sports, postal services and warfare. They made the Carpentum, which was the first covered vehicle for carrying passengers. Initially, the vehicle body rested on the axle, which made the ride uncomfortable, especially on rough roads. Leather strips were first used for suspension. This was improved with introduction of spring suspensions in the 18th century.
- In the 18th century, John Hansom designed the hansom Cab to carry passengers over short distances in London and other towns. Stage Coaches were used for intercity transportation.

Explain the impact of wheeled transport.

(What were the results of development/invention of the wheel?)

Wheeled transport had the following impact:

- Man could travel longer distances on land.
- Man could carry more and heavier loads.
- Transport was now faster, particularly after the engine was invented.
- Migration increased, E.G. the 1194BC Egyptian Border migration.
- The wheel was used in pottery I.E. wet clay was fed onto a turning wheel as the potter shaped it to produce high-quality pots.
- It was used in Shadoofs: a pulley system, with which farms were irrigated.
- Wheels of various sizes are fitted into and used for proper functioning of electronic and other equipment such as video decks, clocks, tape-recorders, etc.

DEVELOPMENT OF THE BICYCLE

- The Bicycle was invented in 1790AD when De Divrac from France made the Walk along. Unlike earlier animal-driven vehicles, the bicycle was driven by the rider on its two wheels, which were placed one in front of the other on a framework rather than side by side on a single axle.

Identify any two types of Bicycle.

(Identify the processes and improvements that the Bicycle has undergone since its invention.

Or:

Name the engineers who contributed to the development of the Bicycle.)

Since its invention, the Bicycle has undergone various processes and improvements, resulting in its various kinds and models. Various engineers contributed to the development of the bicycle as follows:

- Baron Karl Drais from Germany invented a walk along named Draisine.
- Ernest Michaux from France invented the bicycle in 1860.
- Pierre Aliment from France invented the Boneshaker in 1866.
- Kirkpatrick Macmillan from Scotland made the first bicycle in Britain.
- J.K Stanley from England invented a chain-gearing that consisted of two sprocket-wheels linked by chain, which transferred power to the hind wheel.
- James Stanley invented the bicycle with spoked wheels in 1870.
- John b. Dunlop invented the pneumatic tyres, which replaced the uncomfortable iron and solid rubber ones.
- Later, the Free Wheel mechanism was invented, by which the hind wheel rotates even without pedaling.
- The Velocipede (Hobby Horse) was first used in 1820, the Penny farthing from around 1855 and the safety Bicycle, which was safer than previous models was developed in 1884.

THE MOTORCYCLE

The first motorized bicycle was made by Gottlieb Daimler from Germany in 1855. The framework was made stronger and wheels wider, with an engine and gearbox added to ease riding. Instead of pedaling, the rider used engine-power to move the motorbike. It was faster than a bicycle and cheaper than a motor vehicle and could access rough terrain. It carried only one passenger or a small load.

Water transport

- As people settled near water masses, they discovered that water offered an easier and more rapid means of transport by providing ready and natural roadways, unlike land-travel, which involved construction of roads and the circumvention of hills, mountains, swamps and other obstacles.
- The first use of water transport was just a log to which a man could cling, remain afloat and be transported. By then, man could only afford downstream travel.
- Around 400BC, oars were devised to provide propulsion and steering. This led to construction of artificial vessels out of logs, reeds and sewn or inflated animal skins.

Identify traditional (early) forms of water transport.

Early forms of water transport include:

- Rafts I.E. simple floating material such as logs, with a long pole used to propel or steer.

- Canoes, some of which were dug-out or made of tree-bark or wooden frames covered with animal skin.
- Oar-driven boats, which used oars for pushing in water.
- Sailing ships, which used the sail. Some sailing ships had oars for propulsion when there was no wind.

DEVELOPMENT IN MODERN MODES OF TRANSPORT

Identify/describe modern means of Transport.

Modern means of transport include:

- ❖ Bicycles,
- ❖ Motor vehicles,
- ❖ Motorcycles,
- ❖ Trains,
- ❖ Steamships,
- ❖ Motorboats,
- ❖ Ships,
- ❖ Passenger liners,
- ❖ Ferries,
- ❖ Freight vessels,
- ❖ Military vessels,
- ❖ Hydrofoils and Hovercraft,
- ❖ Aeroplanes,
- ❖ Helicopters,
- ❖ Hot-Air balloons.

Road transport

- Early man moved through tracks cleared by animals going to water-holes for a drink and those trodden by nomadic herdsman and their animals to new feeding grounds.
- Around 300BC, man began to build rough roads of stone, tree-trunks and other materials. Places with early road networks include China, Mesopotamia, Persia, Egypt and Europe.

ROMAN ROADS

The Romans were the first great road-builders. From about 312BC, the Roman Empire had a vast network of good roads built by roman soldiers and local gangs of forced labor, supervised by engineers. Bridges and tunnels were built across rivers and through hills.

What are the characteristics of Roman roads?

- They had foundations of up to one and a half kilometers deep.
- They were made with whatever local material was available such as heavy rocks, small stones, and rubble and stone blocks.
- They were raised high above the land on both sides to prevent flooding in wet weather.
- Deep trenches were dug on both sides for drainage of water, especially during rainy season.
- There were kerbstones on the road-sides to prevent the surface from sliding outwards.
- At regular intervals were milestones marked with the name of the Emperor during whose reign the road was built.
- After the fall of the Roman Empire in 407AD, no attention was paid to road construction or repair until the 18th and 19th century when modern road-building started in Britain.

Name the engineers who improved Road transport.

Road transport was improved by various engineers such as:

- ❖ George Wade,
- ❖ John Metcalfe,
- ❖ Thomas Telford
- ❖ John Macadam.

George Wade and John Metcalfe based their roads on Roman methods, which were very expensive.

- Thomas Telford built his roads on solid foundation, with big stones carefully laid and firmly packed at the bottom, followed by several layers of small broken stones. The surface was made of gravel. He built over 920 miles of well-cambered roads, with over 120 bridges.

MACADAM ROADS

Analyse the process of construction of Macadam (Tarmac) roads.

- John Macadam introduced the Flexible Road, whose construction was easier and faster than previous ones. On realizing that ordinary ground could still be used to make good roads if kept dry, Macadam removed only the top soil, leveled it with a layer of gravel and spread a thick layer of small chipped stones for the foundation, after which a second layer of gravel was added. The weight of the vehicles pressed the gravel together. Stones ground by the wheels formed a kind of cement which, when wetted, filled cracks and made the road strong. The surface was curved to allow the water to run off into ditches on the sides. The soil underneath remained dry, making the road durable. Later, tar was added to the mixture of fine stones. This was when the road became known as Tarmac (now Tarmac).
- By 1830, most of Britain's main roads were tarmac, with improved bridge construction. Macadam's method was accepted all over the world as one of the major forms of road construction.
- New Trunk-roads were built, followed by the Motorway, which was exclusively meant for vehicles and on which pedestrians, cyclists and learner-drivers were not allowed. The Motorway was completely fenced off except at the terminals and junctions where motorists entered or left the road.
- "Fly-over" bridges and "under-passes" carried the cross-roads while Cattle-creeper ran under the road linking the farmlands on either side of the Motorway.
- The world's first motorway was built in the USA in the 1930s. Germany built the Autobahn, Italy had the Autostrada, while Britain opened the M1 in 1959.

Identify the results of the development of road transport.

- ❖ Promotion of trade within countries.
- ❖ Advancement of industrialization due to efficiency in transportation of raw materials and goods.
- ❖ Emergence of urban centres.
- ❖ A lot of foreign exchange, particularly to world industrial powers due to manufacture and sale of motor vehicles.
- ❖ Creation of job opportunities.
- ❖ Development of the tourist industry.
- ❖ Road accidents, which claim many lives.

What are the advantages of Road transport?

- ❖ Reduced cost of movement of goods and people as it is the most common means of transport.
- ❖ It is cheaper compared to other forms of transport.
- ❖ It is faster than water and railway transport, except where electric trains are used
- ❖ Road can easily link with Rail, Air and Water transport.

Identify the limitations of Road transport.

- ❖ Road accidents, which lead to loss of life.
- ❖ Air pollution, particularly by motor vehicles.
- ❖ Traffic congestion on roads.
- ❖ Construction of all-weather roads is expensive.
- ❖ The use of roads is limited to specific areas.
- ❖ Roads cannot go beyond land.
- ❖ Some roads become impassable during rains as others are too dusty during dry seasons.
- ❖ Roads cannot be used for transporting very bulky goods.

THE MOTOR VEHICLE

Name the engineers who contributed to invention and development of the Motor Vehicle. (Outline the inventions that took place in the Motor industry.)

The motor vehicle was the work of many inventors over many years as follows:

- In 1769, Nicholas Joseph Cugnot from France built a three-wheeled steam-driven vehicle.
- In 1885, Gottlieb Daimler from Germany invented a high-speed petrol engine.
- In 1885, Karl Benz from Germany fitted Daimler's petrol engine to a Tricycle and made the first petrol-driven car.
- In 1891, a French company, which had bought the right to use Daimler's engine, produced its first car: the Panhard Levassor. The company regularly built cars, which it sold to the public, which gave rise to the motor industry.
- In 1903, Henry Ford from the USA began to manufacture motor vehicles en masse.

What are the advantages of the Motor vehicle?

- It did not run over a track or railway.
- The weight of the fuel it required was minimal.
- It could be owned by any individual and could be driven almost anywhere any time.
- It could be driven almost over any terrain and was easily adaptable.
- It could transport passengers and goods to an exact destination.
- The earliest motor vehicle engine consumed a lot of fuel. The modern trend is towards lower consumption but with greater efficiency.

Railway transport

- Railway transport was developed from the idea of vehicles moving along a fixed track developed from the ruts made on mud roads by the wheels of vehicles to prevent them from skidding off the road. Therefore, the earliest paved roads had stone ruts built into them.
- The first railways were used in Germany from the 16th century AD by coal miners, who pushed ore in carts along wooden ruts.

THE STEAM ENGINE

Identify the engineers who invented the steam engine and locomotives.

Development of the steam engine and locomotives was the work of many inventors as follows:

- In late 17th and early 18th century, British engineers: Thomas Savery and Thomas Newcomer developed the steam-driven pump to pump water out of coal-mines.
- In 1780, Scottish engineer: James Watt developed a steam-engine that was adapted to drive a winch that hauled wagons along a railway in a coal mine.
- In 1804, Richard Trevithick developed the first steam engine to run on rails.
- In 1812, Fenton, Murray and Wood of Leeds; Britain, built the “John Blenkinsons” locomotive.
- In 1813, Christopher Blanket and William hedly built the “puffing Billy”, which was the first steam locomotive to pull a passenger train along a public railway. Trains were initially horse-drawn.
- In 1814, British engineer: George Stephenson invented the “Blucher”, which pulled eight laden wagons.
- In 1825, colonel john Stephens built a tiny experimental locomotive in the USA.
- In 1892, German engineer: Rudolf diesel invented the Diesel engines, which replaced the steam locomotives. These engines were designed to work on a compression Ignition system.
- In 1883, John Hopkins and the Siemens brothers built the first electric locomotive, which was used on the Portrush railway and the south London line.

Explain how the invention of the railway speeded up industrialization in Europe.

IN EUROPE

- It facilitated transportation of bulky raw materials to industries.
- It eased and speeded up transportation of bulky manufactured goods to markets.
- It facilitated the transportation of fuel (especially coal and firewood, to the industries.
- It provided reliable and cheaper means of transport for workers to the industries, which enhanced their performance.
- It facilitated interaction between towns and business people and promoted investment in industries.
- It facilitated the migration and settlement of people into new lands, which were sources of raw materials.
- It opened up mining and farming in the interior of most countries.
- It facilitated the transport of heavy machinery for installation in industries.
- Revenue from the railways was used in setting up industries.

What were the results of the development of railway transport?

- Improvement of transportation of people and goods worldwide.
- Tremendous expansion of trade, particularly in industrial countries.
- Stepping up and boosting of industrial development as industrial goods, workers and raw materials are transported to and from industries more efficiently.
- It has stimulated the growth of urban centres.
- Religious faiths and political ideas have spread more efficiently as a result of railway transport. Missionaries used the railway to travel.
- Efficient transportation of farm inputs and products.
- It has generated job opportunities.

- It has facilitated the exploitation of natural resources such as forests, fisheries and minerals as the products are easily transported.
- Railway transport generates revenue for the government, boosting the country's economic growth.
- It strengthened colonial control and exploitation of resources overseas.
- It opened up the interior of most countries.

State the disadvantages of railway transport.

- It is expensive to establish the railway infrastructure such as the lines and to purchase locomotive engines.
- Trains cause a lot of air pollution.
- Railway transport is prone to hazardous accidents, especially when the trains collide or derail.
- Railway transport requires to be supplemented by other forms of transport e.g. road transport.
- Tunnels have to be dug in areas with ragged terrain since trains are inflexible.

Water transport

In the early years of the industrial Revolution, heavy goods could only be transported by water.

Identify the water vessels developed since the 18th century.

Various water vessels were developed since the 18th century. These include:

- ✓ Steam-ships,
- ✓ Motor-driven ships,
- ✓ Modern passenger liners,
- ✓ Freight vessels,
- ✓ Military vessels,
- ✓ Motor boats,
- ✓ Ferries,
- ✓ Hydrofoils,
- ✓ Hovercraft.

STEAMSHIPS

Since the speed and ability of sailing ships depended on the wind, their use was limited.

In what ways did discovery and use of steam power boost water transport?

The discovery and use of steam power in driving machines from the 18th century greatly contributed to water transport in the following ways:

- In 1736, Jonathan hulls from England built a steam-driven boat.
- In 1783, Marquis de Jeffrey from France built the first successful steam boat. It was driven by paddle wheels.
- In 1787 and 1790, American engineer: John Fitch built two steam-boats and began services on the Delaware River between Philadelphia and Trenton.
- Scottish engineer: William Symington built the first modern steamship. It was driven by a paddle wheel.
- American engineer: Robert Fulton built the Clermont with which he began passenger services on the Hudson River between Albany and New York in 1807.
- In 1819, the Savanna: a ship that used both steam and sail, crossed the Atlantic Ocean.

- In 1838, The Great western: a ship that used steam without sails crossed the Atlantic Ocean. Two years later, a trans-Atlantic steamship service was started by Cunard Line.
- The first propelled steamer (The Archimedes) was built in 1838.
- In 1854, John Elder invented a two-cylinder compound engine that cut fuel consumption by about 60%.
- In 1932, the first turbo-electric power ship (a French liner called Nomadic) was made.
- In 1956, an American submarine (the Nautilus) was the first to use nuclear power.
- In 1961, an American ship (The Savannah) was the first merchant or civilian vessel to use nuclear power. It was fuelled with Uranium Oxide, which enabled it to operate for three and a half years without refueling.

Identify three main advantages of using iron and steel in place of wood to construct the hull of ships.

- Use of iron and steel in place of wood to construct the hull of ships had three main advantages:
 - Iron and steel ships were lighter and much bigger than wooden ones.
 - Iron and steel ships carried more cargo compared to wooden ones.
 - With iron and steel ships, pressure on forest resources reduced tremendously.
 - Iron and steel ships are durable. They last longer than wooden ones.

CANALS

What is a Canal?

- A canal is a manmade water channel, usually dug on a straight course. The first canals were in Europe, designed for use by barges, which were towed by horses. They were shallow, for horses to wade through as the barges they pulled floated to their respective destinations. Modern ship canals such as the Suez and Panama Canal are deeper and can be used by ocean-going vessels.

Why were canals built?

- The first canals were built to link the existing rivers and lakes for quicker, easier and cheaper transportation of raw materials and manufactured goods between ports and towns.
- Elsewhere, canals shortened existing trade-routes.
- Canal building began during the industrial revolution in mid 18th century. It saved costs and increased industrial productivity.

Name three main modern canals.

Major canals include:

- ❖ The Manchester-Liverpool canal, which was constructed to link the industrial centre of Manchester to the port of Liverpool so that ships could travel directly and much faster, ferrying industrial and other goods.
- ❖ The Suez Canal, whose building from 1859-1869 was spearheaded by French engineer: Ferdinand de Lesseps to link the Red and Mediterranean seas and shorten the sea-route between Europe and the East.
- ❖ The Panama Canal, constructed from 1904-1914, still by Ferdinand de Lesseps, but this time with US engineers to link the Atlantic and Pacific oceans across Central America.

What were the results of the building of the Suez Canal?

- The journey between Europe and Asia was shortened.
- There was a direct link between Europe and Asia.
- There was increased international trade.

- Growth of European interest in Africa and the Far East.
- Eventual European colonization of Africa and Asia.

Discuss the development in air transport from 1780-1903.

(Name the engineers who contributed to development of air transport).

- In 1783, two French brothers: Jacques and Joseph Montgolfiers, launched a Hot-air balloon that covered eight kilometers and lasted twenty minutes in the air.
- In 1783, French engineer: Jacques A.C Charles made a successful trial flight in a Hydrogen-filled balloon.
- Sir George Cayley from England and Otto Lienthal from Germany each built and made several test-flights in gliders in the 19th century.
- Around 1850, English engineer: John String designed and built power-driven planes.
- In 1898, Brazilian inventor: Alberto Santos Dumont developed the first airship I.E. a balloon powered by an engine that could be steered.
- In December 1903, two American brothers: Orville and Wilbur Wright (popularly known as the Wright brothers) made the first successful heavier-than-air flight by mounting a home-made engine from a plane, which they modified to fly.

What are the benefits of air transport?

- It provides the fastest means of transport for passengers and goods.
- It has promoted international trade and other business activities, especially those that involve handling of urgent documents and messages.
- It provides employment to many people.
- It has facilitated agriculture as it helps in monitoring large farms and in the spraying of crops.
- It helps in fighting fires.
- Aeroplanes are used in photography and cartography.
- It has facilitated better management of wildlife.
- It has helped in the promotion of tourism as tourists are able to reach their destinations easily and faster.
- It has revolutionized warfare. For instance, during the First and second World wars, aircraft were used to transport soldiers, food and equipment.
- Inaccessible areas where other means of transport have failed are now within easy reach, E.g. mountain-tops and flooded areas.
- Medical and other cases of emergency in distant places can now be attended to.
- Perishable goods like flowers, vegetables and fruits can reach their destinations without going bad.

Explain the limitations of air transport.

(What are the disadvantages of air transport?)

- Aircraft have made warfare more destructive and deadly.
- The use of air transport has facilitated international terrorism.
- Air transport contributes to pollution.
- Fatal accidents occur, at times killing many if not all people.
- Air transport is expensive compared to other modes of transport.

SPACE EXPLORATION

Identify the developments in space exploration since the 19th century.

(Name the inventors who contributed to development of space exploration).

The following developments have contributed to the success of space exploration:

- In 1610, Galileo Galilei discovered the telescope, through which astronomers began to study the moon.
- Around 1000AD, the Chinese invented and used rockets as weapons. Today, rockets are mostly used in space exploration.
- In 1957, the USSR built and launched the first artificial satellite (the Sputnik i) into space.
- In 1958, the USA launched their own (Explorer i) satellite, which made the first discovery of the Space age and the existence of two intense belts of radiation around the earth.
- In 1961, Yuri Gagarin from the USSR became the first human being to go into space.
- In 1961, John Glenn from the USA became the first American to venture into space.
- In 1962, the first international communication satellite in the world (Telstar) was launched.
- In 1969, American astronauts: Neil Armstrong and Edwin Aldrin became the first human beings to land on the moon, where they reached aboard "Apollo 11" space-craft.
- In 1981, the USA launched the first re-usable space-craft (Columbia), which reduced the cost of space exploration.
- In 1983, Sally K Ride became the first woman to go into space. This she did aboard the "Challenger".
- By 1988, there were three hundred satellites orbiting the earth while another 1200 were nonfunctional.

Identify the challenges encountered in space exploration.

- The natural environment in space is not suitable to human life.
- Space operations are extremely expensive.
- Space craft are prone to accidents.
- At times, space craft disappear in space and do not bring back the required information.

What were the results of development in space exploration?

(State the results of Space Exploration.)

- Scientific and technological development through invention of space-craft and other equipment.
- Discoveries that have enhanced human understanding of the universe. For instance, a new planetoid was recently identified.
- Development of advanced air force weapons.
- It has promoted scientific research.

Discuss the impact of modern forms of transport on humankind.

- (Look at the impact with regard to: Social, economic, political and negative effects).

SOCIAL EFFECTS

- Increased rural-urban migration.
- Accelerated diffusion of ideas in science, religion and culture.
- Promotion of the Global Village Scenario as different parts of the world are easily accessible.
- Improved access to education and health facilities.

- Humanitarian assistance I.E. food, medicine and other supplies can easily be sent to deserving areas.

ECONOMIC EFFECTS

- Improvement of both local and international trade as perishable goods can get to their destinations without going bad.
- Farmers acquire agricultural inputs in time and send their produce to the markets efficiently.
- Raw materials and manufactured goods are easily transported.
- Governments levy toll charges and other fees on the various means of transport, which improve economies.
- Expansion of urban centres.
- Creation of new employment opportunities.
- Expansion of the Service sector E.G. banking and health.

POLITICAL EFFECTS

- Enhancement of political stability as the armed forces and the police are easily taken to trouble spots.
- Easy access of politicians to the people, particularly during campaigns.
- Administration is easier as places can be accessed fast.

NEGATIVE EFFECTS

- Colonization of Africa and Asia by Western powers due to improvement in water and land transport.
- The world wars were made more disastrous by the use of air transport and ships to bomb enemy bases, which led to heavy loss of life and destruction of property.
- Many deaths due to accidents. For example, 257 people died in a ferry accident at Mtongwe in 1994.
- Environmental pollution has been accelerated.
- Increased international terrorism.
- Many more diseases, epidemics and pests, which spread quickly and easily as more people travel and interact in places far and wide.
- Serious traffic jams and congestion in many cities as the number of vehicles keeps increasing, with shortage of parking space in many towns.

COMMUNICATION

TRADITIONAL FORMS OF COMMUNICATION

Identify the traditional (early) forms of communication.

Early forms of communication include:

- Verbal communication I.E. talking, story telling and singing.
- Gestures I.E. signals or body movements that pass a message.
- Signals I.E. simple coded messages, usually in picture and sound.
- Drum-beat.
- Use of messengers or runners.
- Horn blowing.
- Written messages E.G. scrolls and stone tablets.

MESSENGERS

Runners were often sent particularly to deliver long and confidential messages. For example, if a community was invaded, a runner was sent with a message to seek help from a friendly community.

What were the disadvantages of using messengers?

- The messenger on foot could give the wrong message, forget it altogether, or die on the way.
- The speed at which the message could be sent depended on the means of transport, which were very poor and often unreliable.
- The greater the distance, the less chance there was of the correct message reaching the recipient.
- It was possible for the messenger not to find the recipient.

SIGNALING

- ✓ A signal is a simple message in a cord, E.G. Smoke, drum-beat or a shout.
- ✓ Signals depend on the type of country the community lived in and their knowledge in sending and interpreting signals. For instance, echoing effects in mountainous regions made shouted calls suitable.
- ✓ In early times, there had to be agreed cords and known signalers. Signals were very important to their community just like radio and radar operations are in our society today.

FIRE & SMOKE SIGNALS

- ✓ These were common among the Red Indians in the Americas and other early societies.
- ✓ In a fire signal, fire was lit on raised ground E.g. on a hill-top, from where it could be seen from a far off distance.
- ✓ In a smoke signal, fire was lit using green tree branches or other damp material to give a lot of smoke. The fire was then covered to control the smoke, which was emitted in a series of signals.
- ✓ Fire and smoke signals were used in sending quick message E.G. warning on an invading enemy.

What were the advantages of fire & smoke signals?

- They were visible in distant places, especially on cloudless weather.
- They saved man from long and cumbersome strain of having to travel.
- They were faster.
- There was least or no danger to human life whenever they were used.
- Materials needed in such signaling were simple and easily available.
- They could be lit at short notice as they were prepared in advance.

Explain the limitations of fire & smoke signals.

- It was difficult to start a fire on a wet weather.
- A fire signal could not send more than one message.
- A smoke signal was of least or no use on a cloudy misty day.
- Smoke could be blown away before the message was delivered or known.
- Sometimes, a signal was sent when nobody was on the lookout, which made it ineffective.
- Because signals were nonverbal, it took long to interpret and understand them.

DRUM BEAT & HORN BLOWING

These were common among traditional African communities such as the Ibo of West Africa and the coastal people of Kenya. They were used in public announcements and to sermon people to important meetings.

What were the advantages of drum-beating?

Drum beat and horn blowing had the following advantages:

- A wide range of messages could be relayed.
- Messages could be conveyed over wide areas.
- Drums or horns could be beaten or blown during the day and at night's
- Messages were conveyed very fast.

WRITING

What is writing?

(Define Writing.)

- Writing means making letters or any other symbols on a surface for the purpose of communication.

Identify three early forms of writing.

- pictures,
- Scrolls,
- Parchment,
- Stone tablets.

Pictures were the earliest form of writing. They came from some of the oldest civilizations such as Mesopotamia and Egypt. Around 3000BC, Hieroglyphics was used in Egypt while Cuneiform was used in Mesopotamia.

- Picture messages were drawn on any available material such as clay tablets, dried animal skin or tree-bark.

What were the advantages of picture Writing?

- They showed earliest locations of villages, hunting-grounds, signaling parts and natural boundaries like rivers, mountains and forests.
- The first stories ever written were in picture form. They covered successful hunting expeditions, victory in battles and the communities' heroes.
- It put man on the mark towards civilization as each generation could pass on its knowledge to the next in picture form.
- The Alphabet we use in writing today developed from early forms of picture writing through Greek and Roman scripts.
- Writing in symbols or letters was easier and faster, although the symbols still had to be chiseled in stone or scrapped on clay tablets.

SCROLLS

- A scroll is a roll of paper used for writing. Scrolls were produced in ancient Egypt at the Nile water edge by splitting the papyrus reeds and soaking the pieces in water to make them stick together when they dried. Rolls of this papyrus were then made into scrolls.

Pens and brushes for writing were also made from the reeds. Various kinds of ink were made from glue, gum and other substances. The Egyptians exported papyrus to other countries for making scrolls.

- The Greeks and Romans stuck the scrolls on wooden bars and rolled them up to preserve them. Books were developed from around 1000BC.

THE PARCHMENT

This was made from dried animal skins. Unlike papyrus, it could be folded and cut easily into pages. It was stout enough to allow writing on both sides and could be used in making books of several pages.

STONE TABLETS

- ✓ These were used for writing by 3500BC by the Sumerians and other inhabitants of the Euphrates and Tigris river valley. Writing was done on wet clay tablets using a wedge-shaped nibor stylus. When the clay dried, a record was left.
- ✓ However, one problem with clay tablets was that they were fragile. Sometimes, real stone was used, for it left a permanent record.
- ✓ That same time in Mesopotamia, Cuneiform, which was based on horizontal and vertical strokes, was developed. Mesopotamia managed to organize and maintain its records for effective running.

DEVELOPMENT IN MODERN MEANS OF COMMUNICATION

Identify modern forms of communication.

Modern forms of communication include:

- ❖ Telephone,
- ❖ Television,
- ❖ Telegraph,
- ❖ Fax (Facsimile),
- ❖ Satellite,
- ❖ Cell-phone,
- ❖ Radio,
- ❖ Internet,
- ❖ Telex,
- ❖ Pager.

TELECOMMUNICATION

What is Telecommunication?

- Telecommunication is quick sending and receiving of messages over very long distances, E.G. from one continent to another.

THE TELEPHONE

Define/Describe the telephone.

(Explain how the telephone works.)

- ✓ The telephone is a system that sends and receives voice messages over long distances through wires connected to a local exchange. It enables people to communicate verbally at any distance beyond the range of the human voice by converting the sound waves of the caller's voice into an electronic current, which is then sent to the telephone of the receiver, where it is reconverted into sound waves that can be heard by the human ear.

Describe/explain the development of the telephone as a mode of communication.

(Identify the inventors who contributed to development of the telephone as a mode of communication.)

- ✓ The telephone was invented by Alexander Graham Bell from Boston, Massachusetts: United States of America, who together with Thomas Alfa Edison, produced a working telephone in 1875.
- ✓ In 1897, Almon Brown Strowger from the USA invented the first automatic telephone exchange using an electromagnetic switchboard. This shortened the initial process whereby calls had to go through a telephone operator at an exchange. Calls can now be diled directly to any part of the world.

THE CELL PHONE

What is a Cell phone?

(Describe/define a cell phone. Or:

Explain how a cell phone works. Or:

Explain the development of a Cell phone as a mode of communication.)

- Also known as a cellular or mobile phone, the Cell phone is a two-way radio system that connects the caller to the telephone network using radio waves instead of wires. It is referred to as a Cell/Cellular phone because it is built around small geographical areas (cells).
- Each cell is fitted with a computerized radio transmitter and a switch to control the cell-traffic.
- A subscriber moving out of one cell is automatically handed over to the next.
- Microwaves connect the cell-transmitters to the local telephone company network, such as Celtel and Safaricom in Kenya.
- Modern cell phones can also send written words (short messages).
- The first modern portable mobile phone handset was invented by Doctor Martin Cooper in 1973.
- Before Cooper's invention, cell phones were huge and cumbersome to transport. Each consisted of a Receiver, Transmitter and Logic Unit, all mounted in the boot of a car.

Explain the disadvantages/limitations of cell phones.

- ✓ Poor reception.
- ✓ The Cellular technology is dependent on the availability of electrical power as the handset has to be recharged from time to time.
- ✓ They can easily get damaged.
- ✓ Handsets are easily lost or stolen.
- ✓ Continuous use of cell phones has raised fears of exposure to radioactivity.

TELEVISION

- ✓ Television technology sends picture and sound messages by radio from a transmitting station to a distant television set. The station changes light and sound waves from a scene into electronic signals and sends them, then they are received by a television set, which changes them back into picture and sound.
- ✓ Wireless transmission of sound and image by radio waves was first demonstrated in 1925 by Scottish scientist: John Ogie Baird. The world's first public television service was started in 1936 by the British Broadcasting Cooperation (BBC). The pictures were initially in Black-And-White. A color television was introduced in the 1930s among other rapid improvements.
- ✓ In Kenya, television service started in 1962, offered by the Kenya Broadcasting Service, which was later renamed the voice of Kenya and is now the Kenya Broadcasting Cooperation (KBC).

RADIO

What is Radio?

(Describe a radio set.)

A radio set is a device that receives and changes electromagnetic waves into sound waves.

Analyse the development of Radio technology.

(Name the inventors who contributed to development of Radio technology.)

Development of radio technology was the work of many inventors as follows:

- In 1864, British scientist: James Clark Maxwell demonstrated that electromagnetic waves could travel through space at the speed of light.
- In 1888, German scientist Heinrich Hertz proved the existence of electromagnetic waves.
- In 1901, Italian inventor: Gugliel Marconi successfully sent radio transmission in Morse code on "wireless" across the Atlantic ocean from London in Britain, which was picked by a receiver in the USA.
- In the early 1900s, US scientist: Lee De Forest developed vacuum tubes that could detect and simplify radio signals.
- In 1906, Canadian scientist: Reginald Fessende successfully transmitted sound without the use of cable. This he did by attaching a telephone mouth-piece to a wireless telegraph.
- In 1920, the Marconi Company made the first radio broadcast from its Cohelmsford station in London: Britain. That same year, the first American radio programs began in Pennsylvania.
- In 1922, the British broadcasting Company, which was later renamed the British Broadcasting Cooperation (BBC) began broadcasting services.

Analyse development and use of radio technology in Kenya.

In Kenya:

- The first wireless communication station was installed in Mombasa in 1915 to serve vessels off the harbour.
- Public broadcasting began in 1927 when a radio station was set up at Dagoreti in Nairobi by Cable and Wireless Limited, broadcasting in English.
- The African Broadcasting Station was started in 1946, airing programs in Kiswahili and other African languages.
- In 1959, the Cable and Wireless limited and the African Broadcasting station were merged to form the Kenya Broadcasting Service.

What are the advantages of Radio as a mode of communication?

- ✓ It was initially used as a means of communication between vehicles on the move.
- ✓ It enabled ships and aeroplanes to keep in touch with land and to send regular messages on their whereabouts.
- ✓ The police, military and other institutions depend heavily on radio communication.
- ✓ It is made and produced in various sizes and is therefore portable and more efficient.
- ✓ It is the most widespread means of mass communication as it can be used in far off areas that cannot be reached by telephone.
- ✓ It is affordable.
- ✓ Most radio sets are Battery-operated.

THE TELEGRAPH

Explain how the telegraph works.

- ✓ The telegraph sends corded electronic messages (telegrams when sent over land or cable if sent or received from overseas).

Identify the scientists who contributed to development of the telegraph.

(Analyse development of the telegraph as a mode of communication.)

- ✓ The telegraph was the work of many inventors, of who Samuel Morse was most outstanding.
- ✓ In 1837, Morse made the first operational telegraph.
- ✓ The first public telegraph was opened in 1845. It operated between Washington and Baltimore in the USA.

THE COMPUTER

What is a computer?

- A computer is an electronic device that works under command or program to reach a conclusion, based on data supplied. It comprises two parts, namely the Bodywork (hardware) and the program of instruction (software).

Identify the inventors who contributed to invention and development of the Computer.

Like many other electronics, the computer was the work of many inventors as follows:

- ❖ In 1834, British school-teacher: Charles Babbage made the first computer.
- ❖ In 1930, American scientist: Vannevar bush built the Differential Analyzer, which was a mechanically operated computer.
- ❖ In 1939, John Atanassoff made the first semi-electronic computer. However, the first commercially available computer was made in 1951.

First-generation computers were huge and cumbersome, filling up whole rooms. But with the discovery of the Transistor, the integrated circuits and the microprocessor, the size has been greatly reduced, resulting in desk-top and even the much smaller Lap-Top computers.

Related to the computer is the Electronic (E) mail, which is the sending and receiving of computer-stored messages between computers linked by telephone. It was among and is still the most widely applied and used on the internet.

FACSIMIL TRANSRECEIVER

Define Facsimil

This is commonly known as the Fax. It is transmittion of message in pictures, letters, drawings or any other documents. The fax machine is also connected to a telephone line.

Explain how information is transmitted through Fax.

(Explain how a Fax works.)

- The user inserts the document into the machine and dials the telephone number of the recipient.
- After connection, an electronic scanner on the transmitting machine converts the image on the page into electronic signals.
- The electronic signals are then received on the recipient's fax machine, which reconverts it into the original image of either picture or letter.

TELEX

What is a telex?

- ❖ This is a modification of the telegraph. A telex electronically sends and receives message in ordinary print and language.

State two main advantages of the Telex over the Telegraph.

A telex has the following advantages over the telegraph:

- Unlike a telegraph, a telex message does not need decoding.
- It does not need the presence of an operator to physically receive a message, because, when the machine receives an incoming signal, the teleprinter automatically types out the message.
- The message can be received at any time of the day or night and can then be read later.
- An exact version of the sender's message is received, which helps in avoiding misunderstanding arising over the decoding of a telegraphic message.

THE PAGER

What is a pager?

- ✓ Also known as a beeper, the Pager is a small receiver that delivers short radio messages, which are read on the Pager's screen.

Give a brief explanation on the development of the pager.

- The first pager like system was developed in 1921 in Detroit: USA.
- The first telephone pager device was used in New York from 1950.
- The first modern commercial pager was made by Motorola in Chicago in 1974.

Identify the limitations of using a pager as a means of communication.

- Pagers still had limited range and were used only in On-sight stations such as hospitals. By 1994, wide-area paging had been invented. Pagers were now popular for general use.

THE INTERNET

What is the Internet?

This is a huge worldwide system of interconnected networks of computers linked within various organizations to easily exchange information. A computer is connected to the internet by Telephone. Information is sent to or obtained from a data-base.

- ❖ To provide information on the internet, the user subscribes to a bulletin board-service and sends his messages by computer, making them accessible to all other subscribers.

Identify the factors that led to the development of the Internet.

After the Russians launched the sputnik satellite in 1957, the United States of America established the advanced research Project agency (ARPA) to provide a US lead in military science and technology.

- In 1969, the network: Arpanet was established. It initially linked the universities of Los Angeles, Stanford, Santa Barbara and Utah. The term "Internet" was coined in 1974.
- In 1992, the Internet society was established to manage the internet.

- Today, the E-mail and the Web which are worldwide are the most widely used parts of the internet. The internet is a public cooperative self-sustaining facility accessible to many more people worldwide.

Discuss the impact of telecommunication on society today.

Communication is easier.

- ❖ Information management has been enhanced, especially through computer storage and processing of data.
- ❖ There is more entertainment, particularly from radios, televisions and cinemas. Entertainment through films has been moved closer to the people through Video cassette tapes, VCD, DVD and computer among others.
- ❖ Cultural exchange and understanding have been enhanced.
- ❖ It facilitates both air and water transport.
- ❖ It enhances efficiency in business transactions.
- ❖ It facilitates the security systems.
- ❖ It has revolutionized warfare as soldiers can communicate efficiently.
- ❖ It provides employment to millions of people.

State the disadvantages of modern telecommunication.

Criminals use the efficient communication networks to commit crimes.

- It has undermined the traditional way of life.
- Most telecommunication devices are not accessible to many people due to their high cost.
- Some people get addicted to some telecommunication systems such as the internet and television.
- If not controlled, some such as radio and television can cause sound pollution.
- Prolonged exposure to some such as a computer screen and cell phone affect the eyes adversely and pose the danger of cancer due to radioactivity.

THE PRINT MEDIA

What is Print Media?

- Print Media refers to printed, written down or published information.

Identify examples or types of print Media.

- ✓ Periodicals,
- ✓ Booklets,
- ✓ Newspapers,
- ✓ Journals,
- ✓ Leaflets,
- ✓ Books,
- ✓ Newsletters,
- ✓ Magazines.

NEWSPAPERS

What is a Newspaper?

- ❖ A newspaper is a document that is produced daily to disseminate information about significant local and international current events.

Apart from news, identify other types of information that a newspaper contains. Apart from news, newspapers contain:

- ❖ An editorial, which is the official opinion of the newspaper on an issue of public interest.
- ❖ Feature-articles on areas of human interest.
- ❖ Commentaries, which are the opinions of individual writers on topical issues.
- ❖ The invention of the printing press in Germany in 1447 was a great boost to the printing of newspapers. France was the first country to develop mass newspapers. **Identify any five examples of newspapers.**
- ❖ The first English newspaper was the Daily Courant, published from 1702.
- ❖ In Kenya, the East African Standard, whose publication began in 1902, was the first newspaper, followed by:
 - ❖ The Daily nation,
 - ❖ The Kenya Times,
 - ❖ Baraza,
 - ❖ The East African,
 - ❖ Taifa Leo,
 - ❖ Taifa Weekly.

Today, there countless newspapers worldwide and through Kenya.

MAGAZINES

What is a Magazine?

- A magazine is a regular publication providing specialized information on a particular issue. It is published weekly, fortnightly or monthly.

Name the early/pioneer magazines in the United Kingdom.

The earliest magazines in the United Kingdom include:

- the review (1704)
- The London Gazette (1665)
- The Gentleman's Magazine (1731).

Name the initial/pioneer magazines in Kenya.

- The Kenya Gazette, whose publication began in 1901, which is the oldest magazine in Kenya.
- The Leader, which was published by the British East Africa Company,
- Wathiamo Mukinyu, which was published by the Consolata Catholic missionaries in Nyeri,
- Harry Thuku's Tangaza,
- The east African Chronicle by the Asian community.

Identify any four magazines in Kenya today.

Since independence, various magazines have been produced in Kenya, such as:

- The Weekly Review,
- Society,
- Viva,
- Executive,
- finance,

- Parents,
- The Financial Review,
- Drum.

At the moment, delivery of magazine articles has been facilitated by advances in computer technology, especially through On-line services. Indeed, some magazines such as the Online, the Journal of current Critical Trials, The Medical Journal and Launch are entirely electronic.

PERIODICALS

What is a periodical?

- A Periodical (a journal) is a regular publication issued at weekly, monthly or quarterly interval. Periodicals range from technical and scholarly journals to magazines of mass circulation. They are smaller than newspapers and are usually bound in covers.
- The first periodical was a French scientific weekly journal called Des Savans, published in 1665. Periodicals began to appear in England towards the end of the 17th century.

Explain the impact of development of modern means of communication.

- Great promotion of education.
- Increased interaction between people due to easier communication.
- Availability of diverse sources of entertainment.
- Rapid enriched worldwide cultural exchange.
- Great expansion of international trade as people can move faster and more efficiently, transacting business from distant places more easily.
- Quicker spread and more acquisition of information.
- Reduction of distance by telecommunication networks through satellite.
- Permanent storage and use of information in fax, Telefax and computer.
- Complete change in warfare. It is now possible to hit any target with pin-point precision.
- Countries can easily spy over each other using aircraft with specially designed communication systems.

CHAPTER 3

DEVELOPMENT IN INDUSTRY

- ✓ What is Industry?
- ✓ What is Energy?
- ✓ Identify three early sources of energy.
- Industry is conversion of raw materials to usable items to satisfy basic human needs.

EARLY SOURCES OF ENERGY

- ❖ Energy is the force that produces motion. It does work and is used particularly in the manufacture of products. Early sources of energy include wood, wind and water.

Wood

- ❖ In late Stone Age era, burning wood was used to harden clay pots. It then developed into the use of fire to smelt metals and to heat water to produce steam for industrial operations. It was cheap and easy to obtain from the extensive natural forests.

Wind

- ❖ Wind is air that moves fast, with the capacity of creating energy on objects upon contact. It was used to winnow and dry grains, to turn wind mills and to propel sailing boats and ships.
- ❖ Though a renewable source of energy, wind is difficult to harness for industrial use since it is influenced by the prevailing weather and topography.

Water

- ❖ Fast-moving water was used in turning water wheels and turbines, on which early grain grinding and textile spinning machines depended to work. It provided energy in the making of copper pots, weapons for war and to sharpen various implements. However, water is limited as a source of energy since its levels depend on climatic conditions.

What were the results of discovery and use of wood, wind and water as sources of energy?

- The use of human energy greatly reduced.
- More goods could be produced cheaply and quickly.
- Improved quality of products.
- Enhancement of the making and development of metallic goods and industry.
- Deforestation due to increased usage of wood without replacement.

USES OF METALS IN AFRICA

Identify the metals used in Africa during the Metal age.

- ❖ Gold,
- ❖ Tin,
- ❖ Silver,
- ❖ Copper,
- ❖ Bronze,
- ❖ Iron.

The Metal age succeeded the New Stone age era.

State the advantages of using metals in tool making.

(What are the advantages of metals over stones in tool making?)

- Metal tools were durable.

- They did not break easily.
- Cutting edges of metal tools could be sharpened.
- Malleable molten metals could be reworked.
- Broken metal objects could be smelted and reworked into useful items. For instance, a broken hoe could be reworked into a knife.

Describe two main stages into which the Metal Age is divided.

- The Bronze age, which falls between the New Stone age and the Iron age.
- The Iron age, which falls between the New Stone age and the Modern Industrial age.

Bronze

What is Bronze?

- Bronze is an alloy (a mixture) of copper and Tin.

Bronze making probably started in Mesopotamia around 3000BC. It then spread to Egypt and the rest of Africa through trade.

Identify the uses of coal.

- Making weapons like Daggers, Arrowheads, Spears, Shields, Helmets and Swords.
- Making tools like Machetes, Hammers, Axes, Hoes, Blades and Chisels.
- Making ornaments like Bracelets, Rings, Anklets, etc.
- Making artistic items I.E. Flower vases, Sculptures, Masks, Plaques and other decorations.
- it was a store of wealth. In Benin, kings measured their wealth in terms of Bronze.

Gold

What is Gold?

- Gold is a malleable highly valued metal. It probably was the earliest of the metals used by man in its natural state. It was obtained from riverbeds or on the earth's surface.
- ❖ The ancient Egyptians obtained gold from Nubia, Meroe and Kenakusar. In central Africa, it was mined in the kingdoms of Mwene Mutapa and Shaba (Katanga) province of the Democratic Republic of Congo. In west Africa, it was mined in Ghana and Mali.
- **Outline the uses of Gold.**

❖ Gold was used in:

- Making Household items, particularly vases and utensils like cups, plates and bowls, which were highly valued, especially in royal palaces.
- Making decorative products like Sword handles, headgear, bangles and other jewelry.
- Commerce. As an item of trade and currency, It became and remains an important medium of exchange.

Copper

What is Copper?

- Copper is a soft durable metal that may first have been used in Egypt around 3000BC in its raw form. It was mined from the Sinai desert and Cyprus, from where it spread through trade.

State the uses of Copper.

- Production of pipes of various sizes and uses, masks, shields, etc.
- Making ornamental items like bangles, rings, chains, mirrors, vases, statues, anklets and bracelets.
- Trade as a medium of exchange in form of Copper bars, particularly in central Africa, Egypt and west Africa.
- Making weapons like daggers, arrowheads, spearheads, swords, helmets and shields.

- Making utensils and containers like pots and pans.
- Making tools such as Chisels, Pins, fishing hooks Axes and knives.
- Production of alloys and tough mixtures like Bronze, brass and other stronger metals for various purposes.

Iron

Explain why iron is the most used metal.

(Why is the use of iron most widespread?)Or;

Why is iron one of the most important metals?

- ❖ Its ore is most widespread than that of Copper.
- ❖ Items made from iron are better and stronger.
- ❖ It was the earliest metal ever used (it has been used for much longer).

Explain how the use of iron spread.

(How did iron become so widely used).

- ❖ Iron may first have been used around 1500BC by the Hittites of turkey before it spread to the rest of southwest Asia, the Mediterranean lands and Europe.
- ❖ The Phoenicians introduced it to ancient Carthage (present day north Africa) before 900BC.
- ❖ Iron smelting and use could have spread to the rest of Africa through trade and migration.

In what ways did iron smelting and use spread to Africa?

(Describe two theories on the origin of ironworking in Africa.)

- ❖ There are two theories on the origin of ironworking in Africa. These are:
 - That which states that iron technology passed along the Nile valley and Meroe in the Sudan from 100BC before spreading to south and West Africa.
 - That which suggests independent origins within Africa itself. According to this theory, Africans may have learnt iron smelting through pot firing in pits.
 - However, Ironworking in Africa began around 500AD. Information on ironworking may have spread from north Africa across the Sahara desert to west Africa. Terracotta (baked clay) sculptures of people and other objects were among the articles made from iron. The people of Axum in Ethiopia also started ironworking around 580BC. This technology may have been learned from southern Arabia. The Bronze age in Africa was very short-lived and was soon succeeded by the Iron age.
- ❖ In East Africa, ironworking may have started among the Bahaya in Tanzania between 600-500BC. More recent evidence from Malawi, Zimbabwe and South Africa date from 400-100AD.

Identify/describe the factors that facilitated the spread of ironworking in Africa.

Trans-Saharan trade, which led to the spread of the skills.

- Migration, particularly of the Bantu and the Southern Cushites, who spread it as they moved.
- Warfare as the Hittites invaded Egypt.
- Travelers and messengers, who spread it by giving or receiving gifts made of iron.

Explain the uses of iron in Africa.

- Production of stronger weapons such as Daggers, Spears and Arrows.
- Making pots for various uses.
- Making usable farm-implements like hoes, axes and machetes.
- Making household items like plates, knives, etc.
- Making artistic items like sculptures and other technically designed goods.
- It was used as a trade item in its raw and smelted state.

- Manufacture of steel for industrial purposes.

Explain the impact of metals in Africa.

(What were the results of development and use of metals in Africa?)

- Building and expansion of kingdoms and empires like Egypt, Ghana, Mali, Songhai, Benin and Mwene Mutapa's empire.
- Frequent migration, mainly of the iron smelting communities.
- Increased warfare among communities, fuelled by weapons like arrows and spears.
- Great improvement in agriculture as larger tracts of land was put into use. Efficient metal tools like hoes and axes were made and used, leading to increased food production.
- Improvement in construction and building works, especially houses, temples and bridges, which were reinforced by strong Bronze and Iron metals.
- Division of labor in the society as some people specialized in smelting of metals while the rest took up other occupations.
- Increased population due to increased food production, resulting from use of improved farm and other tools.
- Wide and high regard of metals, particularly in religious rites and in the royal palaces, E.G. the Golden Stool among the Asante of Ghana. The smiths gained recognition and became a special class in the society.
- Urbanization as trading and industrial settlements developed in and around major mining centers. Meroe in the Sudan is a good example.
- Change in trading patterns and methods as Gold, Copper and other metals gained a monetary value and became a medium of exchange.

THE INDUSTRIAL REVOLUTION

Define the following terms:

- 1. Industrialization;**
- 2. A revolution;**
- 3. Industrial Revolution.**

- Industrialization is diversification and spreading out of industries in a given area or country.
- A revolution is a complete change.
- Industrial revolution is the sum total of radical changes in the economy. such changes could be industrial, structural, Technical, etc.

From mid 18th century, New machines of mass production were invented, which led to establishment of large scale factories that employed thousands of workers. New sources of energy were harnessed and used in driving the new machines. Production was continuous and workers were organized in shifts. Agriculture was replaced by manufacturing as the main source of wealth. Modern urbanized industrial societies replaced traditional economic and social life.

THE INDUSTRIAL REVOLUTION IN EUROPE

Identify the factors that contributed to industrialization in Europe.

- Availability of raw materials like cotton, silk, tobacco, sugarcane, gold, silver, etc, most of which were obtained from overseas colonies.

- New market for manufactured goods, which was provided by overseas colonies.
- High population growth, particularly in England, which provided a large domestic market and labor force to work in the industries.
- The agrarian revolution, which increased food production for factory workers and raw materials for manufacturing industries.
- Major changes in transport, with elaborate networks of water, road and railway transport, which provided a cheap and reliable transport system.
- Technical inventions and innovations, particularly in Britain, which resulted in making of new machines and establishment of new factories to rapidly increase industrial output.
- Discoveries made by industrial thinkers in the 15th century, which laid the basis for industrial revolution.
- **State/explain the characteristics of the Industrial Revolution.**
- Use of machines instead of human labor.
- the rise of a Factory system
- Large scale production of goods.
- Change in lifestyles.
- Use of steam power as a new source of energy.
- enough wealth due to rise of modern capitalism.
- Increased use of coal, iron and steel.
- Growth in science and application of scientific knowledge in production.
- Development in Trade Union movement to cater for workers
- Increased population.

Describe the two main phases into which the Industrial Revolution is divided.

The Industrial Revolution is divided into two main phases. These are:

- the Old Phase (1750-1850), which started in Britain and then spread to other European countries and North America.
- The New phase, which started in 1850 and is still going on.

USES OF VARIOUS SOURCES OF ENERGY

- Apart from wood, wind and water, the industrial revolution called for new sources of energy that could cope with emerging large scale factory production. Here, mineral resources served the purpose.

Coal

- Coal is an underground organic mineral. It first served as a source of industrial power.

Name/describe three types of coal.

Coal is found in three stages, namely:

- Anthracite coal, which is a soft type that burns at high temperatures to produce coke.
- Bituminous coal, which has low heating power and can be used for cooking and coal-gas production.
- Lignite coal, which is the dirty brown coal, with even less heating power's
- Anthracite was mostly used for it had high coking power. In the initial stages of the industrial revolution, the use of coal increased as it was required and used to heat water to produce steam. From 1750, coal continued to be a major source of industrial energy and was used in several areas related to industrial establishments and expansions.

State three uses of coal.

Coal energy was applied or used in:

- Iron smelting as it burnt for a period longer than that of charcoal.

- Heating water to produce steam, which was converted into fuel that drove locomotives and machines.
- Generating electricity for domestic and industrial use.

Identify the disadvantages/shortcomings of coal as a source of energy.

In spite of its long usage as a source of energy, coal has the following limitations:

- It is bulky.
- It is not found in all places.
- It is expensive to mine and transport from source areas.
- It releases dark carbon and sulfur Dioxide smoke when burning, which causes air, water and environmental pollution.
- It corrodes or blackens buildings.
- It is a nonrenewable source of energy.
- It encouraged industrial establishment only within the source areas, being a bulky product.

Oil

- Just like coal, petroleum is a drilled mineral. It is found in a big aqueous natural formation and was used from as early as 5000BC by such people as the Babylonians, Sumerians, Assyrians, the Chinese, the Arabs, the Persians and the Spaniards. It was the Arabs who pioneered the use of oil as a source of energy for lighting.
- With the invention of machines and engines, oil-based energy became most convenient. By mid 19th century, oil was widely used as a source of power in industries throughout Europe and north America.
- The modern petroleum industry began with extraction of kerosene from crude oil for domestic lighting. Due to scientific discoveries and inventions, crude oil is now refined into different grades for use by various machines.

Explain why oil is most used today.

(Explain why oil is the most used source of energy. Or:

What are the advantages/benefits of using oil as a source of energy?)

- It is conveniently accessible in its required quantities to individual and industrial users.
- It is cheaper and easier to transport.
- It is multipurpose, ranging from generating electricity in machines to direct burning as in the case of kerosene.

Explain the drawbacks in the use of oil.

(What are the disadvantages of using oil?)

- It is very expensive as it is a mineral found only in certain places and countries.
- Its extraction requires heavy expensive machinery, which has hampered its exploitation in less developed and developing countries.
- It is a major foreign exchange consumer for non-oil producing countries.
- Oil producing countries set monopolistic controls and cartels.
- It is irreplaceable (the source area is not replenished) once the oil is mined. This causes fear that the world economy would slump should oil run out.

Steam

- Steam power was not quite a new idea. In the 1st century BC, the hero of Alexandria used it to open the massive doors of temples in Egypt where it also was a source of energy for domestic use.
- In the 18th century, industrial use of steam power commenced following the invention of steam driven engines. In the 16th century, Thomas Savery successfully built a steam engine that

pumped water out of coal mines. This engine was modified by Thomas Newcomen and James Watt in the 18th century. By early 19th century, steam engines were used in industries in Britain.

Explain how development of steam power contributed to industrial growth in Europe.

- It was used for pumping water out of coal mines and into factories.
- It was used in steam powered locomotives and ships.
- It was used to drive heavy machinery in factories.
- It was used to turn turbines that generated power for industrial use, E.G. driving weaving and spinning machines in the Textile industry.

What are the disadvantages of steam energy?

- Its supply depended on availability of coal to heat the water.
- Its coal-based generation made it expensive.
- It is convenient for use in and was made a preserve of the heavy machinery factories.
- It was inaccessible for wide domestic use.

Electricity

- Electricity is power supplied by electrically charged electrons through cables.

Identify/name the sources of electricity.

Electricity was invented by Michael Faraday in 1831. Since then, Various sources have been harnessed for its supply, such as:

- Geothermal geysers,
- Biogas from wastes (manure),
- Electric dynamos and motors,
- Water,
- Solar energy,
- Nuclear energy,
- Wind.

In what ways is electric energy important?

(Explain the importance/advantages of electricity as a source of energy.)

- It is easily and conveniently distributed through regulatory switches along electric cables and lines.
- Electric cables are flexible and can be installed as per specific requirement.
- With the motor, electricity is used to produce various sizes and shapes of electric-charged items like heaters and refrigerators.
- It is produced by various sources (water, petrol, atomic, nuclear, biogas and geothermal generating machines).
- Industrialization in the world today is closely linked with the development of electricity-generating plants.

What are the limitations of electricity as a source of energy?

(Explain the disadvantages of Electricity as a source of energy.)

- It is expensive.
- It requires heavy machinery to install.
- Its accessibility is limited due to its high dependence on water, oil or radioactive elements.
- It requires well trained and other highly technical personnel for its installation and maintenance.
- It is a highly dangerous source of power, capable of causing destruction to life and property from a simple technical fault.

THE USE OF IRON AND STEEL

➤ Iron is a mineral obtained from ferrous ores.

Identify the industrial shortcomings of iron.

With the Industrial Revolution, use of smelted iron increased, although iron products were soon realized to have various industrial shortcomings such as the following:

- On its own, iron was weak and brittle.
- It could not be relied on in making machinery.
- It was too heavy to transport, which hampered its use in construction and building.
- It easily rusted on exposure to water or moist air.

What is Steel?

➤ Steel is an alloy (mixture) of iron and carbon. It is lighter, flexible, stronger and harder than iron.

Apart from Carbon, name other metals that are used in steel production.

(Explain how steel is made/produced. Or:

Describe the methods used in steel production. Or:

Identify two processes of steel production.)

- Different qualities of steel are attained by adding various metals such as coromium, Vanadium, or Tungsten. For example, stainless steel commonly used in cutlery is an alloy of steel and Coromium.
- The production of steel in Britain in 1856 by Henry Bessemer made smelted iron durable. Steel is a product of highly heated iron exposed to or mixed with carbon. Bessemer applied Frederick Siemens' and William Martin's Open-Hearth process in heating iron ores.
- With advancements in technology, steel was made from scrap iron metals. The Electric Furnace process was developed and applied along with the Open-Hearth method, leading to manufacture of durable and better steel metals that were even stronger and lighter.
- Iron and steel products have been continuously improved.

Identify the uses of iron and steel products.

Iron and steel products are widely used in:

- heavy and light machines for industrial and domestic purposes.
- Construction works E.G. ships, railway lines, heavy Machinery products, bridges and dams
- Building works, in which heavy iron and steel products are used as reinforcements.
- Storage containers. The stainless iron and steel products are used in the manufacture of food containers and utensils.
- Manufacture of surgical tools like blades, needles, etc, thus improving surgical science.

INDUSTRIALIZATION IN BRITAIN

Explain why the Industrial Revolution took place in Britain.

(Why was Britain the first European country to industrialize? Or:

Identify the factors that facilitated industrialization in Britain).

The development and expansion of industrialization in Britain from the 1750s was favoured by various factors such as:

- Early scientific inventions. Britain underwent an impressive and early scientific revolution from mid 18th century, which was pioneered by inventions in the textile industries, characterized by use of cotton and wool in cloth making as machines were introduced.
- Her great wealth, which had been accumulated from her trading and colonial empire, which she invested into her own industries.
- The fact that Britain had been a colonial power for many years, enabling her to acquire industrial raw materials and market for her cheap industrial products, which helped in shaping up her own and other European industrialization.
- Resources, particularly coal, iron and abundant agricultural raw materials from within and from her foreign colonies and other trading partners.
- The agrarian Revolution, characterized by Land Tenure and Land Enclosure acts, which promoted large scale farming and provided an easily accessible unskilled industrial labor force for factories.
- Ready market for industrial products as provided by the large British and colonial as well as commonwealth population.
- A well developed transport and communication network, which facilitated movement of industrial goods and products.
- Best trained and equipped naval forces, essential in protecting the merchants in trading ports and guarding sea routes from pirates and other intruders.
- Slave labor, especially in plantations and mines in colonies, whose cheap and easily available services enhanced British, European and American industrialization.
- A well maintained banking and insurance infrastructure because of the provision of credit and security services to the investors, with postal and telephone services to link the industrial centers.
- A long history of internal political stability, which is a prerequisite to industrial investment and development.
- An abundant supply of skilled labor, with well trained management and technical personnel, reinforced by enterprising industrialists and scientists, who invested in research, science and technology.
- Government policy, which encouraged a Free and Open Market economy as well as individual or Private Sector investment.
- Well established courtage industries, which pioneered large scale factory investments.
- Capitalism, which encouraged British nationals to form companies to venture into industrialization. Because of this, industrial investment grew rapidly in Britain.
- Removal of all internal customs, barriers and other factors that could hinder industrial development.
- Adequate energy resources I.E. wood, steam, coal, electricity, nuclear and atomic energy for industrial use.
- All these factors explain why the industrial revolution took place in Britain ahead of other European countries. By 1870, Britain was the most industrialized country and a major world power. In spite of stiff challenges from north America and her continental European neighbours, Britain remarkably maintained her industrial development in the 20th century and is one of the leading industrial powers in the world today, being a member of the Great Eight (G8), which is an organization of eight most industrialized countries in the world.

INDUSTRIALIZATION IN CONTINENTAL EUROPE

- From Britain, the Industrial revolution spread to continental Europe. By 1850, continental European nations started experiencing Industrial Revolution changes. Like Britain, continental European nations had adequate supply of coal, iron, steel and a free mobile working population.

Give reasons for delayed industrialization in Continental Europe.

- Political upheavals in Germany, France and Italy.
- The feudal economy, causing the peasant farmers to fail to provide the domestic market.
- Lack of funds for the industries due to the Feudal economy.
- Lack of adequate raw materials.
- Poor transport network for industrial take-off.
- Lack of an enterprising class of people.
- Lack of skills in science and technology.
- Large scale industries in Europe grew rapidly after 1870. coal remained the main source of energy, though it was later on rivaled by mineral oil. By 1870, Belgium, France and Germany had emerged as industrial states. However, Britain still led, especially in establishing chemical industries, followed by Germany, which produced fertilizer from soda Chlorine and sulphuric acid.

Belgium

- From the Middle ages, Belgium had a fine cloth and iron making tradition and many thriving commercial towns. Coal was worked in Liege. Railways and canals were built and Belgium generally enjoyed free trade, with abundant labor. By 1870, most Belgians lived in towns and depended on industry and trade.

France

- In France, industrialization started in the period between 1848-1871. earlier, France was politically unstable because of the French Revolution of 1789 and the Napoleonic wars, which were quite demanding. Although France was quite rich in iron ore, coal was inadequate. Charcoal was used in iron smelting. Earlier, village housewives carried on with the linen industry. However, farming was preferred, which limited labor supply in industries.
- Cotton weaving factories were started in the 1820s. Railway construction started in 1845. Government involvement during the reign of napoleon iii) encouraged industrial growth.

Germany

- In Germany, Industrialization was first hindered by political disunity. Rapid industrial growth began in 1818.

Identify/explain the factors that contributed to industrialization in Germany.

- Formation of a customs union in 1818.
- Construction of the railway in 1835 and building of canals, which greatly improved transport and communication.
- Discovery of coal in Silesia in the Rhineland as well as abundance in other minerals such as iron ore, most of which she got from France in the 1870-1871 Franco-Prussian war.
- Growth of banking.
- Development of steel, electrical, chemical, iron and other industries, which made Germany a leading industrial power in Europe.
- Introduction of tariffs to limit competition against German products in the local market.
- An efficient education system for production and provision of a technological and specialized labor force.

- A larger domestic market and a bigger industrial labor force because of her population, which was bigger than that of Britain.
- Development of the chemical industry for production of fertilizer, synthetic dyes and other commodities.
- The political unification of 1871 (under Otto von Bismarck).
- Production of military hardware, particularly war planes, war ships, tanks, arms and ammunition, in which Germany invested heavily and which served as the basis for Germany's industrial expansion.
- Foreign support (considerable foreign aid), particularly from the USA, which gave Germany a big loan after the two World Wars of the 20th Century to help re-equip Germany's engineering, chemical and motor industries in order to revive Germany's economy.
- Ample energy resources such as coal, hydro electric, nuclear, solar and bio-organic power, which formed the basis for and has enhanced industrialization in Germany.
- capital provided by banks, the government, the Affluent German entrepreneur and foreign donors such as the USA in form of loans, grants, subsidies, investment and prerequisite capital assistance to establish and reward the heavy iron, steel, chemical and other industries.
- Entrepreneurship I.e. a lot of capital put by enterprising investors in steel, metallurgy and machinery production.

Explain the problems that Germany experienced in her effort to industrialize.

(Explain the challenges facing industrialization in Germany.)

- Initial lack of enough capital to run private industries.
- Initial lack of manpower to exploit Germany's diverse resources.
- Initial disunity, characterized by independent feudal states with a relatively small urban population.
- Division of Germany into east and west in the postwar years, with the west Germans following a capitalist policy while east Germany adopted a communist approach. It was not until 1990 that Germany was once again unified.
- Postwar recessions, which badly affected the German economy.
- The 1990 reunification of Germany helped widen the scope of industrialization as the market expanded.
- By 1914, Germany led Europe in steel, chemical and electrical industries apart from being bigger than Britain in terms of size and population. Most of her workers were employed in the manufacturing industries.
- By the turn of the 20th century, most European states were industrialized. Japan, the USA, Canada, Russia, china, Brazil, India and south Africa among others had effectively developed their industries by and from mid 20th century.

State the effects of the industrial Revolution in Europe.

(Explain the results of the Industrial Revolution.)

- Large scale production of goods.
- Building of roads and railways, which boosted transport and communication.
- Rural-urban migration as people left the countryside to look for jobs, which led to development of towns and cities.
- Development of machinery such as combined harvesters.
- Increased exploitation of natural resources such as iron, coal and steel.

- Promotion of local and international trade. Manufactured goods were sold locally and the surplus exported.
- Creation of job opportunities.
- Promotion of science and technology.
- Setting up and enactment of laws by governments such as Britain, which introduced social reforms in education, pension and insurance schemes to alleviate or remedy poor working and living conditions in factories.
- Formation of trade unions to fight for workers' rights.
- Overcrowding and rise of slums due to poor housing, both of which resulted from rural-urban migration.
- Poor sanitation in towns, which led to outbreak of diseases like Cholera and Typhoid.
- Unemployment, which led to and caused an increase of social evils like drug abuse, theft and prostitution.
- The rise of social classes. The rich grew at the expense of the poor.
- Pollution, which increased due to poisonous gases emitted from factories.
- Women and children worked for long (twelve to eighteen) hours with low pay under poor conditions.
- The scramble for and partition of Africa among European powers. Colonies produced raw materials for industries and served as markets for manufactured goods.
- Rise of Marxism. Karl Marx (1818-1863) condemned capitalism due to its exploitative nature. Marx advocated communal ownership of property through Socialism.

Explain how the Industrial Revolution brought a new lease of life in Europe.

(Explain how the Industrial Revolution gave a new lease of life for agriculture.)

- There was ready market for agricultural products in the industrial towns.
- Artificial fertilizers and pesticides were invented.
- There was cure for livestock diseases.
- Agricultural performance was enhanced through invention of machines that could perform various tasks such as ploughing of land, harvesting and thrashing of crops.

In what ways did the industrial revolution boost banking and insurance in Europe?

(Explain how the Industrial Revolution boosted banking and insurance in Europe.)

- Establishing a new factory required a big financial outlay and was only possible with backing from the bank.
- Banks extended credit facilities to industrialists to either start business or improve existing ones.
- Workers needed and had to be covered through insurance against accidents in factories.

In what ways did the Industrial Revolution fuel Rural-urban migration in Europe?

(Explain why rural-urban migration in Europe occurred during the Industrial Revolution.)

- Better wages were paid in the urban centers unlike the countryside where they were low.
- Rural craftsmen drifted to towns in search of work because there were no buyers for their products as factory goods were cheap.
- There was the spirit of adventure, by which many people left their traditional homes for possible city excitement.
- There were better medical services in urban centers.
- People lost their employment and land due to Enclosure and other agricultural changes in the countryside and were forced out of their ancestral homes to look for better life in towns.

Explain why conditions in factories and mines were bad in the wake of the Industrial Revolution.

(Describe the bad conditions experienced by workers in factories in the wake of the Industrial Revolution.)

- Workers' comfort and safety were not regarded as machines were being designed
- Deformities sometimes resulted from the long hours of work.
- Workers aged faster due to lung problems,.
- There was the danger of explosions, which could cause various irreversible effects, including death.
- The unnatural physical exertion that mining required.
- The fact that whoever had an accident and could no longer work was dismissed without compensation.
- Employment of children below nine years of age, particularly in the linen industry, which raised general concern and publicity in the 19th century.

FORMS OF POLLUTION CAUSED BY THE INDUSTRIAL REVOLUTION

- Industries caused sound, air, water and other forms of pollution, which led to grave consequences.

Explain the consequences of sound, air, water and other forms of pollution following the Industrial Revolution.

- Cities became permanently clouded in smoke. Mexico city is a good example here.
- The effluent emptied into rivers, lakes and seas from factories led to water pollution, death of aquatic lives and drying up of vegetation.
- Noise produced by the factories led to health problems for workers, who had their eardrums interfered with.
- There emerged strange diseases that had never been seen before, E.G. Cancer.

Give examples of laws that were passed in Parliament in order to arrest the bad working situation in industrial Europe.

(Give examples of laws that were enacted to ensure good working conditions in Europe.)

- Employment of nine-year-old and younger children was prohibited.
- Working hours per day were reduced to eight. This was later accepted as the universal limit, particularly by the International Labour Organization (ILO).
- Inspectors were appointed to ensure strict adherence to the new conditions.
- Whoever had an accident or could no longer work would be retired (with pension or compensation) instead of being fired.
- Social Security funds, pension, compensation, allowances and other benefits were awarded to jobless and disabled persons.
- Maternity and sick leaves were introduced for women and workers with health problems.
- Insurance policies were enacted to cover factories and workers against accidents.
- Industries would have to ensure that their activities and products are environment-friendly in order to control pollution, depletion and destruction of the environment.
- Protection against extinction was introduced for endangered species of living creatures such as elephants, rhinos, etc.

Identify the problems Europeans faced as a result of the Industrial Revolution.

(What problems/difficulties did the Industrial Revolution cause in Europe? Or:
Explain the problems encountered by Europeans as a result of the Industrial Revolution.)

- Landlessness due to the Enclosure system.
- Unemployment due to mechanization of farms.
- Rural-urban migration as people went searching for jobs in factories in towns.
- Poor living conditions, mainly due to overcrowding.
- Springing up of slums, poor sanitation and outbreak of diseases.
- Increase in crime rate and other social evils due to unemployment.
- Subjection of people to poor working conditions, long hours of work and low pay.
- Pollution and the problem of Acid Rains.

RESULTS OF FORMATION OF TRADE UNIONS DURING THE INDUSTRIAL REVOLUTION

- Organization of workers on class basis.
- Collective struggling by workers for improvement of their economic conditions.
- Raising of one voice by workers to get their problems looked into and difficulties removed.
- Organization and assistance of unemployed people to obtain Unemployment Benefits from the government.
- Adoption of various reliable ways for workers to achieve their aims and objectives.
- Building of a better and just society whose members could lead full, rich and satisfying lives.

In what ways did the industrial Revolution in Europe promote colonialism?

(Explain how the Industrial Revolution promoted colonialism.)

- Colonies served as sources of raw materials for industries.
- They served as markets for the manufactured goods.
- They were used as outlets where surplus capital could be invested by European powers.
- Some European powers would use colonies to settle their surplus populations.

SOCIAL EFFECTS OF THE INDUSTRIAL REVOLUTION

- Socially, the industrial revolution had positive and negative effects.

Positive effects

- Emergence of modern urbanized industrial societies in place of traditional ones.
- Improved living standards and styles (change of life styles).
- Widespread and faster urbanization.
- Better medical conditions, coupled with high birth rate, early marriage and decline in death rate.
- Rapid population growth, especially in urban centers.

Negative effects

- Diseases such as Typhoid, Dysentery, Cholera and TB increased with growth of new industrial towns. Town dwellers suffered more than those in the countryside.
- Slums sprang up and were crowded, which led to poor sanitation and lack of hygiene.
- The rate of death shot up as diseases increased.
- Habitual drunkenness was common among industrial workers, who drank more spirits than wine.
- Houses lacked sewers and other private conveniences, which led to careless disposal of refuse and waste, resulting in a bad stench and blocked gutters, which is still common today especially in third world cities.
- Pauperism (the state of begging) due to widespread unemployment in industrial towns.
- Emergence of revolutionaries and organizations opposed to the state in the early 19th and 20th centuries due to extreme poverty.
- Bad conditions in mines and factories.

- Employment of women and children, which was common all over Europe, especially in England and Germany, where even four-year-old children were employed, particularly in the Linen industry.
- Pollution, which led to grave consequences.
- Diseases and malpractices such as prostitution, homosexuality, etc, which spread faster to wider societies.
- Scramble among European powers for colonies in places outside Europe, particularly in Africa.

Political effects

- With England, Germany and France on the forefront, governments had to take steps to arrest the bad working situation in industrial Europe in the following ways:
- Laws were passed in parliament laying down and enforcing good working conditions. (Look at ‘LAWS ENACTED TO ENSURE GOOD WORKING CONDITIONS’ for clarity).
- Employees formed trade-unions to collectively and strongly claim and defend their rights. (Look at ‘RESULTS OF FORMATION OF TRADE UNIONS DURING THE INDUSTRIAL REVOLUTION’).

Economic effects

- Establishment of large scale factories and employment of thousands of workers.
- Discovery and harnessing of new sources of energy for driving the newly invented and other machines of mass production.
- Dependence on manufacturing as the main source of wealth.
- Speeding up of delivery of raw materials and finished products as transport and communication were boosted.
- Expansion of international trade as industrialized countries were looking for raw materials to buy and markets to sell their products.
- New lease of life for agriculture.
- More importance or value for banking and insurance to many.
- A lot of rural-urban migration.
- continuous and massive production, with workers organized in shifts.

THE SCIENTIFIC REVOLUTION

Define the term *Scientific Revolution*.

- The Scientific Revolution refers to a sudden change in the field of science. It was a period in history when man made many discoveries about his surrounding and the entire universe. The Scientific revolution began in Europe during the Renaissance period (about 1400AD) , when rebirth of learning and exploration was witnessed. In fact, the term Renaissance means Reawakening or Rebirth.

The discoveries and developments in science from the Renaissance period were an improvement of the world’s ancient civilizations and developments in early science, especially in medicine, astronomy, biology and geometry in order to solve human problems in arithmetic, architecture and design, thus increasing human knowledge and understanding about the universe.

SCIENTIFIC INVENTIONS

1. Describe the two stages into which the period of Scientific Inventions is divided.
2. Describe the contributions of ancient Egypt to scientific development.

3. In what areas of science were ancient Chinese famous?
4. Identify the contributions of Arab and Muslim scholars in the field of science.
5. Describe the role of ancient Indians in the field of science.

The period of scientific inventions is divided into:

- Ancient science, in which we study the contribution of ancient civilizations to the development of early science long before the Renaissance period.
- Modern Science, in which we study the progress of science during and after the Renaissance period.

Ancient science

EGYPT

The ancient Egyptian scientific development was greatly influenced by the need to solve daily problems as follows:

- As mathematicians, the Egyptians constructed wonderful pyramids (tombs) for their pharaohs
- They invented and used Geography on their farms.
- In medicine and surgery, they are known for preservation (Mummification) of dead bodies, many of which have been found in almost perfect state in spite of their having been buried more than 5000 years ago.

THE CHINESE

These are known or famous in the following areas:

- In Astronomy, they were the first to record Halley's Comet, a heavenly body with a very bright head and less luminous tail orbiting round the sun. In 1804, Edmund Halley (an English scientist) found that the comet was visible from earth once in every 76 years. Indeed, it is after Halley that the comet was named.
- They discovered how to make silk clothes from the silk worm.
- They invented and were the first to use printing, hence they contributed to the development of writing

ARAB AND MUSLIM SCHOLARS

- In Astronomy, they studied the writings on the Solar System by Ptolemy: a Greek scientist.
- In Mathematics, they borrowed and brought the idea of "Zero" from the Indians and simplified multiplication. Some of their numerals were accepted in Western Europe and came to be part of modern numeration.
- In medicine, Muslims were famous doctors. They wrote medical books, which Europeans later translated and used.
- They developed architecture through their style of building mosques.
- They developed book-making, which they copied from the Christians.

ANCIENT INDIANS

- They introduced "zero" in Mathematics, which made multiplication easier.
- In medicine, they found cures for Leprosy and snake-bites. They could perform simple operations and mend broken bones.

MODERN SCIENCE

Modern Science is based on developments in Western Europe from the Renaissance period through the Industrial Revolution, during which many discoveries were made about the universe, ushering in the Scientific Revolution.

The Scientific and Industrial Revolutions were closely associated since both began in Britain.

Discoveries of new scientific fields were due to efforts to solve industrial problems.

Explain the factors that led to the Scientific Revolution.

- ❖ The Renaissance (rebirth) period in Europe, during which people developed interest in research and further learning.
- ❖ Funds availed by European nations for scientific research, which encouraged scientists to undertake research.
- ❖ The invention of the printing press, which led to the spread of scientific knowledge and skills as people shared knowledge through books and other publications.
- ❖ The desire to answer questions that religion could not address.
- ❖ Desire to find solutions to the many challenges facing humanity.
- ❖ Overseas exploration and discovery of new lands, which stimulated learning.

Identify any five inventors and the contributions they made to Modern science.

The following are some inventors and the contributions they made to modern science:

- ❖ Robert Boyle discovered the importance of air in combustion and respiration. He established that the pressure and volume of gas are inversely proportionate. He invented the air-pump.
- ❖ Copernicus (1473-1543) proved that the earth is one of the planets in the Solar System and that the earth rotates on its axis and revolves round the sun.
- ❖ Galileo Galilei (1564-1642) confirmed Copernicus' theory of motion. Using a telescope, Galileo discovered that there were satellites traveling in orbit around the planet Jupiter.
- ❖ Isaac Newton (1642-1727) discovered the force of gravity, by which the moon is pulled to the earth and the earth is pulled to the sun. He also invented the Reflecting Telescope, which was an improvement of the one Galileo had used. While producing this telescope, Newton discovered the Spectrum i.e. the different colours that make up light.
- ❖ Antoine Lavoisier (1743-1794) made successful experiments in chemistry and discovered that all chemical substances are made up of different elements, e.g. water is made up of oxygen and hydrogen.
- ❖ John Dalton (1766-1844) discovered the 'atomic' theory i.e. atoms are the smallest elements of matter. He also discovered and described color blindness.
- ❖ Michael Faraday (1791-1867) invented and made an electric dynamo, having studied the relationship between magnetism and electricity. He pioneered the Electricity era.
- ❖ Charles Darwin (1800-1882) proved that all living things (which he classified as Species), including Man, were products of Evolution and development over millions of years from simple life-forms to complex species. In 1859, he published his theory of evolution in his book called The Origin of Species.
- ❖ Edward Jenner (1749-1823) invented a vaccine against Smallpox, which was a Killer-disease at that time. He discovered that those with Cowpox survived a smallpox attack. He therefore used fluids from Cowpox patients to develop the vaccine that brought Smallpox under control. Today, vaccination against Smallpox is so basic as a medical service in most countries that people are not allowed to travel outside their own countries before or without vaccination.
- ❖ Benjamin Franklin (1706-1790) proved that lightning was a form of electricity.
- ❖ William Morton (1819-1868) discovered that by using Ether during surgery, patients could be kept asleep and feel less or no pain. This helped a lot since before mid 19th century, patients endured a lot of pain, for they were operated on while awake.
- ❖ Louis Pasteur (1822-1895) discovered that decay in animal and vegetable substances is caused by microbes floating in the air. He invented the process of Pasteurization for the preservation of liquid food such as milk. His work also influenced canning of solid food.
- ❖ Joseph Lister (1827-1912) discovered Carbonic acid, which he used as antiseptic to clean surgical instruments and the wound after an operation. Carbonic acid killed the microbes that

got into the wound and disinfected the surgical instruments. Lister then developed an antiseptic spray, with which he could spray and keep the air around the wound clean. Operations were now more hygienic unlike the period before Lister's discoveries, when doctors were unclean while the instruments they used were crude and dirty. Initially, most patients died during or after operations. But with Lister's inventions, most patients survived and would live after surgery.

Identify scientists from the United States of America and their contributions to modern science.

- ❖ In 1877, Alexander Graham Bell invented the telephone.
- ❖ In 1879, Thomas Edison invented the electric lamp.
- ❖ In 1903, the Wright brothers (Wilbur and Orville) were the first to fly in an aeroplane. It was from this that space exploration developed, which saw American astronauts landing on the moon in 1969.
- ❖ Henry Ford invented the mass production of motor vehicles.

IMPACT OF SCIENTIFIC INVENTIONS

Explain the agricultural impact of scientific inventions.

(State the results of scientific inventions in the field of Agriculture. Or:

Identify the improved methods of farming and animal husbandry which resulted from scientific inventions.)

Better yield and increased food production due to improved farming methods and animal husbandry such as:

- Cross-breeding in both crops and animals.
- Use of artificial fertilizers to improve soil quality.
- Increased use of pesticides.
- Use of machines on farms in place of human labor.
- Development of food preservation methods like canning, pasteurization and refrigeration.
- Increased income and exchange among other benefits of farming.
- Cultivation of cash crops in addition to or rather than relying just on food crops.
- Increase in population due to healthy feeding.
- More scientific research as agricultural schools and colleges have been set up for research in seeds, control of pests and diseases.
- Diversification in agriculture as new methods of farming such as biotechnology are developed.
- Setting up of large-scale farms.
- Problems of soil-infertility due to continuous and in some cases improper use of fertilizers.
- Disregard for traditional crops (which are resistant to drought and diseases) due to reliance on biotechnology.
- Consumption of chemically treated/stored foods, which raises fears of some types of cancer and heart diseases.

Explain the industrial impact of scientific inventions.

- Invention of various sources of energy such as coal, petroleum, steam power, etc.
- Invention of steam-engines, which boosted building of factories, mills, etc.
- Growth of small villages/trading centers into crowded cities.
- Invention of electricity, which was used for lighting and as a source of industrial power.
- Building of new iron and steel factories, which provided raw materials for the building of machines, railway engines and motorcars.

- Increased production of industrial goods.
- Creation of job opportunities.
- Pollution as industrial waste is emitted into the atmosphere.
- Development of dangerous weapons, like the Atomic bomb, which have destroyed and endangered human life, as was with the bombing of Hiroshima and Nagasaki in Japan in 1945 as well as the attack on the World Trade Centre in the USA on 11th of September 2001.
- Joblessness/unemployment due to use of machinery.
- Improvement of transport and communication.

In what ways did scientific inventions contribute to improvement of Transport and Communication?

- Great railways were built in America and Europe, e.g. the Great American and the Trans-Siberian railways.
- High-speed electric trains are used, mainly in developed countries.
- Fast-moving aeroplanes like rockets and jets are used worldwide for navigation, warfare and space exploration.
- Mass media such as the Printing press, radio, television and the internet were invented and are still used in spreading knowledge and boosting communication worldwide.
- Telex and telefax machines.
- Man and information could move quickly across the world within a short time.
- Worldwide spreading of knowledge and information, which has turned the world into a global village.

Explain the medical impact of scientific inventions.

- Use of vaccines and drugs to control human diseases, which in turn led to high population growth due to improved health and longer life-span.
- Setting up of more industries to meet the high demand for goods of all kinds.
- Reduction, prevention and eradication of dangerous diseases and epidemics.
- Cure for killer diseases such as smallpox.
- Dispensation of treatment in addition to controlling, preventing and curbing killer diseases, which have helped in reducing human suffering.
- Performance of surgical operations in a cleaner, safer and less painful way than before due to invention and use of Ether and Carbonic acid. Furthermore, a majority of patients survive operations.
- It is possible to have plastic surgery, which gives a person a new look.
- Invention of X-ray, through which internal body parts are seen.
- Transplant of organs like the heart, liver and kidneys is now possible.
- Development of babies in Test Tubes through external fertilization, which helps remedy childlessness.
- Development of modern postmortem examinations, pioneered by Andreas Vesalius (1514-1564), who performed the first dissection of corpses.
- Discovery of blood circulation, blood-groups and blood transfusion.
- Better living standards due to improved health.
- Decrease in mortality rate, leading to high population.
- Malpractices such as abortion, which has caused many deaths.
- Abuse of some drugs, leading to negative psychological effects.

Identify the setbacks to the scientific revolution in developing countries.

SETBACKS TO THE SCIENTIFIC REVOLUTION IN DEVELOPING COUNTRIES

Scientific advancement in the third world has been undermined by various factors such as the following:

- Inadequate funds.
- High levels of illiteracy.
- Inadequate manpower due to Brain Drain, as skilled and energetic persons migrate to other countries, particularly the Western world.
- Poor policies/planning by governments.
- Poor/lack of budgetary allocation to support scientific research.
- More theoretical than practical education curriculum. E.g., Maths and science are perceived to be difficult.
- Dependence on developed countries, which has badly affected their initiative and creativity in scientific undertakings.

EMERGENCE OF WORLD INDUSTRIAL POWERS

The development in science and the subsequent Industrial Revolution from the 1750s caused many countries to advance in science and technology and to have well developed industrial investment.

Name any five World Industrial powers.

- Britain,
- Germany,
- Belgium,
- France,
- The USA,
- Russia,
- China,
- Japan.

THE UNITED STATES OF AMERICA

The United States of America (USA) was an English colony that gained her independence in 1776. After her recognition as an independent nation in 1781, many people started migrating into the USA from Western Europe. The emigrants helped in exploitation of America's natural resources, which enabled the USA to grow economically.

Explain/give the reasons for fast industrialization in the United States of America.

(Explain the factors that facilitated fast industrial growth in the USA. Or:

Discuss the factors that led to emergence of the USA as an industrial power after 1945.)

- Availability of minerals such as coal, iron, copper and oil. Forestry was also a necessary resource.
- Good transport and communication network.
- Ready market at home and abroad.
- Technological knowledge of the pioneers.
- Economic measures introduced by President Theodore Roosevelt in 1901 to strengthen America's industries. For instance, he passed Conservation laws to prevent careless use of US natural resources.

- President Woodrow Wilson's "New Freedom" reforms, which freed the US economy from domination by vast business monopolies and gave ordinary people the opportunity to better themselves.
- The "New Deal" Economic Recovery program, introduced between 1932-1944 by Franklin Delano Roosevelt, which restored economic growth after the Great Depression of the 1920s and early 1930s.
- American unity and long period of political stability due to strong leadership.
- Discovery of Petroleum (oil), which became important for export and as a source of industrial power.
- America's policy of isolation and neutrality, especially in the First and Second World Wars, which enabled the USA to have an earlier and uninterrupted industrial take-off. She only fought when attacked. For instance, she got into the First World War in late 1917 when Germany attacked her Merchant ships. She entered the Second World War late in 1941 when Japan bombed an American naval base at PearlHarbour in Hawaii.
- America's scientific inventions and technological advancement, which made the USA to lead in world scientific development, especially in space exploration, which was intensified after the USSR, sent a Sputnik satellite into earth's orbit in 1957. America landed the first man on the moon in 1969.
- Military Industrial Complex. After the First and Second World Wars, there developed the Cold War between the USA and the USSR, of which the USA took advantage to produce and manufacture arms, which she sold and therefore contributed to fuelling trouble between nations. The Cold War collapsed, with the dismantling of the USSR in 1991, meaning that America could now dominate the world by controlling the supply of military hardware, which strengthened the military industrial complex in America.
- Availability of funds.
- Foreign investors, e.g. from Britain.
- Enterprising citizens, ready to venture into business e.g. Andrew Carnigie.
- Availability of raw materials like cotton, wheat, tobacco, etc.

Explain the benefits of President Woodrow Wilson's "New Freedom" reforms.

(What were the results of President Woodrow Wilson's "New Freedom" reforms in the United States of America?)

- Strengthening and diversification of the economy.
- Taxation of high incomes.
- Increased rights for trade unions.
- Encouragement of farmers to borrow money, which made agriculture profitable and established agricultural industries.
- Ample food for urban industrial workers and abundant raw materials for industries.

What were the benefits/results of President Franklin D. Roosevelt's "New Deal" economic recovery program (1932-1944)?

- People's confidence in the banks was restored.
- Employment was created through public works, such as road-building, dams, schools, forestation and land reclamation.
- Farmers retained their property and were protected from losing it due to failure to pay mortgages.
- Social Security was enacted, with pension for older people and Unemployment insurance for unemployed people.

In what ways did unity and prolonged political stability promote industrial growth in the USA?

(Explain how American unity and long period of political stability boosted her economy.)

- The USA made tremendous economic advances.
- Railways were built over much of the country.
- Industrialization took a faster pace due to abundant production of steel, which, to this day, is the basis of industry in the USA.
- Profits got from agricultural and other resources were devoted to industrial upkeep rather than war expenditure.
- Unlike the case in war-ravaged countries, whose citizens were forced into military conscription, Americans were sent to learning institutions for industrial and other training.

Explain the influence of the policy of Isolation and Neutrality on industrialization in the USA.

(Explain the results of America's policy of isolation and neutrality, especially in the first and Second World War.)

- America suffered less from the ravages and destructions caused by the wars.
- America's industries, towns and infrastructure were not destroyed.
- The USA emerged economically stronger and militarily more powerful.
- The USA militarily and economically reconstructed war-torn Europe through the Marshall plan, under which American money and resources were spent on helping her European allies to rebuild their economies.

JAPAN

- In early 17th century, Japan's policy was that of isolating herself from the rest of the world. Agriculture was Japan's main economic activity. Cotton, silk, rice, tobacco and sugar were among the crops grown.
- In early 19th century, the USA, Britain, Russia and Germany forced Japan to give them trading rights in Japanese territory. Since Japan was a weak nation, she could not resist. With such humiliation, Japanese leaders thought of industrializing in order to be as powerful as the USA and Western Europe.
- While some clans such as the Choshu and Satsuma were willing to change and learn from the West, others like the Keiki did not want any Western influence. There followed a war, in which the Keiki were defeated in 1868 and a new government was set up under Emperor Meiji.
- A new government system based in Tokyo was introduced, which started the process of industrialization. The Japanese Work ethic that discourages idleness was introduced to speed up the process.

What were the results of introduction of the Japanese Work Ethic?

(Explain the importance of the Japanese work ethic in Japan's industrial growth.)

- Feudalism was abolished.
- Internal customs duties were removed.
- Railway lines were built and harbours modernized.
- Many students were sent to European countries to learn from the industrial technologies of the Western world.
- Education was made compulsory from 1872 onwards. By mid 20th century, Japan had the most literate people in Asia.

- A new taxation system was introduced to raise money for industrialization.
- Very tough measures were adopted and are still in place today against corruption and misappropriation of public funds.

Explain the factors that enabled Japan to emerge as an industrial power by the end of the 19th century.

- Import of European heavy machinery in exchange for silk. Such heavy machinery were used in starting new factories.
- Increased food production due to use of modern farming methods.
- Expansion of her external trade as she imported some of her industrial raw materials from foreign countries, which made her to start iron and steel industries for ship and railway building.
- Japanese government support in starting large capitalistic monopolies, such as Mitsubishi, Mitoni, Yasuda and Honda for easy management of the new heavy industries in which the monopolies invested.
- Ample raw materials due to her diverse natural resources.

Identify the resources that boosted Japan's industrial growth.

- Good climatic conditions that allow diversity in agricultural produce, especially cotton and silk, which enabled Japan to develop her textile industries.
- Hydro-atomic and solar energy, which supplemented Japan's dependence on imported coal and oil for the supply of industrial energy as Japan is not well endowed in mineral output.
- Forestry and fishery resources.

Industrialization strengthened Japan's military power. For instance, in 1895, Japan invaded and captured Formosa and Liantung peninsula from China. However, a combination of German, French and Russian forces compelled Japan to give back Liantung province to China.

In 1904, Japan fought and defeated Russia over Manchuria. During the First World War, Japan sold weapons and ships to Europe, which further strengthened Japan's economy. By the outbreak of the Second World War, Japan was so industrialized that she lacked enough raw materials. Furthermore, her population was growing very fast. Japan needed rubber, oil, steel and others for her heavy industries.

These and other factors made Japan very aggressive. Her armed forces were very influential. In 1931, she placed Manchuria and much of the Chinese coastline under her control. She then aimed at extending her control to south-east Asia, where she could get rubber, tin and oil.

The USA was determined to stop this expansion and to push Japan out of Manchuria. To stop the US problem, Japan thought it wise to attack the US naval fleet in the Pacific by surprise.

In late 1941, Japan attacked PearlHarbour. In response, the USA dropped atomic bombs on Hiroshima and Nagasaki. These two Japanese cities were totally destroyed. Japan surrendered and was occupied by American forces under General Douglas Mac Arthur.

Mac Arthur introduced reforms aimed at making Japan a liberal democracy. A new constitution was introduced, by which the power of the emperor was reduced, the people were given the power to vote and parliament became the supreme government body. With these reforms, peace and stability were restored in Japan. This created another chance for revival of Japan's economy.

After the Second World War, Japan's economic and industrial growth took off, enabling Japan to follow forward-looking policies, with minimal drawbacks. Since then, Japan has actively facilitated her industrialization and has grown into a major world industrial power.

Give reasons for emergence of Japan as a World industrial power.

(Explain the factors that led to emergence of Japan as a major world industrial power after the Second World War.)

- Political stability. Japan was transformed into a liberal democracy, which put in place a stable government chosen by the people, free from coups and other forms of instability.
- Investment in industrial and other establishments i.e. encouragement of foreign and local investment in Japan as Japan herself invested in other countries.
- Her large population, which provides labour for industries as well as a ready domestic market for industrial products.
- Japanese Government support for science and technology as evidenced in the establishment of the Tsukuba Science City near Tokyo in 1963, which boosted research and development in production of industrial goods.
- Financial and technical aid, particularly from the USA, which helped Japan to recover the losses she incurred during the First and Second World Wars.
- Industrial and economic diversification, whereby newly established industries dealt with chemical, metal, engineering and other forms of work.
- Construction of more hydro-electric power plants for provision of power to the industries.
- Building of more ship yards, which enabled Japan to produce more ships than any other country in the world.
- The fact that Japanese products are cheap and skilfully made. Japanese motorcars and electronic equipment such as radios, TV sets, Video sets, mobile telephone handsets, computers, tape recorders, refrigerators, clocks and watches are more marketable unlike those from other countries.
- The “Just In Time” strategy, whereby the government and industrial investors emphasized on precision and timely production to effectively compete in the world market and to meet the demand on time.
- The Free Market policy, whereby the Free Market economy of the Japanese government encouraged capitalistic investments, which created monopolies in industrial and commercial investment such as Mitsubishi, Mitani, Yasuda and Honda, with which Japan produced large quantities of cameras, computers, TV sets, motorcycles, vehicles and ships, which entered the international market.
- Entrepreneurship, whereby the Japanese people have generally been known as enterprising, with a good sense of investment. For instance, ambitious technological research-students designed communication and electronic gadgets such as radios, watches and calculators, which successfully entered the international market.
- Good transport and communication systems.
- An existing industrial base, which was not totally destroyed by the Second World War.
- The fact that the Japanese government encouraged expatriates to join their industries.
- The fact that industry was the only aspect of economic development, since only 2% of Japan’s land is suitable for agriculture.
- Rural-Urban migration. Following the feudal and education reforms, rural people moved to industrial centres for employment.

Explain the benefits of Rural-Urban migration to Japan’s industrial prospects.

- ✓ The Industrial centres grew into big towns and cities.
- ✓ The topography of the land in Japan was unfavourable for agriculture, hence people went to work in industries, which were and still are Japan’s economic mainstay, rather than remain idle and poor.

- ✓ Japan is counted among today's world industrial powers, which include Britain, Germany, the USA, China, France, Belgium and Russia, all of which constitute the G8 (Great eight) nations.

INDUSTRIALIZATION IN THE THIRD WORLD

Third World is a term used to refer to developing countries in Africa, parts of Asia and south America, most of which were once under colonial rule and had their economies influenced by the colonial masters. On attaining independence, most of the Third World have had to rely on aid from international organizations and the developed countries, particularly their former colonial masters for economic upkeep, which has greatly undermined their industrialization. However, some Third World countries such as South Africa, Brazil, India and Egypt have made admirable industrial attempts.

SOUTH AFRICA

Analyse/explain the development/process of industrialization in South Africa.

(Identify the developments that marked the beginning of the process of industrialization in South Africa. Identify the factors that influenced industrialization in South Africa.)

The process of industrialization in South Africa started with the following developments:

- The landing of Bartholomew Diaz: a Portuguese explorer, at what he called The Cape Of Good Hope in 1486, which made the Cape Province coast known to the outside world. By this time, there was little or no knowledge about the interior of South Africa.
- Setting up of a settlement at Table-bay in the Cape area by Jan Van Riebeck of the Dutch East India Company in 1652, which started the influx of Dutch and other European settlers, which culminated into the establishment of British occupation and rule in the cape in 1795.
- Discovery of diamonds in Kimberley from 1869-1871 and gold in Wit Waters Rand in 1886, which brought a new picture in the industrial history of South Africa and intensified the quest for minerals by European prospectors and industrialists, who rushed into the interior for their control.
- Establishment of Johannesburg Stock-exchange in 1887 to provide credit on finance capital.

Describe/explain the factors that facilitated industrialization in South Africa.

(Explain the reasons for industrial growth in South Africa).

- The unification of Boer and British republics in 1910 to form the Union of South Africa as a political entity,, which led to market enlargement and improved manufacturing and industrial investment.
- Mineral resources such as gold, diamonds, coal, copper, zinc, uranium and iron ore, which formed the backbone of the manufacturing industry.
- Internal scientific and technological investment encouraged by the white-led government due to international sanctions and bans against Apartheid South Africa. Through a deliberate education policy, the administration encouraged technological advancement locally.
- Capital. Under the Nationalist party and through major companies such as Debeers Iron and Steel industry Cooperation, the whites deliberately invested their capital in industry to meet the demands of their market.
- Entrepreneurship. There was a wide range of industrial plants and factories founded using agricultural resources. Besides, many enterprising South African Whites such as Cecil Rhodes (1889) and Delfos, who inaugurated iron and steel manufacturing in 1910, willingly assisted by investing in industrial development.
- Abundant agricultural and other natural resources such as fruits, grains, sugarcane and livestock, which provided ample industrial raw materials.

- Adequate labour supply. The deliberate Squatter-Landlord coexistence of Blacks and Whites made Blacks a ready and cheap industrial labour-force.
- A diverse demographic structure, suitable for an industrial economy. South Africa's large relatively diversified population of Blacks, Whites, coloureds, Asians and Malays provides a ready market for industrial products.
- Access to regional and international markets following the removal of sanctions by the international community from 1994 when South Africa got rid of the Apartheid system of government.
- A well-developed infrastructural network i.e. good roads, railways, communication systems and port facilities, which link all major cities and industrial centres and even extend to neighbouring countries. Cape Town, Port Elizabeth, Durban and Johannesburg are among the major industrial centres and cities in South Africa.
- The Natural Tariff advantage i.e. naturally favourable situation costs whereby bulky goods tend to be expensive to import from overseas or to transport to distant interior regions. Such a situation necessitates development of such industries in or near the raw material. This has encouraged rapid expansion of industries within their locality.
- Availability of sources of energy, particularly coal and hydro-electric power.
- Imposition of high tariffs on imported goods, among other industrial policies.
- The deliberate successive government policies of several years, based on Apartheid, which contributed to a more diversified industrial development that favoured Whites at the expense of Blacks.

Explain the influence of Apartheid on South Africa's industrial prospects.

- ✓ Amidst international sanctions and bans due to the Apartheid policy, the South African government provided funds to Whites, which boosted and encouraged local investment.
- ✓ Blacks were deliberately discriminated against through legislation and were forced to provide manual labour for building investments.
- ✓ The government legally facilitated Low-wages guidelines for Blacks to reduce running costs for investors.

Explain the challenges/difficulties facing industrialization in South Africa.

(Explain the hindrances/problems/setbacks to industrialization in South Africa. Or:

Explain the factors that undermine/limit/weaken industrialization in South Africa.)

South Africa's efforts to industrialize are undermined or hindered by various factors, such as:

- Long history of inter-racial conflicts and wars, which undermined industrial investment.
- Sanctions, embargoes, bans and boycotts by the international community against goods from south Africa during the Apartheid era, which caused her foreign market to remain closed for most of the post-world war ii) years.
- The fact that the internal market was limited by the racially-based system.
- Labour unrests i.e. frequent riots, demonstrations and strikes by racially frustrated Blacks and Coloureds due to racial labour policies during the Apartheid era.
- Inadequate infrastructure in areas inhabited by Blacks and coloureds, where transport, communication, banking and insurance was poor or lacking, which reduced exploitation of resources in areas referred to as Bantustans.
- Poverty among the population, which meant low purchasing power, hence the domestic market was affected.
- The state of Insecurity in the country, particularly during the Apartheid era, which discouraged foreign investment.

- The HIV-AIDS scourge, which has affected the country's labour force and finances.
- Inadequate skilled manpower.

In spite of these and other drawbacks, South Africa is among the most industrialized nations in Africa and the Third World. Her Rainbow inter-ethnic or multiracial status puts her on a good industrial footing. African and other nations ought to learn from South Africa's example for prosperity.

BRAZIL

Brazil is the largest of Latin (south) American states. After her independence from Portugal in 1822, Brazil depended for long on primary products. Before the discovery of coal, forests were the major source of fuel for Brazil's industries.

Identify the primary products that Brazil initially depended on after her independence.

(Identify the primary products that Brazil depended on before her industrialization.)

- coffee,
- rubber,
- cocoa,
- timber,
- maize,
- tropical fruits,
- Soya beans,
- cotton
- sugarcane.

Identify/describe Brazil's industries.

(Identify three industrial centres in Brazil. Identify the industrial/cash crops that are cultivated/grown in Brazil.

Name the minerals that Brazil is rich in.)

Industries in Brazil include:

- Coffee processing, which is the leading industry in Brazil. Coffee, which is Brazil's major export, is grown in Parana and Sao Paulo. Sao Paulo is the most developed and leading industrial centre in Brazil and the whole of South America.
- Sugar processing. Sugarcane is mainly grown around Salvador in north-eastern Brazil.
- Cotton processing, which boosted Brazil's cloth making endeavour?
- Lumbering, which was promoted by availability of raw materials got from Brazil's vast forest-belts? Timber is the main lumber product, although a variety of paper is also produced.
- Mining. Brazil is rich in minerals like coal, iron-ore, manganese, steel, dioxide, bauxite, gold and petroleum.
- Heavy industries. Brazil produces machines, tools, transport material, electronic equipment, heavy and light commercial vehicles, aeroplanes, boats and tractors.
- Steel and chemical production and export.
- Textile and leather production and export.
- Biotechnology, which mainly deals with production of poultry.
- Alcohol.
- Pharmaceuticals.

Brazil remained a primary product exporter, which caused fluctuation of prices and economic depressions. However, in the 1930s, the government of Brazil started a new policy aimed at encouraging establishment of heavy industries.

Identify the economic/industrial policies accredited to the rule of President Getulio Vargas (1930-1945) in Brazil.

(Describe the economic strategies/plans that were laid/realized in Brazil during the rule of Getulio Vargas in Brazil. Or:

Assess Brazil's economic/industrial achievements during the rule of President Getulio Vargas. Or:

What economic/industrial successes/steps did Brazil make during the rule of President Getulio Vargas?)

Under the rule of President Getulio Vargas (1930-1945), a thoroughly planned economy was created in the following ways:

- Major industries were nationalized for effective state supervision.
- Aid from the USA was used in developing heavy industries such as Volta Redonda steel Works.
- The state started to provide energy and transport to accelerate industrial development.
- Various economic (five-year) plans e.g. the 1956-1960 one which concentrated on increase of energy from coal, oil and hydro-electric power were inaugurated.
- Development of infrastructure, particularly roads and railways was focused on.
- New industries were started as old ones were expanded.
- Capital for the development of all these sectors was provided by the state.

Explain the factors that contributed to industrialization in Brazil.

(Give reasons as to why Brazil is one of the leading industrial countries of the Third World.)

- Ample raw materials obtained from her diverse agricultural, forest and mineral resources, with which she is well-endowed.
- Ample energy resources i.e. coal, petroleum, forests for provision of wood-based fuel and turbulent rivers, which provide hydro-electricity, all of which provide power for industries.
- Government policies and programs, characterised by a well-organized and planned approach, whereby industries were nationalized so that the state would be in a better position to supervise them effectively.
- Diverse climatic conditions, which promote the growing of various tropical crops like coffee, rubber, cocoa, maize and fruits.
- Foreign aid, particularly from the USA for the development of heavy industries e.g. Volta Redonda Steel Works.
- Good road, railway and telecommunication networks, which link major industrial centres and cities.
- Development strategies e.g. five-year plans undertaken by the government from 1950.
- Government funding in sectors such as energy and transport, which increased industrial investment.
- Market for her industrial products, which enjoy high demand within her large population and in the Latin and Caribbean Central American region.
- Ample industrial and manual labour, provided by her large population.
- Development of banking facilities that provided credit facilities.
- Political stability, which promoted industrial growth.
- Both skilled and unskilled workers from Brazil's large population.

Explain the factors that hinder/undermine industrialization in Brazil.

(Describe/identify the drawbacks/setbacks to industrialization in Brazil. Identify the problems experienced by Brazil in her efforts to industrialize.)

Industrial development in Brazil is hindered by various limitations, such as:

- Internal poverty and low purchasing power of her population.
- Poor transport system, particularly in rural areas, where roads are impassable, especially during rainy seasons.
- Under-exploitation and under-utilization of resources in some regions.
- Huge closed hinterland. There is little or no economic exploitation in the thick Amazon forest in the north and the vast Grosso plain in the south, which have not been fully penetrated in spite of their high potential.
- Imperial and neo-colonial exploitation in spite of her attainment of independence in 1822.
- General World trends e.g. conflicts between the industrialized powers, which have great bearing on her Foreign Trade relations and economy in general.
- Inadequate investors for promotion of industrial work.
- The fact that natural resources in Brazil are largely in the hands of multinational companies, thus undermining their exploitation by local companies.
- Inadequate trained manpower.
- Huge foreign debt, since a lot of money is spent on debt-repayment, leaving Brazil with little or nothing to invest in industries.
- Inadequate skills in science and technology, making her unable to fully exploit resources.
- The fact that foreign investors take the profits back to their home-countries, leaving Brazil poor.

In spite of all these and other obstacles, Brazil is one of the most industrialized Third World countries.

INDIA

Analyse the process of industrial development in India.

(Discuss the background to industrialization in India.)

- Development in India is associated with European entry there from the 15th century, especially her colonial master: Britain, from who India inherited many of her industries, transport and communication systems. Just like in Britain, the first factories in India were for spinning and weaving cotton to produce clothes. Since India grew cotton, many small spinning and weaving industries developed to the level of out competing those of Britain. Displeased with this, Britain banned importation of cloth from India. However, the Indians continued to process cotton. Many products were used in India.
- Heavy industries dealing with minerals like coal, iron ore and manganese were also started by the British colonial government. By the outbreak of the Second World War, industries in India were so advanced that everything needed for the war in south-east Asia was made in India.
- From 1848-1856, Lord Dalhousie (colonial India's first Governor-General) embarked on India's infrastructural development. He started with railways and roads. For instance, in 1853, the Grand-Trunk road from Calcutta to Punjab was opened. Postal services and electric telegraphs were established.
- Large scale cotton cultivation was encouraged by the colonial government. Cotton mills were built in Bombay and other textile industries set up. However, the British colonialists established industries in India with the aim of exploiting India's economic resources for the

benefit of the European Industrial Revolution. Raw Material was tapped for factories in Britain.

Describe the problems that India faced in her industrial prospects after independence.

When India got her independence in 1947, Prime Minister Nehru and his government tried to pick up from where the colonialists had left. But there were new problems such as the following:

- India's industrial base was small compared to the needs of her people.
- Rapid population growth.
- Food shortage.
- Poverty.
- Conservatism i.e. a society that was reluctant to change.

Analyse/describe postcolonial economic policies in India.

(Identify the economic policies that were introduced by the government immediately after independence in India. Explain the economic policies that India adopted after her independence.)

After independence, the government came up with policies aimed at modernizing India's economy, such as:

- Provision of education to produce technical and scientific experts needed in agriculture and industry.
- Development of initial heavy industry i.e. mining, ship-building, aircraft, heavy machinery and electrical equipment.
- Development of chemical production as well as road and sea transport by state and private enterprises. Textile, cement, paper and consumer goods remained in private hands.
- Introduction of Five-year plans for economic diversification.
- Decentralization of industries from large cities to highly populated centres to create jobs there.

Explain the economic policies initiated/adopted in India during the First Five-year plan (1951-1955).

- Introduction of modern farming techniques.
- Giving of soft loans to farmers.
- Improvement of seeds and animal husbandry.
- Establishment of irrigation, power projects and fertilizer plants.

Describe the economic/industrial strategies that characterised Five-Year plans in India.

(Describe/identify the main priorities in India's Five-Year plans.)

- The first Five-Year plan (1951-1955) gave priority to agriculture by modernizing and improving farming.
- The second Five-Year plan (1956-1960) concentrated on industrialization. This was when industries were decentralized from the cities.
- The third Five-Year plan (1961-1965) consolidated the achievements of the first two plans. The fourth Five-year plan (1966-1970) worked out details on how foreigners would be invited to invest their capital in India. The coming of British, Soviet and American investors made this plan materialize.

Give reasons for the success of industrialization in India.

(Explain the factors that contributed to the success of India's industrial development.)

- Efforts made by the first British governor to India: Lord Dalhousie, who introduced European education with the aim of bringing the benefits of the European Industrial Revolution to India. This made India one of the few countries that the colonizer thought of industrializing.

- Infrastructure i.e. building of railways and roads as well as establishment of telecommunication networks to link the industrial resources.
- Cottage industries, whereby the first factories built in India were small cottage spinning and weaving industries at home, which made local Indian textile industry to be banned in British domestic and other colonial markets since they out competed the British ones.
- Ample raw materials obtained from her diverse agricultural and mineral resources, enabling India to expand her industries and to supply most Second World War requirements in south-east Asia apart from production of heavy machinery in large scale.
- Prime Minister Nehru's policies that aimed at modernizing the economy as well as expanding established factories, leading to setting up of heavy machinery industries in Calcutta, Jamshedpur, Bangalore and Vizakhapatnam.
- five-year plans and other development strategies formulated by independent India's government, which resulted in great strides in industrialization.
- India's foreign policy, which encouraged investors from Britain, the USA, the former Soviet Union and other foreigners to invest their capital in India without repatriating profits back, which helped show how non-aligned India is.
- Power resources. India developed her coal resources for the supply of fuel to locomotives and industries and embarked on exploitation of her hydro-electric power resources from her rivers from Western Ghats highlands in addition to utilizing her nuclear energy to set up industries.
- Her large population, which supplies labour and provides a ready market for industrial products.
- Dual State-And-Private investment, whereby the state developed heavy industries such as mining, shipbuilding, aircraft, heavy machinery, electric equipment and chemical production in addition to construction of roads, railways and harbours while the private enterprises took up cement, paper and consumer industries.
- Large domestic and foreign market for Indian industrial products, which are cheaper and easily accessible.
- Entrepreneurship, whereby Indian traders have been known to be aggressive investors in Indian and Third World cities, especially in eastern and southern Africa.
- The fact that Indian traders who invest in foreign countries pump large sums of their profits back to the Indian economy.
- India's inheritance of some industries from her colonial master, which encouraged addition and mechanization of more industries.
- Trade with European nations such as Portugal, Netherlands and France, who established trading ports at various points in India.
- Good banking system, which helped ensure credit facilities to the industrialists.
- Science and technology skills and technical advice from Britain and the USA.

Describe/identify the industrial centres in India.

- Calcutta, which is an important mineral region.
- Jamshedpur, which has three iron and steel works, including a great plant. Locomotives, buses and machine tools are made here.
- Vizakhapatnam, which is known for ship-building.
- Bangalore, where machinery, aircraft and vehicles are manufactured. This area is also rich in iron ore and manganese.
- Bombay (Mumbai), which is the chief cotton manufacturing city in India. Cotton comes from the Deccan region.

- Western Ghats highlands, which are used for provision of hydro-electric power for India's industries. In addition to electricity and coal, India uses nuclear and oil as industrial fuel.
- Industrialization in postcolonial India was so successful that India recently became the first Third World country to explode a Nuclear weapon.

DRAWBACKS TO INDUSTRIALIZATION IN THE THIRD WORLD

Give reasons as to why industrialization in the Third World has not been rapid.

(Explain the problems that Third World countries face in their effort to industrialize.)

- Lack of adequate funds for investment in the industrial sector due to high population growth rate and rampant poverty, which causes reliance on loans, grants and aid from developed countries, which often have strings attached and high interest rates.
- Lack of skilled manpower and other technical know-how due to poor education systems that lay less emphasis on scientific, Technical and vocational training.
- Draining of the scarce financial resources due to reliance on expatriates, who are expensive to hire and maintain.
- Poor infrastructure due to little or lack of effort to develop and expand existing means of transport and communication, most of which were established during the colonial era to serve the interests of the former colonial masters. Because of this, third World countries have not fully developed and exploited their natural resources for the benefit of their people.
- Little or lack of market for local infant industrial products due to poor economic policies and stiff competition from High-quality and cheaply produced goods from developed countries. This has often led to collapse of some local industries in the Third world.
- Low purchasing power due to rampant poverty.
- Prohibitive protectionist measures by some governments, which discourage investors.
- High fertility rate, which calls for massive expenditure on food importation.
- Epidemic catastrophes such as HIV-AIDS, Ebola, Cholera, Dysentery and Malaria, control of which huge amounts of resources are spent on at the expense of industrial establishments.
- Political instability i.e. coups, civil wars and Border disputes, which slow down the pace of economic development.
- Natural calamities such as droughts, floods, etc, which also claim lots of lives.
- Large expenditure on military hardware for defence and security due to power struggles among leaders while economic prosperity is disregarded.
- Colonialism, during which resources were selfishly exploited, thus laying a weak foundation for a meaningful industrial take-off.
- Neo-colonialism, whereby, in spite of independence, economic resources in the Third World are still controlled and exploited through multinational cooperations and international trade.
- Brain Drain, whereby the Third World's few skilled personnel go to work in developed countries for better pay.

Explain the possible solutions to the Third World's industrial problems.

(Explain how problems encountered by third World countries in their industrial prospects could be remedied.)

- Reclamation of marshy and dry areas through drainage and irrigation for settlement and economic exploitation.
- Reduction of poverty and enhancement of investment by providing capital and credit to their people.
- Diversification of the economy and manufacturing industries.

- Boosting and encouraging regional cooperation for a wider industrial market.
 - Improvement of their people's purchasing power by increasing income.
 - Reduction of military expenditure.
 - Encouragement of industrial investment by giving incentive and protection to local manufacturing sectors.
 - Diversion of funds for the manufacture of products for the wider domestic and external market.
 - Development and extension of infrastructure and accessing all productive areas to go
 - transport and communication network.
- Promotion and provision of scientific and technological education to their people. With all these ideas, industrialization in the Third World could be achieved to the advantage and joy of all.

CHAPTER 4

URBANIZATION

What is urbanization?

- Urbanization is the process by which people are attracted to settlements of large human population. It involves human migration from rural areas to towns and cities. An urban centre is a settlement with a population of not less than 20,000 people.

Explain the factors that led to early urbanization.

(Outline the factors that led to emergence of urban centres in Africa.)

Urbanization started in the New Stone-age period. It occurred due to a variety of reasons, such as:

- Early Agrarian and Industrial development. Because of this, Man stopped migrating since he settled down to till the soil and domesticate animals.
- Rapid population growth due to improvement in food production and diet, which led to rural-urban migration due to scarcity of farmland.
- Division of labour and creation of other human activities apart from agriculture.
- Creation of the art of government to meet the need for security due to development of settlements, leadership, law and order.
- Trade, which developed due to surplus agricultural and industrial produce.
- Water, supply of which drew people.
- Religious and educational activities, which were conducted in certain ways and environments.

Identify the locations of early urbanization.

- Areas with a secure and steady fresh water supply such as the Nile, Tigris and Euphrates river valleys in the Middle East, the Indo-Gangetic plains and the Yellow River region in China. Such areas were preferred because communication, crop-cultivation and livestock rearing were easier, due to adequate water supply for domestic, industrial or domestic purposes. Urban centres like Gedi declined when water supply ran out.

- Junctions on the routes to stopping points as well as ports, islands and hill-tops, where people such as farmers and craftsmen met to exchange their goods. These grew into trading centres such as Carthage, Sofala, Kilwa and Mombasa.
- Areas with abundant supply of minerals such as iron ore, gold and salt e.g. Meroe and Taghaza, where Blacksmiths, miners and other craftsmen settled.
- Administrative centres, where emperors, kings, queens, chiefs and other rulers had their headquarters and which grew into urban centres because of the large number of people who served the rulers, soldiers and those who visited them.
- Major centres of education such as universities e.g. Fez and Timbuktu, which expanded as people came from different parts of the world to study there.
- Religious centres e.g. Akhanaton in ancient Egypt and Timbuktu in the kingdom of Mali, which developed because of the religious activities that were conducted there.

EARLY URBANIZATION IN AFRICA

Name the earliest towns in Africa.

The earliest towns in Africa were in Egypt along the Nile Valley, where food, water and communication were adequate. Among such towns were:

- Memphis,
- Heliopolis,
- Naqada,
- Thebes,
- Alexandria,
- Cairo.

These early urban centres served as administrative, religious and commercial centres, where traders, manufacturers, craftsmen and professionals like teachers, judges and doctors were based.

Urbanization in Egypt started in the year 3000BC, when the upper and the lower Egyptian kingdoms were united.

CAIRO

The city of Cairo developed about 2000 years ago from an old Greek settlement near Memphis, which was the capital of the pharaohs. In 642AD, the town was converted into a military settlement by Amir Ibn Al-As: the leader of Arab invaders. Al-As and his followers named the city Fustat.

Around 942AD, the Fatimids: a Muslim group from Tunisia conquered Egypt. In 969AD, the Fatimids renamed Fustat and called it El Qahira, which means The Victorious. The name El Qahira was later corrupted into Cairo. Cairo subsequently became the centre of Egypt and was therefore attacked by several world powers, particularly the Syrians, the Turks and the French.

Cairo had various classes of people. These included:

- The Amirs, which comprised wealthy landlords who enjoyed various privileges e.g. exemption from paying taxes.

- Professionals such as traders, craftsmen, merchants, teachers, judges and government officials.
- The Felahins i.e. peasants, who had to pay taxes and were not allowed to move without their landlords' permission.
- The slaves, who owned least or no property. They were the lowest class.

Explain the reasons for Cairo's growth and development.

(Explain the factors that led to emergence and growth of Cairo. Or:

Explain how trade promoted Cairo's growth and development.)

The following are among the factors that facilitated growth of Cairo into a major urban centre:

- Strategic location. Generally, the location of the Nile Delta was attractive to the Arabs, who sought to dominate the Nile Valley. From Cairo, they were able to launch expeditions upstream and receive reinforcements from Arabia.
- As one of the major cities in trans-Saharan trade, Cairo served as an outlet for products from the Sudanic to the Mediterranean and Arabian regions.
- Cairo participated in trade within the Nile Delta, which included trade-links with Upper Egypt and on both the Red sea and Mediterranean Sea as well as with Syria and Arabia.
- It was an important station on Pilgrims' journey to Mecca and Medina.
- It served as a harbour on the way that linked Upper Egypt and the Mediterranean Sea. However, foreigners were forbidden from using it and had to receive their merchandise at Alexandria.
- Migration and settlement, particularly that of Arab peasants, who arrived in Egypt in the 18th and 19th centuries, hoping to participate in trade and agricultural production.
- Agriculture, development of which was enabled by Cairo's location on the Nile-delta, boosting production of cotton, flax, wheat and barley, which grew in the fertile silt irrigated by the waters of the Nile.
- Customs and taxes paid by all the traders that entered the city as well as peasants, who payed for their produce, livestock and the fields they owned.
- The fact that Cairo minted her own currency (the Fatimid Dinar), which served as an international currency on the Red and Mediterranean seas.
- Labour provided by the peasants and the slaves obtained through the Trans-Saharan trade, all of who were used in the expansion of Cairo as a city.
- The fact that Cairo managed to survive all the wars fought around it.
- Its status as the capital of Egypt, serving as an administrative, commercial and cultural centre.
- Its declaration by the United Nations educational and scientific Congress Organization (UNESCO) as a world heritage site, with monuments dating several millennia e.g. the pyramids of Giza.
- The fact that river Nile was a good means of transport and communication and provided water for the population in addition to boosting agriculture.
- The fact that Caravan trade-routes from north, west and central Africa crossed at Cairo.
- The opening of the Suez Canal in 1869, which provided a new trade-route and led to settlement of many foreigners in Cairo.
- The opening of the Aswan high dam, which added to the importance of the town in 1968.
- Establishment of modern industries to process fertilizers and other products, which enhanced the growth of the town during British colonialism.

- The fact that Cairo was the centre of Islam over several generations, which attracted a high population.
- The historical importance of Egypt, which attracted many visitors, making Cairo a tourist and cultural centre.
- The fact that Cairo was an education centre.
- Medicine industries, which attracted people to Cairo.

Identify the functions of Cairo.

(Explain the importance of Cairo).

The city of Cairo is important in the following ways:

- It is a national capital and a political centre of the Arab world.
- It served as the Transport and commercial centre for North Africa and the Middle East.
- It has many recreational facilities, including sports staid and entertainment halls.
- It is a historical centre, having housed the Egyptian civilization for more than five thousand years.
- It is a tourist centre, attracting more than one and a half million tourists every year.
- It serves as an industrial centre and has many manufacturing industries.

Explain the challenges facing Cairo.

- With a population of over eleven million people, Cairo is congested.
- Many people are unable to get employment in the city.
- The high unemployment rate has given rise to social evils such as poverty, crime and prostitution.
- The high population has led to emergence of slums.
- Traffic congestion is another problem.
- Air pollution caused by industries and motor vehicles' exhausts is a common problem.

MEROE

In which kingdom was the city of Meroe?

- Together with Napata, the city of Meroe was located in the ancient kingdom of Nubia (Kush) between the White Nile and the Atbara rivers. Meroe became the capital of Kush after the Egyptians destroyed Napata in 593BC.

Explain the reasons for Meroe's growth and development.

(Describe the factors that led to emergence and development of Meroe).

From a provincial town, Meroe developed into a large city due to the following factors:

- . Natural resources such as iron ore and hard wood, which marked the beginning of the Iron Age. Hard wood was converted into charcoal, which was used for smelting iron.
- Trade. Meroe was rich in various trade items such as grains, livestock, ivory, leopard-skins, tools and weapons. This was due to Meroe's entry into the Iron Age, which brought added prosperity and increased agricultural production in addition to improving hunting.
- Location. Meroe's strategic location near the sixteenth cataract of the River Nile, which was far from Egypt, prevented further attacks such as the one that had destroyed Napata. The city was easily accessible to the Red Sea through various overland routes. The Red Sea served as an outlet for Meroe's produce to the Mediterranean Sea and the Indian Ocean, from where they were exported to the Roman Empire.
- Ample rainfall and soil fertility, which enabled Meroe to produce most of the grain in Kush.

- Meroe had palaces and temples, particularly the Lion-temple, which housed a large community of priests and temple-workers in addition to drawing many pilgrims. There, the Lion god (Apedemek) was worshipped. The Meroetic religion evolved from the Egyptian religion, which was retained at the founding of Meroe.
- Development of a new language and form of writing, which was witnessed alongside transformation of the Egyptian culture after Meroe was founded, giving the city a unique socio-political take-off.
- Meroe's leaders were welcoming to visitors.

Explain the impact of emergence and existence of Meroe.

(Explain the impact of Meroe.)

- Meroetic language developed and replaced the Egyptian language.
- Development of new architecture, characterised by tombs and temples.
- Development of the iron working industry, which gave rise to other industries such as weaving and pottery.

Explain the reasons for Meroe's decline in the 14th century.

Meroe began to decline in the 14th century AD due to the following factors:

- Most of her forest had been cut down for charcoal without planting new trees or allowing the soil to regain its fertility.
- Meroe's agriculture collapsed due to exhaustion and erosion of her soil.
- Her trade deteriorated because her main market: the Roman Empire, was also in decline.
- Meroe was attacked, subdued and destroyed in 350AD by the kingdom of Axum, which had risen as a rival in its trade. Axum was led by its king: Ezama.

KILWA

- The island city of Kilwa was founded by the Persians in the 13th century AD on the east Coast of Africa between the Mafia islands and the mouth of river Ruvuma. It was earlier inhabited by Swahili-speaking Muslims from the Northern cities of Shungwaya and Lamu. It was established alongside Zanzibar, Pemba and Mafia.
- Kilwa was a prosperous autonomous powerful city. It had splendid buildings. It traded in gold from Sofala and Zimbabwe. From the 14th to the 15th centuries AD, Kilwa had conquered most of the settlements between Zanzibar and Sofala. The city had narrow streets. Its great palace (Husuni Kubwa) was the largest building in the region south of Egypt at that time.

Identify the social classes into which inhabitants of Kilwa were stratified.

(Name the classes into which people in Kilwa were divided).

- Its highest class was that of the rulers, who claimed direct Arab ancestry and were wealthy since they owned large plantations and controlled Indian-ocean trade.
- The next class comprised Muslim Swahili speakers, who were mainly the Africans. These included artisans, Blacksmiths and minor court-officials.
- The lowest class was that of slaves, who were mainly non-Muslims obtained from the mainland to work on farms and estates or in the production of cotton and beads.

State the factors that contributed/led to Kilwa's growth and development.

- Location. Being an island, Kilwa was secure from attack. Also, she was the farthest distance that ships could sail in one season, which made her strategically placed for the Indian Ocean trade.

- Trade. Kilwa became wealthy and powerful as a result of her participation in Indian-ocean trade.
- Islam. This was used by the rulers to unify the people, especially in times of war, for a majority of people on the island were Muslims.
- Gold, which was obtained from the mainland at Sofala and was one of the major commodities of the Indian-Ocean trade.

State the reasons for Kilwa's decline from 1490AD.

(Explain the factors that led to disintegration of Kilwa).

- Frequent wars between various African communities, which interrupted with the flow of gold from the mainland.
- The rise of Mombasa.
- Invasion and occupation by the Portuguese.

Though Kilwa briefly rose in the 18th century due to slave trade, she was never able to regain her past glory.

Explain the factors that contributed to the decline of most early urban centres in Africa.

- Decline of mineral deposits e.g. Meroe and Axum in North Africa, which were rich in iron ore.
- Decline of trading activities. This led to decline of many towns that had thrived because of trade, e.g. Trans-Saharan trade.
- Wars of conquest e.g. Gedi and Kilwa, which were burnt down by the Portuguese in East Africa. Gao in Songhai was destroyed during the Moroccan invasion of Songhai.
- Decline of empires. Early urban centres that served as administrative posts collapsed when the power of those empires diminished e.g. Gad.
- Change in trade routes. This made some towns to decline since they did not have enough revenue from trade. For instance, Timbuktu and Sigilmasa declined due to change of trade routes in the Trans-Saharan trade.
- Shortage of water, which caused outbreak of epidemics, which led to the decline of towns like Gedi

EARLY URBANIZATION IN EUROPE

Early urbanization In Europe has its cradle in the Greco-Roman civilizations, which date back thousands of years. Early inhabitants of Europe were mainly rural folk, who engaged in subsistence farming, hunting and gathering and in crafts such as iron smelting and carpentry. With the Greco-Roman influence, town planning and construction spread. This was because, both the Greek and the Romans were imperialists. Most of the major European cities such as London are tangible evidence of the Greco-Roman civilization.

LONDON

London, which is the Capital City of the United Kingdom, dates back to the Roman occupation of the British island in the 1st century AD. It is located on the banks of the Thames River.

After the collapse of the Roman Empire, Britain was conquered by the Anglo-Saxons, who settled there in 450AD and divided the country into many little kingdoms. In the 17th century, London grew into a thriving market, participating in regional trade. In the 18th century, the city was the focus of attacks by the Vikings, who were repelled by King Alfred the Great. London was also a financial, administrative and cultural centre, which drew many settlers to the city and caused overcrowding, which led to frequent plagues and fire disasters, such as

the great fire of 1666. However, London recovered from these disasters and became a major metropolis in Europe.

Identify the factors that facilitated emergence and growth of London.

(Explain the factors that led to London's growth and development).

- Location. The location of London on the banks of the river Thames enabled the city to access both the interior and the sea, since the Thames, which is navigable, served as a natural canal of sea-going vessels
- Trade. By mid 17th century AD, items were being exported and imported from and into Europe through London.
- Culture. London was a cultural focal point for the whole of Britain in addition to being a religious and educational centre, with many monasteries, universities and schools.
- Administration. London rose to prominence as an administrative centre, particularly in the 12th century, when the Royal Court of justice, the Exchequer and the Precursor to Parliament were moved to Westminster, where the great Roman palace had been constructed.
- Finance. With London's development into a trading centre, the city also grew into a financial hub of Britain. However, London's central role in finance was strengthened by the relocation of the Exchequer to Westminster during the 12th century.
- Construction. Throughout London's history, the Building industry has played a significant role. It drew a continuous flow of builders to the city, whose physical expansion also became evident.
- Industries. Though London's industrial strength was overcome by cities like Birmingham and Manchester, new industries such as cloth production contributed to London's growth by drawing industrial workers.
- London emerged as a traditional settlement area of the Celtic population: the original inhabitants of Europe.
- City government. Since the 20th century AD, London had an effective and efficient city administration, which began in the 1920s when London was divided into twenty wards, each headed by an Alderman, who served as a commander in war and Judge in peace-time. The Alderman was assisted by a Portreeve, who collected taxes and a peace-guild that pursued criminals as well as a traditional assembly known as the Folkmoot. In the 20th century AD, the Cooperation of the city of London, which was modelled on the French city administration and was headed by a mayor assisted by Aldermen, was granted a royal charter. The cooperation was responsible for the welfare of Londoners as it introduced various services.

Identify the services introduced by the Cooperation of the City of London.

(What were the responsibilities of the Cooperation of the City of London?)

The cooperation of the City of London was responsible for the welfare of Londoners through:

- Prisons (12th Century).
- Clean water, a sewerage system and cemetery (17th century).
- Street-lighting, house-numbering and street-naming (18th century).
- Metropolitan police service (19th century).

Local authorities all over the world have since been modelled on the Cooperation of the City of London.

Discuss the functions of the city of London.

The city of London is important in the following ways:

- It is a transport and communication centre. It is interconnected by road, railway and air transport to other parts of the world.

- It is a political and administrative centre. The Prime Minister and the British monarchy have offices and residences in London.
- It is a commercial centre. Many commercial institutions such as banks and shops operate from London.
- It is an industrial centre. Ship-building, textile industries and other light industries are concentrated in London.
- It is an educational centre, hosting the University of London, which dates back to 1836 and Oxford University.
- It is a historical centre. It hosts theatres and other cultural activities.

Identify the problems facing London.

- In the pioneer years, the city had a large number of poor residents, especially during the Industrial Revolution.
- Large numbers of young people flocked to London, leading to overcrowding and congestion.
- Her large population caused a serious housing problem, leading to emergence of slums.
- Increased and higher criminal levels.
- Unemployment due to the high population.
- Air and other forms of pollution due to heavy concentration of industries.
- Illegal emigration by various categories of persons from all over the world.
- The problem of international terrorism, mainly due to the Middle East and other Crisis.

ATHENS

Athens, which is the capital of modern Greece, is located on the plain of Attica between the Ilissus and Kifisos rivers, with four mountains (mount Hymettus, Mount Pendelikon, mount Parnis and mount Aigaleos) forming a semicircle around it. The name Athens was derived from Athena: the city's patron-goddess. Athens was founded on the slopes of a high cliff above the Aegean Sea.

Identify the features of ancient Athens.

The Greek city of Athens is important because of its following features:

- ❖ Pottery and carving, which greatly contributed to its fame.
- ❖ The Parthenon: a large temple built between 447-432BC in honor of their Goddess: Athena.
- ❖ The statue of Athena, which stood forty feet high in the temple and was covered in gold.
- ❖ Narrow streets, with which the town was lined.
- ❖ Houses made of unbaked bricks. Most of them were grass-thatched.
- ❖ Frequent outbreaks of diseases due to poor sanitation. The Agora: a market in the centre of Athens, which was used as the Assembly hall for philosophical debates.

Explain the reasons for Athens' growth and development.

(List the factors that favoured the development of Athens

Identify the social classes into which Athenians were divided.)

- Trade. Athens sold wine, olive oil, wool and ceramics, for her rocky soil was not suitable for cultivation or production of food-crops.
- Culture. Athens was an important cultural centre in the ancient world and is today acclaimed as the Home of drama.

- Education. The men of Athens loved to seek knowledge and question their surroundings. Sons were sent to teachers, who taught them to think and critically respond to problems in Mathematics, Astronomy, Medicine and Philosophy.
- Religion. Athens' polytheistic complexity drew worshippers and pilgrims from all over the Mediterranean region to the city. The city had a great community of temple-staff, priests and traders, who offered services to worshippers and pilgrims within and around the Parthenon.
- During the Byzantine era, Athens became the seat of the Archbishop who presided over the synod of the Greek Orthodox Church, which resulted in the construction of the churches of Saint Theodora and of the Holy Apostles, which still serve as Athenian landmarks. Consequently, Greek orthodox Christians travel to Athens in great numbers.
- Security,.

Explain how security was ensured in Athens.

(Explain the factors that boosted security in Athens.)

- The city was located on a hill, which made discreet ascent by enemies difficult.
- Around the city were long walls to protect it and its port.
- Athens had a powerful army and navy that defeated enemies such as the Persians. It also had a fleet that ensured that Athens was the head of the Delian League.

In spite of its numerous odds, Athens has always emerged and re-emerged as the leading city of Greece. This status was confirmed with the establishment of the independent Greek state in 1834 under Otto I, who pioneered its modernization. The arrival of Athens on the world-stage was cemented in 1896 when the city played host on the first modern Olympic Games, which she again hosted in 2004.

EMERGENCE OF MODERN URBAN CENTRES IN AFRICA

In Southern and East Africa, urbanization was restricted to the coast, mainly because of trade and settlement of migrants from Arabia. But with the coming of the Europeans and their subsequent penetration into the interior, several urban centres emerged, which grew during the colonial period and have expanded rapidly into large cities such as Nairobi and Johannesburg.

NAIROBI

The word Nairobi is got from a Maasai term “Enkare Nairobi”, which means The Place of Cold waters.

Nairobi, which is the capital city of the Republic Of Kenya, is situated on the Athi plain, which was originally a meeting point of the Kikuyu and Maasai communities, who exchanged wares such as milk, honey and poisoned arrows and where caravans from the coast later paused to purchase food from the Kikuyu. The area was originally inhabited by the Maasai.

When the Kenya-Uganda railway reached Athi plains in 1899AD, Nairobi was chosen as the site of a resting place and a base-camp as it was located midway between Uganda and the East African (particularly the Kenya) coast. Its cool climate and supply of water from the streams and rivers made it suitable to the Europeans.

Explain briefly how Nairobi developed into an urban centre.

- With the railway came dozens of workers and Indian traders, some of who remained in Nairobi as the railway moved on. These established the Indian Bazaar: Nairobi's earliest formal market.

- a year after the establishment of the Indian Bazaar, Nairobi was recognized as a township, whose significance increased with the relocation of the headquarters of the British East Africa Protectorate from Mombasa to Nairobi in 1901.
- In 1902, a town council was created in the wake of problems such as the plague in the Indian Bazaar and poor street lighting. The council introduced town planning and created the sectors for the Whites, Indians and Africans. A sector was established for government departments.
- In 1927, Nairobi became a municipality and proceeded to grow rapidly. As new settlers arrived in Kenya, they stayed in Nairobi before moving to their farms. Africans moved into towns in search of employment.
- In the 1950s, Nairobi became a thriving city as it was the administrative capital as well as the industrial and commercial centre of the colony.
- The city continued to be segregated, with Europeans occupying Lavington, Muthaiga, Kilimani and Karen, while Asians lived in Ngara, Parklands and Nairobi-south. Africans were housed in Bahati, Makadara, Majengo, Makongeni and other quarters in the outskirts of the city. This situation continued up to Kenya's independence when racial segregation officially ended

Explain the factors that have boosted development of Nairobi into a modern city.

(Explain the factors that led to the growth of Nairobi.)

- Nairobi was the traditional trading place for the Maasai and Agikuyu.
- The area had plenty of fresh water.
- It was located almost half way between Mombasa and Kisumu. It therefore became an important stop-over
- The area around Nairobi was viable for white settler Agriculture.
- The area near Nairobi provided a good plain ground, suitable for the construction of railway workshops for the crews of the Kenya-Uganda railway.
- The colonial government transferred the headquarters to Nairobi in 1907.
- It became an important commercial centre for the white settlers.
- Many industries were established around Nairobi because of good transport and communication networks.
- It became a tourist centre due to the game-park located near the city
- Nairobi also became a cultural centre and attracted Muslims, Christians and Hindus, who erected worshipping places in the town.

Explain the functions of Nairobi.

(Explain the importance of the city of Nairobi.)

- It serves as the administrative capital of Kenya. For instance, it houses statehouse and various government offices.
- It is a transport and communications hub in east Africa. The Jomo Kenyatta International and Wilson airports are located in Nairobi.
- It hosts many regional and international organizations such as the United Nations Environment Program (UNEP).
- It is a tourist town, hosting national parks, museums and entertainment theatres.
- It is an educational centre, hosting various learning institutions.

Identify the challenges/problems facing Nairobi as a modern city.

- Unemployment, accompanied by other social problems, including a high rate of crime.
- Rapid expansion, which is the main contributing factor to unemployment.
- Poor housing, which has led to emergence of slums.

- Inadequate social services E.G. in health and lack of educational facilities to cater for the growing population.
- Congestion on the roads and in the streets.
- Poor town planning, which has led to problems of drainage, especially during heavy rains.
- Pollution from industries and the large number of vehicles.
- Rapid increase of street families.
- Prostitution and drug-addiction as well as alcoholism
- The population outstrips the water supply.
- Increase in the number of people infected with HIV&AIDS due to social problems such as prostitution and drug-addiction.
- Poor waste-disposal as the city's garbage collection and disposal services have found it difficult to match the growth of the city's population with the services they render, generating mountains of garbage on daily basis.

Identify possible solutions to the problems encountered in Nairobi's growth and development.

- Partnership with the private sector in addition to investment in the service-sector.
- The civil society's assistance in handling social issues.
- The city has sent delegations to other major cities in the world to gain from their experience. Hopefully, the knowledge gained will be applied to spur the city's growth and employment in service-delivery.

JOHANNESBURG

The city of Johannesburg, which is the commercial hub of the Republic of South Africa, is located on the highland plateau of the Gauteng province.

Analyse/trace the development/origin of the city of Johannesburg.

- After gold was discovered in the Witwatersrand region of the Gauteng province, the government sent two officials: Johann Risk and Johannes Joubert to go and investigate on the discovery and identify a suitable site for settlement. It is from the names of these two officials that the city got its name: Johannesburg.
- From its founding, Johannesburg was divided into different residential regions based on the Apartheid laws. The Whites, coloureds and Indians lived within the city while the Black had their own separate townships such as Soweto. In line with Apartheid, services provided in the townships were of a lower standard when compared to those in other areas.
- Johannesburg was divided into eleven local authorities, seven of which were white and four were black. The white authorities were largely self-sufficient while the black ones were only 10% self-sufficient.

In 1995, all authorities were merged under the "one city one taxpayer" policy, whereby taxes paid by the wealthy neighbourhoods financed services like roads, water and electricity, which were previously missing in the poor Black townships.

Identify the factors that led to the growth of Johannesburg.

- ✓ The discovery of minerals, particularly gold, which attracted many Europeans to Johannesburg.
- ✓ Availability of clean water for domestic use from the VaalRiver, which enhanced growth.
- ✓ Its location on a plain, which facilitated construction of buildings.
- ✓ Availability of coal from Witbank and Vereeniging, which enabled the mining and other industries to prosper.

- ✓ The fertile land near Johannesburg, which boosted food-production, essential for feeding the town residents.
- ✓ The development of efficient road and railway networks, which enabled more people to settle in Johannesburg.
- ✓ Mining, which attracted other commercial ventures, including banking and insurance.

Describe/analyse City Government in Johannesburg.

- ❖ Each province of South Africa determines the structure of local government in its jurisdiction. In this respect, Gauteng province chose the Executive Mayor system.
- ❖ The Mayor (who is directly elected) is fully in charge of strategic and political city responsibility. He heads the Mayoral committee, whose ten members make up a “city cabinet” as each member has executive responsibility for a specific portfolio. E.G. the City Manager heads the City Management team, which implements the decisions of the Mayoral council and monitors the performance of the arms of the city.
- ❖ The city’s administrative office is in charge of overall administration, financial control and revenue collection. Among other departments are: the fire and Ambulance services, Metropolitan police and traffic control and the Museums and Heritage Sites. All these report to the management team.
- ❖ The city is divided into eleven administrative regions, which are headed by regional directors, who ensure provision and maintenance of services in the respective areas. The Director serves as the local link of the city administration.
- ❖ The City Council sits as an assembly, presided over by a Speaker, who ensures the smooth running of proceedings and also performs ceremonial duties. While some members of the council are elected (each representing a ward), the rest are proportionally nominated on the basis of party strength in the council. The elected councilors work with their respective regional directors and raise issues concerning their regions in the council.
- ❖ Being a councilor is a part time job as the council meets on every third of July. The resolutions made in the council are passed to the management team for implementation.
- ❖ There are separate self-contained entities that provide key services to the city and are run on business lines, with their own chief executive officers. They are contracted by the City Administration.

Identify the separate self-contained entities that provide key services to the city of Johannesburg.

- Enterprises I.E. departments that are run as businesses by companies on management contracts. These compete with other private enterprises in their respective fields. They include the Johannesburg Zoo, the Civic, Theatre, Bus-Service, Fresh Produce, Markets and the Property Company.
- Gold, the discovery of which prompted a rush by speculators, gold-diggers and other people to the Rand. This gradually encouraged or strengthened mining activities, due to which Johannesburg grew into a modern city.
- Labour, need of which was easily met by the large number of Black people, who moved to the city. The construction of dormitories and compounds for Africans by the Local Authority also contributed to Johannesburg’s structural expansion.
- Government policy, which favors industries by encouraging their establishment in Johannesburg.

- Location. Johannesburg is situated on a veldt (plain) near the VaalRiver, which eased construction work as well as development unlike other cities on hilly locations, for the VaalRiver ensured constant supply of water.
- Coal. This has served as the city's major source of energy, powering the mines, industries and domestic consumers.
- Industries, which drew investors to the city. Apart from those processing agricultural produce such as wheat, there are textile products, motor-vehicles, electrical goods, paper and food and beverages.
- Food. Gauteng province is located in an agriculturally productive region of south Africa, due to which the city of Johannesburg has a steady and low-cost source of food
- Financial services, mainly through banking, which serves the mines and the Johannesburg Stock-Exchange, which, together with banking, laid the foundation of the city's development into the financial capital of South Africa.
- Utilities i.e. self-funding registered companies that provide billable services to residents.
- Agencies, which are also structured as companies and which provide other specific services to the public at large at no direct charge. These are dependent on the council for funding.

Identify the self-funding registered companies that provide billable services to residents in Johannesburg.

- ❖ Johannesburg Water, which deals with water and sewerage.
- ❖ City power, which deals with electricity.
- ❖ Johannesburg gas, which supplies heating and cooking gas.
- ❖ "Pick-it-up", which is in charge of waste disposal.

Identify the agencies that provide specific services to the public in Johannesburg at no direct charge.

- ❖ The Johannesburg Roads Agency.
- ❖ City posts agency.
- ❖ The Johannesburg Development agency.

State the urban challenges experienced in Johannesburg.

- Most of the African workers live in shanties.
- Rampant unemployment, particularly among the African population.
- High crime-rate, associated with the wide gap between the poor and the rich.
- Rampant industrial pollution due to the high number of industries.
- The HIV&AIDS pandemic, which is a serious challenge.
- Inefficient systems introduced with the creation of the unicity as provision of essential services has been hampered.
- Debt due to overspending, wastage and fraud because of inexperienced management.
- Traffic congestion, which grew by 26% between 1990-2002.
- Problems in collection of revenue for services rendered, which is a major challenge that stems from the Boycott culture entrenched in years of anti-Apartheid defiance campaigns, leading to growth of debt-areas.
- The legacy of Apartheid. Although standards of living in the serbabs are often compared with those in California: USA, 20% of Johannesburg's population live in Shacks that lack any kind of municipal service, which has contributed to persistence of racial tension long after the end of Apartheid.

Explain the impact of agrarian and industrial developments on urbanization.

- Job-specialization, whereby people who settled around the productive areas became potters, weavers and, later on, Blacksmiths. The places where these skilled people settled became urban centers as early industrial activities were carried out there and the clients who visited.
- Trade, which subsequently became centred at specific locations, which grew into urban centers.
- Food-supply to the towns due to trade between the farmers and craftsmen, resulting in food-security, which attracted increased settlement to the regions.
- Displacement as many people lost their land with the passing of the Enclosure act while others were replaced by the machines that were introduced following the changes that characterized the Agrarian and Industrial revolutions in Europe, leaving these people with no option but to move to urban centers in search of better livelihood there.
- Raw materials, supply of which led to establishment of many factories and the subsequent industrial revolution, which drew more people to towns in search of jobs.
- Minerals, exploitation of which the industrial revolution was focused on, which drew miners in large numbers to places that had them. The mining camps soon grew into towns and cities.
- Transport, in which there were numerous innovations during the industrial revolution, resulting in faster and easier traveling by large numbers of people from rural areas to urban centers using the railway, motor vehicles and other modern means.

NEGATIVE IMPACT

- ✓ The quality of air and water in the cities and towns has declined due to pollution from inefficient industries.
- ✓ The thousands of people drawn to urban centers annually have exerted pressure on the already existing social services like schools and hospitals.
- ✓ There is overcrowding and mushrooming of slums in most urban centers, with unsanitary conditions.
- ✓ The frustrations at unemployment, low wages and poor living conditions have contributed to crime and vice in towns and cities.

CHAPTER 5

AFRICAN SOCIETIES IN THE 19TH CENTURY

By the 19th century, African communities had developed various systems of organization. Many of them were still decentralized, with the clan as the centre of most activities.

Identify two main developments in which African societies were trapped by the beginning of the 19th century.

at the beginning of the 19th century, African societies were trapped in two main developments:

- They were politically, economically and socially awakened to the realities of the times.
- Most of them submitted to colonial rule and lost their freedom.

THE BAGANDA

The Baganda are Bantu speakers living in Uganda. Buganda state was initially part of the larger Bunyoro Kitara kingdom before its collapse.

Origin

Identify the two traditions that explain the origin of the baganda.

Two traditions explain the origin of the Buganda kingdom. These are:

- One which states that Buganda was founded by Kintu, who came to Buganda from the Mount Elgon direction.
- That which states that Bunyoro was founded by Kimera, a brother to Rukidi, who founded the Luo-Babito dynasty of Bunyoro Kitara. According to this tradition, the ancestors of the Baganda came from diverse origins.

Explain the background/origin of Buganda kingdom.

The Baganda lived in the rich agricultural region where they had adequate food that promoted population growth alongside facilitating other developmental experiences of the community.

The Baganda originated from the Bantu clans that had already inhabited Buganda by 1000AD.

They were later joined by immigrants from Bunyoro, the Mount Elgon region and Sese islands.

- By 1400AD, the Baganda had organized themselves into the Buganda kingdom.
- Buganda started off as a small weak state, a vassal of the then powerful Bunyoro kingdom, to whom it paid tribute. However, by early 19th century, Buganda had grown into the most powerful kingdom in the interlacustrine region.
- While Buganda was stable, peaceful and strong, she was surrounded by weak unstable neighbours like Toro, Bunyoro itself, Ankole and Busoga. By the 19th century, Buganda was the most centralized kingdom in the interior of east Africa.

Explain how the rich agricultural region that the Baganda lived in during the pre-colonial period facilitated/promoted their population growth and other developmental experiences.

- Buganda occupied central Uganda and extended southwards to Lake Victoria.
- It was compact with a good climate and fertile soil, suitable for agriculture.
- They had adequate food.
- Buganda rose to power due to its small size, which made control easy.

Identify the factors that led to the rise and growth of Buganda kingdom.

- ❖ Collapse and disintegration of Bunyoro Kitara, of which Buganda took advantage.

- ❖ Its small size, which enabled it to hold together
- ❖ Good leadership of the rulers (Kabakas) like Kyabagu, Junju and Suna, who greatly expanded the boundaries and territory of the kingdom.
- ❖ Ideal geographical location, with adequate rainfall, fertile soils and favourable climate for agriculture.
- ❖ A centralized system of government under the Kabaka.
- ❖ Their participation in the Long Distance trade with the Arabs and the Waswahili, which boosted growth. It was from this trade that they acquired fire arms.
- ❖ They had a strong army, which enabled them to conquer the weaker neighbouring states like Buddu, Kygwe and Busoga.
- ❖ Ganda traditions, which boosted growth. Women worked in the farms while men took part in politics and wars.
- ❖ Wealth got from the vassal states such as Buddu, Kygwe and Busoga, which were rich in ivory, slaves and iron ore in addition to paying tribute to Buganda.
- ❖ Food. Buganda received plenty of rainfall in addition to fertility of her soils, allowing for abundant food, especially bananas, which were cultivated by women and required little labor, which freed the men for other economic activities and military service.
- ❖ The fact that administration was easy, which allowed maintenance of stability and cohesiveness.

Explain the social organization of the Baganda in the pre-colonial period.

- ✓ The social organization of Buganda was based on the clan.
- ✓ Each clan had its own traditions, which were passed from one generation to another.
- ✓ The Baganda were divided into four social classes, with the Kabaka and other members of the royal family at the top. The royal family comprised wealthy people, who led luxurious lives. Under them were the chiefs, followed by the Peasants (Bakopi). Slaves (Badu) were the fourth and least of the classes.
- ✓ Being the embodiment of the values of his people, the Kabaka was the centre of social life. He was regarded as semi Divine and was associated with many rituals and ceremonies. His word and wish were law. His property included land and large herds of cattle. Around him were symbols of royalty such as drums, spears, stools and the throne (Namulondo).
- ✓ The Baganda believed in a supreme creator (Katonda), to whom every homestead-head prayed every morning. They also believed in other gods (Balubaale), who were thought to have been spirits of people who had supernatural powers during their earthly lives. Balubaale were consulted through mediums or prophets. Different Balubaale were prayed to for different needs. E.G. Kibuuka was prayed to for success in war, Mukasa for fertility and Nagawonyi for rain.
- ✓ Because mediums demanded huge gifts for consultation, peasants used medicine men (Wasawo), who provided remedies using herbs. Sorcerers (Balapo) were greatly feared as they could cause injury. The royal shrine was opposite Kabaka's palace. Other shrines were scattered all over Buganda. Among such shrines are Kabaka's burial sites.
- ✓ With the arrival of Swahili Arabs in Buganda from 1844AD, Buganda's traditional religion was greatly influenced by Islam: a new religion that many Baganda accepted and which spread rapidly, especially after Kabaka Mutesa I was himself converted in 1866.
- ✓ Uneasy about the growing influence of Muslims in his kingdom, Kabaka Mutesa invited European Christian missionaries through Henry Morton Stanley into Buganda in 1875. He

realized that the Europeans could make better allies because of their guns and wealth. By the end of the 19th century, Christianity had taken a foothold in Buganda.

Into what social classes were the Baganda divided during the pre-colonial period?

The Baganda were divided into four social classes as follows:

- ❖ The Kabaka and other members of the royal family were at the top. The royal family comprised wealthy people, who led luxurious lives.
- ❖ Under the royal family were the chiefs.
- ❖ Chiefs were followed by the Peasants (Bakopi).
- ❖ Slaves (Badu) were the fourth and least of the classes.

Describe/explain the economic activities of the Baganda in the pre-colonial period.

- They grew crops, particularly bananas. Agriculture was their economic mainstay.
- They kept large numbers of livestock.
- They practiced hunting and gathering. There was a class of skilled hunters, who mainly hunted antelopes, buffaloes and warthogs. Lions and leopards were only killed when they caused trouble.
- They participated in domestic and external trade, exchanging bark-cloth with guns from the Bagisu. They also traded hides and slaves and got glassware and cloth from the coast.
- They fished in Lake Victoria and other streams and rivers in Buganda to supplement their diet.
- They made bark-cloth, baskets and pots. They were involved in canoe building for trading and fighting purposes.
- After their conquest of Buddu, Kygwe and other vassal states, they began ironworking. Iron smelting was for manufacturing weapons and farm implements.

Discuss the structure of government among the Baganda in the pre-colonial period.

(Analyse/discuss political organization in Buganda during the pre-colonial period.)

- They had a centralized system of government led by a King: Kabaka, whose office was hereditary.
- Kabaka was assisted by the Queen-mother, the Queen-sister and a council of ministers.
- Under the council of ministers were chiefs, court officials, pages, messengers and slaves.
- The Bataka were chiefs in charge of clans. They were answerable to the Mugema: the senior chief. Their roles included collection of taxes and maintenance of law and order.
- Kabaka strengthened his position by marrying from every clan.
- The kingdom was divided into Sazas (counties) led by Saza Chiefs.
- Sazas were divided into Gombolola (sub counties), under Gombolola Chiefs.
- Gombolola were further divided into Miluka, under Miluka chiefs.
- Then there were conquered/vassal states, under governors (Abatangole), who were appointed by the Kabaka.
- The royal officials kept a record of all events related to the royal family.
- Kabaka had a royal bodyguard.
- Kabaka was also assisted by Lukiko (Parliament: an assembly of chiefs, which comprised sixty-nine members.

Explain the functions of Kabaka in pre-colonial Buganda.

- The Kabaka was the head of religion (Lubale).
- He was the head of the judiciary and final court of appeal.
- He was commander in chief of the army.
- Kabaka appointed the governors (Abatangole) who ruled the vassal (conquered) states.

- Kabaka's court was the nerve centre. All symbols of royal authority like royal drums, spears and stools were kept there.

What were the duties of the Bataka in Buganda during the pre-colonial period?

- Guarded the clans,
- Assisted in collection of taxes.
- Participated in recruiting soldiers for Kabaka's army,
- Presented page boys that served the Kabaka.

Describe/name the personnel/officials that constituted/made up the council of ministers in Buganda during the pre-colonial period.

- Kabaka was assisted by the Queen-mother, the Queen-sister and a council of ministers. The council of ministers included:
 - Katikiro (the Prime Minister),
 - Omulamuzi (Chief Justice),
 - Omuwanika (Treasurer),
 - Mugema (The most senior chief).

The Katikiro organized tax collection and public works. He planned in the name of the Kabaka.

Explain the functions of the Lukiko among the Baganda during the pre-colonial period.

- It made laws,
- It advised the Kabaka,
- It presented people's concerns to the Kabaka,
- It acted as the final court of appeal,
- It directed collection of taxes,
- It planned expenditure,
- It carried out general administration.

All these factors made Buganda very successful.

Explain one major problem that the highly centralized system of government in Buganda had.

One main problem with the highly centralized system in Buganda was personalization of authority, whereby state affairs would operate smoothly when a strong ruler was in power, but such a reputation would be spoiled when a weak ruler came in.

THE SHONA

The Shona are a Bantu speaking people that live in the fertile plateau between the Limpopo and Zambezi rivers, mostly in modern Zimbabwe, although some extend to present-day Mozambique.

Name the subgroups that make up the Shona community.

The Shona consist of subgroups such as:

- ❖ The Karanga,
- ❖ The Kore-kore,
- ❖ Zewhuru,
- ❖ Manyika,
- ❖ Ndao.

Explain the factors that facilitated rise and growth of the Shona.

The following factors led to rise and growth of the Shona:

- ❖ Founding of the state of Great Zimbabwe in about 1200AD.
- Use of dry stone walling for cattle enclosures and encircling the houses of the wealthy.

- The state of Great Zimbabwe started as a prosperous cattle keeping and farming centre.
 - Much of the Long Distance trade between the western plateau and the coast was diverted to pass through the Great Zimbabwe capital in the 12th and 13th centuries.
 - The Great Zimbabwe itself became a focus of crafts manufacturing and trade. From gold, copper and iron, fine jewelry and a wide range of tools were made.
 - Weaving of cloth from locally grown cotton.
 - Founding of an alternative state i.e. Mwene Mutapa in about 1420AD following the decline of the Great Zimbabwe.
 - Fertility of Great Zimbabwe, with plenty of rain and timber. Besides, the region was accessible to the Zambezi and the Swahili trading posts.
 - Alluvial gold, which was obtained from the Mazoe region and was refined and sold to the east African coast in return for beads, coloured cloth and other luxuries.
 - Establishment of the Rozwi empire and the Changamire dynasty, which dominated the Zambezi plateau throughout the 18th century.
 - Tribute paid to the Rozwi by various Shona chiefdoms due to ruthlessness of Rozwi regiments.
 - Royal control of mining of and trading in gold to prevent the Portuguese and other traders from regaining access to the gold trade of the region. Much of the gold was crafted by local goldsmiths into jewelry for the royal court.
- The Shona may first have lived in the Congo Forest Region, from where they migrated into their present home area in 1000AD, where they were later joined by other migrants from southern Africa.

1. Explain the origin of the Shona.
2. Explain/analyse the establishment of:
 - (a) The Great Zimbabwe;
 - (b) MweneMutapaKingdom;
 - (c) The Rozwi empire.

GREAT ZIMBABWE

The word Zimbabwe comes from a Shona term: “Dzimba Dzamabwe”, which means “stone buildings”.

- The Shona founded the state of Great Zimbabwe in about 1200AD. Although the use of dry stone walling for cattle enclosures and encircling the houses of the wealthy was common among New Stone age cattle keepers in south and central Africa, The Great Zimbabwe was unique since the enclosures were more elaborate.
- The state of Great Zimbabwe started as a prosperous cattle keeping and farming centre.
- In the 12th and 13th centuries, it developed into a trade centre since much of the Long Distance trade between the western plateau and the coast was diverted to pass through the Great Zimbabwe capital.
- The building of less elaborate stone enclosures was extended into a large area of the eastern plateau as centres of provincial government. The Great Zimbabwe itself became a focus of crafts manufacturing and trade. From gold, copper and iron, fine jewelry and a wide range of tools were made. Weaving of cloth from locally grown cotton was also practiced.
- The site of the Great Zimbabwe was abandoned in about 1450AD due to increased population and the need for new areas of cultivation, grazing and timber as well as shortage of salt and shifting of Long Distance trade northwards in the Zambezi valley.

MWENE MUTAPA

- Mwene Mutapa was the second Shona kingdom. It was founded by Nyanzimbe Mtota, who was sent north from Great Zimbabwe to look for a new source of salt at the end of the Mazoe valley.
- In about 1420AD, Mtota identified an ideal site for the founding of an alternative state. The site was fertile, with plenty of rain and timber and was accessible to the Zambezi and the Swahili trading posts.
- By the end of Mtota's reign, the new state extended eastwards in the coastal lowlands to include Uteve, Barwe and Manyika. In this kingdom, wooden palisades were used instead of stone.
- The Mazoe region was a valuable source of alluvial gold, which was refined and sold to the east African coast in return for beads, coloured cloth and other luxuries.
- Mtota was succeeded by his son Matope in the 1480s.

THE ROZWI EMPIRE

- ✓ In the 1670s, a wealthy cattle owner: Dombo, who acquired the title known as Changamire, established a new Shona empire. His highly disciplined and well trained army were known as Rozwi (Destroyers), a name that the empire later came to be known by.
- ✓ Rozwi Empire resulted from the emergence of private armies as the poor sought the protection of the rich, who owned large herds of cattle and attracted dependants into military service due to increased violence as a result of widespread Shona resistance against the Portuguese, who gained control within the Mutapa Empire in the 17th century.
- ✓ In the 1680s, Dombo defeated the Torwa rulers of Guruswa and between 1684-1696, he expelled the Portuguese from Mashonaland.
- ✓ The Changamire dynasty dominated the Zambezi plateau throughout the 18th century. In fear of Rozwi regiments' ruthlessness, various Shona chiefdoms paid tribute to the Rozwi.
- ✓ Mining of and trading in gold was strictly under royal control to prevent the Portuguese from regaining access to the gold trade of the region. However, the Portuguese were allowed to establish a small trading post at Zumbo, where gold dust was exchanged for imported cloth and beads.
- ✓ Much of the gold was crafted by local goldsmiths into jewelry for the royal court.
- ✓ Shona-Portuguese disputes went on up to the 19th century when, coupled with internal (succession) rivalry, the disputes weakened the Shona so much that the Shona were easily defeated by the Ndebele, who took over and occupied Mashonaland.

Describe the social organization of the Shona in the pre-colonial period.

- They were influenced by religion. They believed in one God: Mwari, the Creator and Supreme Being. Worship of Mwari was led by priests in sacred places. Priests came from the Rozwi clan. They had two kinds of spirits: Vadzimu (Family spirits) and Mhondoro (clan spirits).
- They were divided into clans and had a kinship system that was patrilineal (in which the man headed the family).
- They had a national spirit: Chamiruka, who settled Clan disputes and protected people against injustice by the government.
- They practiced polygamy. Marriage was not allowed between related clans.
- They lived in stone buildings, as they had great skills in Masonry.
- They had informal education.

Explain the political organization of the Shona in the pre-colonial period.

- They were ruled by the Emperor (Changamire) of the Rozwi kingdom, whose position was hereditary. He was assisted by the Queen-mother, Queen-sister, his nine principal wives, the Army-Commander, the head-drummer, the head-doorkeeper and the head-cook.
- There was an advisory council, which comprised five state kings. Under them were chiefs, who maintained law and order, collected taxes and contributed warriors to the imperial standing army.
- Religion played a major role, especially in settlement of disputes and maintenance of peace within the empire. Priests kept the emperor informed on major developments.

Identify the economic activities in pre-colonial Shona society.

- (Explain economic organization among the Shona in the pre-colonial period.)
- Agriculture. They grew maize, millet, sorghum, cassava, bananas, yams, sweet potatoes, groundnuts, pumpkins, beans, cucumbers, cotton, rice, onions, figs, vines, sugarcane limes and oranges. Men cleared land while women prepared it, planted, weeded and tended the crops. Everybody then joined in harvesting, which was communally done.
- Animal husbandry. They kept livestock, poultry and others.
- Hunting. This was the main means by which meat was obtained. Cattle, sheep and goats were slaughtered only on special occasions.
- Fishing. This was carried out in lakes, rivers and streams.
- Crafts. Pots, baskets, Granaries, calabashes, gourds, clay plates and bowls were made for storage and consumption of food.
- Trade. They actively participated in Long Distance trade, exporting gold, copper, ivory and slaves in return for cloth, beads and guns. The King controlled trade routes and commercial centres.
- Iron smelting. They made spears, shields and hoes. Gold was used for decoration purposes. In 1840, the Shona were invaded and subdued by the Ndebele, who ruled them up to late 19th century, when they fell under British occupation and colonization.

THE ASANTE

Apart from the Asante, name other Akan-speaking peoples.

(Apart from the Asante, name the other communities that make up the Akan-speaking people).
The Asante are the largest of the Akan-speaking people. Apart from the Asante, Other Akan-speaking communities include:

- ✓ The Fante,
- ✓ The Akyem,
- ✓ The Akwapin,
- ✓ The Akwamu,
- ✓ The Assin,
- ✓ The Denkyira,
- ✓ The Kwahu,
- ✓ The Twifu,
- ✓ The Wassa,
- ✓ The Denbyna.

The Akan migrated to and settled in their present homeland from the north between 100-1300AD.

ORIGIN

- The Asante emerged as a kingdom in the 17th century, occupying the central part of modern Ghana.
- The Asante kingdom grew so powerful that by the 19th century, it determined the politics and trade of the region.
- Today, the Akan-speaking people make up nearly half of the total population of modern Ghana.

Give reasons for the rise and growth of the Asante kingdom.

The rise and expansion of the Asante was due to the following factors:

- Their homeland was fertile, suitable for food production.
- Trade. They were linked to the Trans-Saharan trade and were rich in trade goods such as gold and kola nuts.
- Conquest, They united and successfully revolted against their oppressors such as Denboyira.
- Their first three rulers I.E. Obiri Yeboa, Osei Tutu and Opoku greatly expanded the empire through consolidation and further conquests.

Describe the social organization of pre-colonial Asante kingdom.

- ✓ The Asante were basically organized around clans, each of which spoke its own dialect, with its own customs and was headed by a chief.
- ✓ They believed in one supreme creator: Nyame, who was assisted by lesser gods and goddesses as well as ancestors.
- ✓ Religion and politics were inseparable. The Golden Stool was the most important symbol of religious reverence. The Asantehene, Omanhene and chiefs conducted spiritual ceremonies within their respective areas. Political power was believed to come from Nyame and the spirits.
- ✓ A leader underwent various religious ceremonies during installation, crowned by sitting on a sacred stool, of which each clan had its own, believed to have come directly from Nyame.
- ✓ Creative Art I.E. singing, dancing and playing musical instruments and culture were taken seriously.
- ✓ They were stratified into five main divisions. The first comprised the kings and those close to them, Ministers and other top officials. The second consisted of chiefs and other top officials in charge of maintaining law and order. The other was made up of those who had acquired great wealth and reputation. The fourth comprised farmers, traders and fishermen. Slaves belonged to the fifth and lowest group.

Identify the economic activities of the Asante in the pre-colonial period.

(Analyse economic organization among the Asante in the pre-colonial period.)

Trade was the major economic activity of the Asante in the following ways:

- They traded with the Gad, Guan and others from Ivory Coast in goods like fish, salt, cloth and beads. Other people from the Cape-Verd islands, Benin and Europe were also attracted to the trade.
- In the 16th century, the Asante served as middlemen, carrying trade items to the Gold coast in return for ivory and gold.
- They were mainly linked to north Africa through Long distance trade.
- With the introduction of the gun by the Europeans, the Asante extended their frontier to the source of trade at Ghana's coast.

After 1812, the British took over the administration of the Gold coast. From 1824, wars between the Asante and their southern vassals became wars between the Asante and the British. From

then, Asante economic organization kept falling upto 1900 when Asante kingdom was annexed by the British as a colony.

Explain the political organization of the Asante in the pre-colonial period.

Explain the role of the Asantehene in Asante society.

POLITICAL ORGANIZATION

- ✓ The Asante empire was ruled by the king (Asantehene), assisted by a union council of state kings (Omanhene), who ruled the states that formed the Asante empire and served as advisors to the Asantehene.
- ✓ The High court or union at Kumasi arbitrated in case of disputes.
- ✓ Asante states were bound together by the Golden stool, which is believed to have come directly from God in heaven. Each Omanhene was given a black stool, which was equally sacred within his jurisdiction.
- ✓ Each state had to pay tribute during national emergencies E.g. wartime.
- ✓ A national (Odwira) festival was established.
- ✓ Military service was compulsory for every able bodied man, which made the Asante army strong and efficient.
- ✓ The Asantehene appointed officers to represent him in the conquered states, districts, diplomatic service, levying and supervision of collection of tolls, death duties, trade, mining and ivory collection. These officers were appointed on merit and could be transferred or dismissed at will by the Asantehene. The Asantehene did not depend much on hereditary chiefs.
- ✓ Asante kingdom comprised three divisions.

Identify three divisions of Asante Kingdom in the pre-colonial period.

The three main divisions of Asante Kingdom were:

- ❖ Kumasi, which was directly under the Asantehene.
- ❖ States outside Kumasi but which were part of the Asante empire.
- ❖ The conquered states, which were provincial territories that were loosely bound to the Asante union.

State two reasons of the Odwira festival in the Asante kingdom in the pre-colonial period.

(Explain the importance of the Odwira festival among the Asante in the pre-colonial period.)

- To assemble all Asante states in Kumasi,
- To pay allegiance to the Asantehene,
- To honour the dead,
- To settle disputes among the Asante.

Identify/describe the divisions of the army in pre-colonial Asante empire.

(Into what wings/categories was the Asante army divided during the pre-colonial period?)

- ✓ The Army consisted of:
- ✓ The Van (Adonte),
- ✓ The Rear (Kyidom),
- ✓ The Right Wing (Nifa),
- ✓ The Left Wing (Benkum).

Apart from the army, identify/name other bodies/personnel that were in charge of security in the Asante empire during the pre-colonial period.

- ❖ A body of scouts (Akwanstafo),
- ❖ The King's Body-guards (Gyaso),
- ❖ A Cavalry Wing.

Each Asante state had a place in command of one of the wings.
Identify the factors that led to decline of Asante kingdom.

The decline of the Asante Empire was caused by both internal and external factors as follows:

- Opoku ware, who succeeded Osei Tutu in 1820 failed to incorporate the conquered states into the Asante union as his predecessors had done.
- After Opuku ware's death, there was no personality to unify the empire.
- Opuku Ware's death was followed by a long period of rebellions.
- The Fante, who were traditional rivals of the Asante got British support in a number of wars and prevailed over the Asante in the 19th century.
- The subject-states took advantage and broke away.
- In 1896, the British occupied Asante and arrested the Asantehene (Prempe i).
- A British Protectorate was declared over Asante Empire in 1900.

Therefore, due to political and economic problems in the second quarter of the 19th century, Asante power and high standard of living collapsed and the territory fell under British colonial rule, which then engulfed the entire Ghana.

CHAPTER 6

CONSTITUTIONS AND CONSTITUTION MAKING

What is a Constitution?

The term Constitution could be defined in various ways as follows:

- It is a set of agreed principles and rules that states how a country should be governed.
- It is a body of principles and rules that enable people within a state to live together in harmony and order.
- It is a set of agreed principles and rules that state the structure and powers of the government and the relation between the ruler and the ruled.
- It is the scheme by which a country is governed.

Identify the components of a constitution

Basically, a constitution consists of the following parts:

- The structure of the government.
- The power of the ruler.
- How the government is constituted.
- The Judiciary, including the duties and powers of the courts.
- The rights and duties of the citizens.

Explain the importance of the constitution.

(In what four ways is the constitution important?)

- It defines the state plus its organization and aspirations.
- It establishes the structure of government and power distribution among the various arms of government.
- It spells out the rights, responsibilities and duties of the citizens in relation to the state.
- It directs the relationship between the governors and the governed.

Describe two main types of constitution.

(Explain the differences between written and unwritten constitutions. Or:

What are the characteristics of a written constitution?)

Basically, there are two types of constitutions i.e. written and unwritten.

- A written constitution is a single document into which the fundamental principles and rules of the state are formally and consciously reduced.
- An unwritten constitution is one which is not contained in a formal document e.g. the British constitution.

WRITTEN CONSTITUTION

A written constitution is prepared, enacted and adopted by a designated body through a clearly defined procedure and can only be amended through a predetermined process. To ensure this, specific irremovable clauses may be included.

The earliest written constitution was the American constitution, which was written in 1787 and enacted in 1789. Today, most states in the world have written constitutions, Kenya included.

Explain the advantages of the two types of Constitution.

ADVANTAGES OF A WRITTEN CONSTITUTION

- It is simple, clear, precise and consistent.

- It is readily available for reference in case of doubt, dispute or crisis since it is a single document containing all constitutional provisions.
- It clearly sets out the powers and relations between different organs of the state, which creates harmony.
- It sets out fundamental liberties and rights and protects individual freedom
- It cannot be easily tampered with to the advantage of those in power, since the process of its amendment is clearly spelt out.
- It helps preserve individual autonomy and identity, especially in a federal system of government.
- In case of crisis, it provides clear procedures to be followed.
- It helps a young country to develop in an orderly manner.
- It protects different interests, e.g. ethnic and religious groups.
- It creates national unity as it emerges out of consensus.

ADVANTAGES OF UNWRITTEN CONSTITUTIONS

- They are flexible and adaptable to changing conditions.
- They provide continuity amidst change, for they revolve around conventions.
- They are short, simple and easy to remember.
- There is no danger of civil disorder because of amendments.
- It is indigenous and well suited for the people, e.g. the British constitution, which retains the traditional institutions, such as the Monarchy.
- It can easily be changed through the ordinary legislative process.
- **What are the limitations of the two main types of Constitution?**

DISADVANTAGES OF A WRITTEN CONSTITUTION

- It invites disputes, disagreements and misinterpretations since it is much too detailed.
- It is rarely read or understood by ordinary citizens.
- It must often be amended since it says too many things on too many subjects, which makes it more detailed.
- It tends to be rigid and lacks flexibility. It does not respond adequately or quickly enough to the changing circumstances and needs of the state.
- Civil unrest and disorder can easily occur due to the slow cumbersome and constrictive procedure in amending the constitution.
- It makes the Judiciary too powerful, for the Judiciary is the organ charged with the responsibility of interpreting the constitution.

DISADVANTAGES OF UNWRITTEN CONSTITUTIONS

- They are likely to be vague, indefinite and imprecise.
- They can easily be manipulated by those in power to the disadvantage of the citizens.
- They suitably operate in a state with very high political enlightenment and maturity, which is a very rare circumstance.
- They are unsuitable in young nations and in a federal type of government.
- They give too much power to the Judiciary, which interprets the constitution.
- since the fundamentals of the state are not recorded, it is not easy to effectively protect the rights of the people.
- It assumes that people are politically conscious of their liberties and rights, which may not be the case.

Identify the factors that determine the form of constitution a country adopts.

- The historical background of the country e.g. colonialism.
- Geographical factors. Some countries, such as Japan, are made up of several islands.
- Religious beliefs of the people. Some countries, such as Libya, follow the Islamic law (Sharia).
- Racial composition. There might be need to cater for special groups, such as the Aborigines in Australia.

Describe the two main documents from which the United Kingdom draws the principles of her constitution.

The United Kingdom, which is a major example of states with unwritten constitutions, draws her principles from documents such as:

- Constitution milestones like the Magna Carta of 1215, which guaranteed certain privileges for all Englishmen.
- Various legislations.

Describe the legislations from which the United Kingdom draws the provisions of her constitution.

- The “Petition of rights” act (1628), which prevented the state from raising taxes without parliamentary consent and prohibited imprisonment without a lawful course.
- The Habeas Corpus Act, (1679), which established the right of detainees to an immediate trial.
- The Bill of Rights Act (1689), which limited the powers of the monarchy.
- The Act of Settlement (1701), which granted independence to the Judiciary.
- The Act of Union (1707), which united the Scottish and English parliaments.
- The Parliamentary Acts (1911-1949), which limited the powers of the House of Lords to delay legislation.
- Parliamentary Acts of 1918-1928, which allowed women to vote.
- The peerage Act (1963), which prohibited discrimination.
- “Representation of the people” Acts (1969), which lowered the voting to 18 years.

Describe/identify the main characteristics of a good constitution.

(Explain the qualities of a good constitution. Or:

What characteristics/qualities should a good constitution have/bear?)

Regardless of the format in which a constitution exists, there are certain characteristics that are common to all good constitutions. These include:

- Clarity. It ought to clearly define and spell out its contents.
- comprehensiveness. It should address as many components of the state as possible and guard against disputes or misunderstanding.
- Flexibility. It should respond to any issue or situation, while maintaining overall state principles and aspirations.
- The bill of rights. It should clearly state and protect the rights and freedoms that citizens are entitled to.
- Amendment, It should distinctly state which of its sections can or cannot be amended and who may participate in the amendment process.

Describe the constitution making process in Kenya between 1885-1952.

- After the Berlin conference (1884-1885), Kenya became a British Sphere of influence by the terms of the Anglo-German agreement of 1886.
- In 1897, the East Africa Order-In-Council was enacted, establishing the office of the Commissioner in charge of Kenya.

- The East Africa Order-In-Council (1902) enhanced the Commissioner's authority by empowering him to divide the country into provinces and districts.
- In 1905, the East Africa Order-In-Council was enacted, changing the title of the Commissioner to Governor and Commander-in-chief.
- The Order-In-Council of 1905 also created the Executive and Legislative councils, which were the forerunners of the National Assembly in Kenya.
- In 1923, the Devonshire white paper provided that five Asians represent the Asian community, one Arab represents the Arabs and one Christian Missionary represents the Africans.
- In 1944, the first African was appointed to the Legico.
- In 1948, royal instructions were issued to provide for the increase of Legico representatives to include eighteen official and 22 Exe-official members. In 1952, the number of exe-official members increased to 28.

Analyse the development of the Independence constitution.

(Describe the constitution-making process in Kenya between 1954-1963. Or: Describe the milestones/landmarks that facilitated progress towards the independence constitution. Or:

Analyse the process of decolonization in Kenya.)

This involved decolonization of Kenya as follows:

- The 1954 Lyttelton constitution facilitated African representation in the Legislative Council, with the aim of making Kenya multiracial.
- Due to demand for an even greater African representation, the 1958 Lennox Boyd Constitution increased African membership to 14 and offered them cabinet positions apart from providing for better balance between races.
- due to continued African agitation, the 1960 Lancaster House Conference was held, during which the colonial government set out the goal for Kenya's independence. Africans gained more representation in the Legislative Council and in the cabinet.
- Following the 1962 Second Lancaster House Conference and other meetings there-after, Kenya had a new constitution, by which she was granted internal self government in 1963, under a Westminster Federal (Majimbo) government.

Identify the provisions of the Lyttelton and Lennox Boyd constitutions.

PROVISIONS OF THE LYTTELTON CONSTITUTION

- All races were to participate in government.
- The council of ministers was to assume the authority of the Executive council.
- It led to the appointment of the first African Minister.
- It provided for election of African representatives to the Legico.

PROVISIONS OF THE LENNOX BOYD CONSTITUTION

- Increase of African representation in the Legico to 14.
- Increase of the number of Ministers to two.
- Introduction of a multiracial representation in the Legico by creating twelve specially Elected Members' seats: four for each of the three major races.

Identify/state the disagreements that occurred during the 1960-1962 Lancaster House conferences.

- The Europeans wanted the provinces to be created on race basis. Africans were not for this idea.

- The small ethnic communities wanted a Federal type of government while the big ones were for a strong central government.
- The Northern Frontier district (North-Eastern province) was not comfortable about being part of Kenya.
- The Arabs wanted to control the coastal strip.
- **Explain the major aspects contained in the Kenya Independence constitution.**

(Identify the provisions of Kenya's Independence constitution (1962).)

At independence, Kenya was to be a dominion within the British Commonwealth, with the queen as head of state, represented in Kenya by a Governor General. The Independence constitution contained the following major aspects:

- The Executive. The Head of state was the Governor General, acting on behalf of the queen. He enjoyed wide ranging powers and could veto legislation.
- The Legislature. The National Assembly conducted the legislative functions of government. It comprised the House of Representatives (Lower House) and the Senate (Upper House).
- The Judiciary. An independent Judiciary was established, with the judges and the Attorney General accorded security of tenure.
- Federalism. Kenyas was divided into seven regions, each with its own legislative and executive structures, with a President and an assembly. The regions were: The Coast, Eastern, Central, Rift Valley, Nyanza, Western and north-Eastern.
- Rights and freedoms i.e. the Bill of Rights, based on the European convention on human rights and fundamental freedoms.
- Citizenship. This spelt out the necessary conditions for the acquisition of Kenyan citizenship.
- Democracy. A competitive electoral process, supervised by an independent electoral Commission, was spelt out.
- Protection of the Minority rights in the constitution.
- The civil service, which was to be insulated from corruption.
- A Westminster Parliamentary system of government, led by the Prime minister as head of government.
- A Bicameral National Assembly, comprising the Lower House and the Upper House.

Describe four phases into which the process of making the constitution of Kenya was divided.

The process of making the constitution of Kenya was divided into four major phases. These are:

- The first phase, which deals with the period during which Kenya was a colony of the British crown and constitution changes were the responsibility of the colonial secretary. During the first phase, the colony functioned under the British constitution. Colonial government and the fundamental rights of the residents were spelt out in the British constitution. Amendments to the government structure and any other changes were generally initiated by the Governor in consultation with the colonial secretary, who wielded a lot of power over the colonies. This was most evident from 1945-1959.
- The second phase, which was characterised by the direct participation of Kenya's political leaders in negotiations that led to the writing of a new constitution. All the members of the Legico travelled to London for the negotiation. This phase covers the period between 1960-1962, characterised by the first and second Lancaster House Conferences

- The third phase, whereby Parliament played the leading role in revising the constitution through a series of amendments that were debated and passed by the House. The constitution was effectively rewritten and several of its aspects altered. Kenya was consequently transformed from a dominion to a republic and from a DeFacto One-party democracy (one-party democracy by fact) to a DeJure one-party state (one-party state by law). Kenya ceased to be a Federal republic under a Prime Minister and instead became a unitary republic under an executive president. These were possibly the most profound changes to the constitution that was effectively rewritten by Parliament. This was the period from 1963 up to late 1980s.
- The fourth phase, which was brought about by the immense authority enjoyed by the Executive, especially by the President. This was because the rewritten constitution in the Third Phase gave the Executive arm of government wide ranging powers while relegating the Judicial and Legislative powers to the periphery. From late 1980s, there were unheeded calls from various sections of the Kenyan population for a comprehensive review of the constitution, with the elimination of certain issues such as Section 2A.

Apart from the four phases, Identify/explain other changes that characterized constitution-making in Kenya.

- The pressure for a new constitutional order reached new heights with the introduction of pressure from the international community as a result of the end of the Cold War. This led to a few changes, such as the repeal of Section 2A in 1991 that led to the first multiparty elections since 1966. However, pressure for a new constitution order persisted, characterised by street protests, riots and even disruption of the reading of the budget speech by the Minister for finance in 1997.
- In 1998, there were attempts at dialogue between politicians, representatives of the civil society and general public, leading to an act of parliament that spelt out the process of the composition of a commission that would develop a constitution based on the principles of accountability, democracy, human rights, the people's participation and social justice. But the process was hindered by lack of agreement among the nominated parties, especially political parties. Therefore, the civil society launched their own process i.e. the Ufungama no initiative, which established the people's commission of Kenya to conduct the constitution making process.
- Meanwhile in the year 2000, Parliament sponsored a parallel process through the Constitution of Kenya Review Act. In 2001, both the Parliamentary and Ufungama no processes were successfully merged, which resulted in the Constitution of Kenya Review Commission, which was now a People-driven process.
- the commission comprised several stages, the first of which involved civil education, whereby the commission trained and equipped people and organizations with resources on what a constitution is, contents of the present constitution and the importance of a new constitution.
- Then the commissioners themselves visited all the constituencies and held open forums, where people were free to present their proposals on a new constitution. at that time, written proposals were being sent to the commission's secretariat in Nairobi.
- All the views were then summarised by the commission and a draft document prepared and sent to the public, who had thirty days to study the draft and comment on its contents. similarly, the public chose their delegates to the Constitution Conference that was to refine the draft into a new constitution. The delegates included all members of parliament and representatives of the districts, the military, the police, religious groups and the civil society.

These had the mandate to discuss the draft and agree on its provisions. Contentious proposals would then be sent to the public for a national referendum.

- Upon completion of the process, the document would be sent to the National Assembly for ratification.

Describe/identify the features of the Kenya constitution.

- The republic. This establishes the public seal of the republic and the supremacy of the constitution over all other laws.
- The Executive.
- Parliament.
- The Judicature.
- The Bill of rights. This spells out the rights and freedoms that all Kenyans are entitled to, plus the conditions for their enforcement.
- Citizenship. This defines Kenyan citizenship and the process by which it may be acquired or lost.
- Finance. This establishes the consolidated fund and gives the process of authorising various offices to draw from it. The office of the Controller and Auditor General is established by this chapter.
- Public service. Here, the public Service Commission is authorized to appoint various public servants.
- Trust land. This defines the procedure by which land may be set apart for various purposes, e.g. construction of government buildings.
- **Describe three broad parts into which the Kenya parliament is divided.**
- Legislative power, which is vested in the President and the National Assembly.
- That which deals with Legislation and the procedure in the National Assembly.
- That which deals with the summoning, prorogation and dissolution of parliament. This power is vested in the President.

Describe three parts into which the executive arm of the Kenya government is divided.

The Executive is divided into three parts, namely:

- That which deals with the presidency. It spells out the qualifications and role of the President of Kenya.
- That which deals with the cabinet, its composition, duties and conduct.
- That which vests executive power in the president and deals with the Attorney General's office.

Describe three branches into which the Judicature is mainly classified.

The Judicature is divided into three main parts, namely:

- That which deals with the High Court and the Court of appeal and spells out the qualifications and the procedure for the appointment of their judges, tenure and oath.
- That which establishes the courts.
- That which deals with the Judicial Service Commission, its composition and functions.

CONSTITUTION AMENDMENTS IN KENYA SINCE INDEPENDENCE

1. What are constitutional amendments?

2. Identify and describe postcolonial constitution amendments in Kenya. (Discuss the constitutional amendments in Kenya since 1963.)
3. Explain the provisions of the 1964 Republican Amendment to the constitution of Kenya.
4. Explain the provisions of the 1978 Two Thirds Majority amendment to the constitution of Kenya.
5. Explain the provisions of the Citizens and Parliamentary Seats amendment of the Kenya Constitution.
6. Explain how the 1966 Presidential and National Assembly Act changed the method of Presidential and other elections.
7. Explain the changes made to the Kenya constitution by the 1985 Public Service Commission and Judiciary amendment.
8. Explain the provisions of the 1986 Security of Tenure for the Attorney-General and Auditor-General amendment of the Kenya constitution.
9. Explain the provisions of the 1988 Rights of Suspects amendment to the constitution of Kenya.

Constitutional amendments are fundamental changes made on the Constitution by Parliament.

According to the Independence Constitution, such amendments required a 75% majority vote in parliament. Amendment concerning the Bill of Rights, the Regions and the Districts required a majority of 94% in the Senate apart from the 75% in the House of Representatives. Today, a majority of 65% in the National Assembly is required for such amendment. By 2002, the Kenyan constitution had undergone thirty-six amendments, which include the following:

- The Republican constitution Amendment (1964), under which a bilateral legislature (the lower and upper House) was established. Its provisions were as follows:
- Kenya was transformed into a republic, with an executive President, who became head of state and government and Commander in chief of the armed forces.
- A Presidential candidate had to be a candidate for the House of Representatives and have his nomination supported by at least 1000 registered voters.
- In case of a presidential vacancy other than general election, the House of Representatives would meet and constitutionally elect a successor.
- All candidates for the House of Representatives had to indicate their support for a presidential candidate.
- The candidate who won majority votes and his Constituency seat would be declared President.
- Powers of the regional government over education, agriculture, health as well as economic and social development were amended.
- A vice President had to be appointed from among the members of Parliament by the president to be the principal assistant but not the automatic successor of the head of state.

Specially entrenched clauses (1965). This amended certain specially amended clauses of the constitution on such issues as financial relations between the central and regional governments as well as alteration of regional boundaries.

The two-Thirds Majority Amendment (1965). This was altered through the following provisions:

- The parliamentary majority required to approve the declaration of a state of emergency was changed from 65% to a simple majority. The period after which a parliamentary resolution for the Emergency is required was extended from 7 to 21 days.
- The validity of a state of emergency was increased from two to three months
- The parliamentary majority required for a constitutional amendment was reduced to 65% in both houses.
- Special entrenchment of sections of the constitution concerned with executive powers of the regional assemblies were councilled.
- Parliament was given the power to confer functions on the provincial councils.
- The right of appeal to the Privy Council was abolished.
- The title “Supreme Court” was changed to “High Court”. Provisions on land transaction control were removed from the constitution.
- Citizenship & Parliamentary Seat Amendment. This also touched on several provisions of the constitution as follows:
 - A member of parliament sentenced to six or more months imprisonment would lose his seat.
 - A member of parliament who missed eight consecutive parliamentary meetings without the Speaker’s permission would lose his seat, except if pardoned by the President.
 - The President was given the power to appoint and dismiss people from the Civil Service.
 - The President’s power to rule by decree in the North-eastern province was extended to Marsabit, Isiolo, Tana-River and Lamu districts.
 - Commonwealth citizens were made eligible for rather than titled to Kenyan citizenship.

Change of Party Allegiance (1966). A member who resigned from the party that sponsored him into parliament now had to vacate (leave) his seat at the end of the parliamentary session.

Public Security (1966). This allowed the President to exercise special Emergency powers E.G. detaining individuals without trial in accordance with Preservation of Public Security and would not be considered as interfering with the individual’s fundamental rights.

Abolition of Senate and Bilateral legislature (1966). The Senate and the House of Representatives were merged, leading to formation of the National Assembly, whose life was extended by two years.

Resignation of Members of Parliament (1966). In addition to making the Fifth Amendment retrospective in operation, it solved doubts on the interpretation and effect of section 42A on resignation of members of parliament.

Change of administrative boundaries (1966). All references to provincial and district boundaries were deleted (removed) from the constitution in addition to abolition of provincial councils, therefore removing the last vestiges of regionalism.

Presidential and national Assembly Act (1966). This altered the method of presidential and other elections as follows:

- The President was now to be elected by all voters during general election.
- Every candidate participating in a general election had to be nominated by a political party.
- Every political party participating in a general election had to nominate a presidential candidate.
- Presidential and parliamentary candidates of the same party would be put together on the ballot paper.
- The Vice President would assume the Presidential position if it became vacant in times other than dissolution of parliament, followed by presidential election within 90 days.

- The twelve specially elected members were replaced by twelve members nominated by the president.

Revised Constitution (1969). This is also referred to as Act.5.1969. It consolidated all the amendments into a revised constitution and gave the president power to appoint all the members of the electoral commission.

Age of Adulthood (1974). This lowered voting and maturity age from 21 to 18 years.

Official National Language of the National Assembly (1974). This made Kiswahili the National and Official language in Kenya, making it legible for use in parliament too.

Official Language of National Assembly (1975). This altered the thirteenth amendment and allowed for bills in the national assembly to be presented or debated in either Kiswahili or English instead of Kiswahili alone.

Pardoning of election offenders (1975). Here, the prerogative of mercy enjoyed by the president was extended to the lifting of disqualification as a result of an electoral court ruling.

Kenya court of Appeal (1977). Here, the Kenya Court of Appeal was established in place of the East African Court of Appeal, which collapsed with the East African Community. Also, the right to remit compensation after compulsory acquisition without conformity to foreign exchange regulation was abolished.

Languages of the National Assembly (1977). This was meant to thwart (remove) the damage of the 1974 Kiswahili amendment. It provided that English would be an alternative to Kiswahili in the National Assembly and that proficiency in both languages would be required for one to qualify to stand as a parliamentary candidate.

Election & public Servants (1979). This specified that public servants who decide to vie for positions in general elections resign at least six months before the election.

One-party state (1982). This had the most far-reaching and historic effect as it amended section 2A of the constitution, making Kenya a one-party state by law, with KANU as the only political party in Kenya. The position of the Chief Secretary as the head of the Civil service was formalized, empowering him to exercise general supervision of the office of the President and coordinate other departments of the government.

- Public service Commission and Judiciary (1985). This made the following changes:
- Members of the public service commission were increased from 7 to 15, excluding the Chairman and Vice Chairman.
- The High Court became the highest court of appeal for election petitions.
- Judges appointed to the court of appeal were permitted to continue and complete the cases that they were hearing in the High Court before their appointment.

Citizenship (1986). Here, only those whose parents were Kenyans were entitled to Kenyan citizenship. Section 89 of the constitution which provided for acquisition of citizenship by everyone born in Kenya after 11th of December 1963 was repealed.

- Security of Tenure for the Attorney General and Auditor General (1986). This empowered the President to dismiss the attorney General and auditor General without referring to commissions as before. However, in 1990, this provision was amended, reverting (returning) to the guarantee of security of Tenure. With this amendment, the position of Chief Secretary was abolished and the number of Parliamentary constituencies was fixed.

Non-bailable offences (1986). In this, all offences that are punishable by Death such as Treason, murder and Robbery with violence were made non-bailable. This amendment was one of those rare incidents where the legislature overrules and therefore interferes with the discretion of the judiciary's

Rights Of suspects (1988). This was a continuation of the 23rd amendment. It further eroded the rights of suspects by empowering the police through the following provisions:

- Duration for detention of criminal suspects without charging them was increased from 24hr to 14 days.
- The security of tenure of the public Service Commission as well as Judges of the High Court and Court Of Appeal was resolved.

Reinstitution of Security of Tenure (1990). This restored the Security of Tenure of the Judges, Attorney General, controller and auditor General and the Public service Commission. It started undoing the wrong amendments since 1982.

Number of Constituencies (1991). This one fixed the maximum number of Parliamentary constituencies at 210 and the minimum at 188. This amendment was unconstitutional since the function of specifying the number of constituencies is a lawful responsibility of the Electoral Commission, which is an independent constitutional body.

Repeal of Section 2A (1991). This repealed section 2A of the constitution that made Kenya a Dejure One-Party state and limited the tenure of the President to a maximum of two Five-Year terms. It swung back the country to respect the Constitution and rule of law.

Explain the main purposes/reasons for constitutional amendments in the early years of Kenya's independence.

Constitutional amendments in the early years of Kenya's independence aimed at:

- Dealing with the challenges of an emergent nation.
- Shaking off opposition as leaders strengthened themselves through the laws.
- To harmonize the operation of a democratic constitution and an undemocratic and authoritarian administration.
- Through various amendments, the constitution was partly used to resolve conflicts and issues among groups in the society.

Unfortunately, democracy was threatened even more, because, even after 1964, the political forces did not agree on the correct political path, though they were united on the need for independence and self rule. After independence, the ideological differences between the radicals and conservatives within KANU resurfaced.

CHAPTER 7

DEMOCRACY AND HUMAN RIGHTS

DEMOCRACY

What is Democracy?

Democracy could be defined in various ways as follows:

- It is a form of governing where power rests with and is vested in the people.
- It is a system of government in which people rule themselves i.e. it is the government of the people for the people and by the people.
- It is a form of government where the political decisions are directly in the hands of the citizens.

What are the main aspects of democracy?

(Explain the main aspects of democracy).

Democracy has three main aspects. These are:

- The political aspects, whereby society wholly and freely participate in their government, expressing their will through representatives. People's views are expressed through elected leaders.
- Social aspects, where individuals are accorded necessary respect that enables them to enjoy their rights. Democracy is in this case seen as a means through which people are free to express their opinions and associate with others.
- Economic aspects, which aim at ensuring equal opportunities for all citizens without exploiting anyone or a section of them.

Describe the types of democracy

There are three types of democracy. These are:

- Constitutional Democracy, whereby the rights and the power of the majority are exercised within the limits of the constitution. Minority rights are however guaranteed.
- Direct (pure) Democracy, whereby people participate in decision making e.g. Law making.
- Indirect (Representative) Democracy, whereby the people exercise their rights in decision making through their elected representatives, e.g. members of Parliament.

Describe Direct Democracy.

- Here, society freely and directly participate in state affairs.
- They assemble and debate issues affecting them on regular intervals.
- This kind of democracy is only effective in societies with small population sizes.
- Direct Democracy was first practised in ancient Greece around the 5th century BC.

Explain how opinion is obtained in Direct Democracy.

- Physical presence of citizens at assemblies, where they participate in discussions.
- Referendum. In this, political issues are referred to the voters rather than the Legislative body, securing the will of the people on any law, particularly those proposed by the Legislature. The French system is a good example of governments that draw from a Referendum. In modern history, the Referendum has been used in Switzerland and in Australia.
- Plebiscite. Here, direct popular vote on a matter of political importance is indicated in the form of either "Yes" or "No" in a secret ballot. It was used in some one-party states to elect a president.

- Initiative. Here, the people indicate the legislation and refer it to the Legislature for consideration.
- Recall. Here, an elected representative or official can be recalled, removed or dismissed. It has been used in some American states, in Germany and in Latvia.

Explain the importance of a referendum

- It embodies the principle of popular sovereignty, which gives the law more willing obedience because of its approval by the people themselves.
- It helps in checking the excesses of the Executive.
- It serves as a means of political education.

Describe two forms of Initiative as a method of obtaining opinion in Democracy.

Initiative takes two forms:

- Formulative Initiative, e.g. the Constitution of Kenya Review Commission, whose formation was started by the people through the civil society organizations before Parliament took over to legalize it.
- The Initiative in general terms.

Define/Describe Indirect Democracy.

Indirect Democracy is a system where members of a society choose representatives to run their affairs. It originated in ancient Rome, where the uneducated masses were considered unfit to rule directly. Those considered fit to lead were chosen to represent them. It is the most common and easily applicable form of Democracy.

Identify the elements of Representative Democracy.

These are:

- Universal suffrage, whereby every member of the society has the right to vote or to stand for election.
- Free and fair election, whereby the electoral process must be free of manipulation, corruption or intimidation of the voters.
- People Supremacy, whereby the supreme controlling power in a society is vested in and exercised by the people through voting at regular elections in order to give the greatest benefit to the greatest number of people.

Identify the principles of Democracy.

(Explain the factors that promote Democracy.)

- Consent of the people. The supreme controlling power is the people.
- Equality.
- Enlightenment, which gives Democracy a moral and educative value.
- Peace. Democracy best flourishes in locations and circumstances that are free from intimidation and unrest, which deter free expression of opinion.
- The rule of law. This presents a basis of confidence that the process will be fair and the outcome acceptable to the majority.
- Balance. Democracy balances the liberty of the individual with the power of the state. The state makes the laws based on the consent of the people.
- Openness. Transparency and accountability (including open and accountable mass media) encourage confidence and make people trust their institutions for a just outcome and foster critical debate without the fear of retribution.
- Competition. This entails several ideas that compete for the attention and opinion of participants in the democratic process.

- Patriotism. This makes citizens to feel that they are an integral part of government and that the welfare of the state is really their welfare.
- Co-existence. This promotes world peace as citizens develop a sense of cooperation, compromise, love, sympathy and self sacrifice for the larger interest of the community.
- Education. This is the cornerstone of Democracy, for, through education, citizens properly understand their rights and duties.
- National unity. This encourages stability, without which democracy cannot thrive.
- Free Press. A responsible free independent and objective press is one of the pillars of democracy.
- economic equality. A democratic government must have policies aimed at reducing unemployment and other economic disparities, based on rational planning.
- Leadership. Leaders at key levels must be principled, courageous and financially independent in order not to be compromised through corruption or manipulation.
- Tradition. Every country has to develop its own democratic traditions, practices and ethos.
- Freedom of speech, whereby citizens express their views without fear.
- Inclusion/participation of the people in their government.
- Decentralization of economic power (economic Democracy) so that individuals and communities are empowered.

In what ways are people the supreme controlling power in democracy?

In Democracy, the people are the supreme controlling power in the following ways:

- Democracy is founded on a government based on the consent of the people.
- Leadership accommodates people's needs and aspirations.
- It benefits the greatest majority.
- Ideals of Liberty, equality and fraternity are cherished.
- People participate in and debate on matters of national interest.

Explain the importance of Equality as a principle of Democracy.

- Democracy recognizes equality among people, regardless of colour, sex or creed.
- It provides every member of the society with equal opportunity to participate in the process of airing their views.
- All votes are counted as equal. Their opinion therefore contributes to the final decision.
- It enables the disadvantaged people to move from their original handicaps to an improved and better status.
- It rejects the aristocratic principle or claim that some people are born to rule others.

Explain the role of enlightenment in democracy.

- It helps develop one's personality.
- Each participant has equal access to various sources of information on issues or candidates and their possible consequences.
- It gives the necessary moral and intellectual freedom for individual development.
- It makes people conversant with their rights and duties, which they get prepared to, defend at all times.

Explain the function of the press as a principal of democracy.

- It provides correct information and monitors public opinion.
- It educates people by providing background information and investigative reporting among others.
- It harmonizes the relationship between the government and the governed.
- It entertains the public through creative writing and delivery of interesting information.

- It includes and incorporates various print and broadcasting media such as daily newspapers, radio, television, periodicals, etc.

What are the advantages of Democracy?

- It is popular as it is based on the consent of the people.
- It recognizes equality of all citizens.
- It promotes people's initiative and a sense of responsibility.
- It promotes patriotism.
- It reduces chances of Revolt as citizens are part of the government.
- It promotes co-existence, hence it fosters cooperation and peace.

What are the disadvantages of democracy?

- It promotes dictatorship by the majority as the minority are ignored.
- It encourages Class struggle and corruption as the rich, who campaign and get elected make laws that protect their interests.
- Democracies are slow and wasteful. As the views of the majority have to be received, there is a lot of consultation.
- It perpetuates incompetence of leaders, because it is the numbers and not the quality of leadership that count.
- In practice, Democracy promotes the rule of the elected minority as opposed to the majority.

HUMAN RIGHTS

What are rights?

Rights could be defined as:

- Entitlements of legal claims that universally belong to people from the time they are born.
 - Powers of free action that every human being is individually endowed with.
- Due to their essence for the individual, rights are officially recognized as the basic laws of the state.

Identify the doctrines of Natural Law that evolved into human rights.

- The Liberty to know, to utter and to argue freely according to conscience.
- The right to property,
- The 1776 American declaration of independence,
- The 1789 French declaration of the rights of man,
- The rights of the individual,
- The 19th and 20th century constitutions,
- The basic statutes of almost all states since the end of the Second World War.

Explain how Natural law evolved into human rights.

The concept of human rights started in Europe during the Renaissance, when doctrines of Natural law evolved into human rights as follows:

- In 1644, John Milton advocated for the Liberty to know, to utter and to argue freely according to conscience.
- In 1690, John Locke argued that the rights to liberty and property were inherent in each individual prior to their acceptance of political bonds and that governments were created by contracts for specific purposes and should operate only within specific limits.
- The 1776 American declaration of independence and the 1789 French declaration of the rights of man were largely influenced by the belief in the rights of the individual.

- The rights of the individual were recognized in the 19th and 20th century constitutions and were included and defined in the basic statutes of almost all states since the end of the Second World War.

In what ways are human rights important?

(Explain the importance of human rights.)

- They are inherent to human beings. They distinguish human beings from other creatures.
- Respect for human rights limits internal and external conflicts and strengthen national unity.
- They guide the organs of the state regarding the exercise of power.
- They help human beings to live a dignified life, exploit their potential and to satisfy their spiritual and physical needs.
- They empower citizens and residents by giving them control of decision making organs of the state.
- They justify special treatment of minorities and other disadvantaged groups.
- They provide the citizens with the necessary information for the protection of democracy.

Explain the characteristics of human rights.

(Describe/state the features of human rights.)

- They are universal. They apply equally to all.
- They are indivisible. One right cannot be applied if the other does not exist. For instance, one cannot enjoy other rights if the right to life is not protected.
- Some rights have limitations. In enjoyment of rights, one has a duty to respect the rights of other people.
- They may be suspended at times. For instance, during war or outbreak of contagious diseases, the freedom of movement is restricted.

Describe/identified two main groups into which human rights are divided.

Human rights are grouped into:

- Political rights, which limit what the government can do to its citizens and how government power is exercised.
- Civil rights or liberties, which accrue to groups rather than individuals. They are referred to as Third Generation Human Rights.

Identify the rights that accrue to groups rather than individuals.

(Outline the Third-Generation Human rights. Or:

List the rights that fall in the *Civil Rights or Liberties* group.)

- rights to self determination.
- The right to permanent sovereignty.
- The right to economic, social and cultural development.
- The right to national and international peace and security.

THE BILL OF RIGHTS

What is the Bill of Rights?

It is the common name for chapter 5 of the constitution of the Republic of Kenya, in which the rights of the citizen are contained. It borrows from the English and the American bills of rights. It was adopted from the 1953 Universal Declaration of Human Rights.

Identify the rights that are contained/outlined in the Bill of Rights.

Chapter 5 of the constitution of Kenya contains the following rights:

- The right to life, to which every human being is entitled from birth to natural death. However, this right can be lawfully waived in occasions such as war, self defense, arrest of an individual, etc.
- The right to liberty and security, which entitles and guarantees every individual human being personal freedom, security and protection of the state over his person and property and prohibits cases of unlawful arrest or confinement.
- Freedom of conscience. Every individual is free to think and feel as they want and to follow whatever persuasion pleases them without imposing their opinion on others, for all people are viewed as equal before the law, free to follow their own conscience.
- Freedom of expression. One is free to express their thoughts in whatever appropriate form within limits laid down in the law.
- Freedom of Association and Assembly. This permits everyone to associate and congregate with like minded people without breaking the laws of the land.
- Freedom of movement. This permits the individual to move all over their country in order to meet and discuss with others who share similar persuasions, but without trespassing into private property and other designated areas.
- Freedom from discrimination, whether in terms of race, ethnic group, gender, age, political or religious affiliations, etc. all Kenyans are equal and deserve equal treatment.
- The right to property. Everyone has the right to acquire, maintain and dispose off property as they so desire, guided by the law of the land.
- Freedom from arbitrary search and entry. When necessary, the search and entry can go on as stipulated by the law of the land.
- Freedom from torture. This prohibits all forms of inhuman treatment, whether physical, emotional or psychological.
- Freedom from slavery and any other form of forced labor. This enables the individual to freely choose their employment, governed by specific labor laws.

THE UNITED NATIONS CHARTER ON HUMAN RIGHTS

Identify/outline the principles/objectives of the United Nations Organization.

The United Nations Organization (U N O) was formed during a conference in san Francisco in 1945 after the Second World War, with the following aims or principles:

- To prevent another war of a similar magnitude.
- To respect basic human freedoms.
- To ensure that no territory should change hands after the war without the consent of its inhabitants.
- That people or nations determine their own forms of government.
- To protect and defend life, liberty, independence and religious freedom.

Explain the process through which the charter of the United Nations organization was drawn.

The United Nations Organization was formed and its charter drawn through the following process:

- ✓ During the Second World War, 21 nations held the conviction that a victory over the enemy states was essential to defend life, liberty, independence and religious freedom and to preserve human rights and justice.

- ✓ The final proposals about an international organization were discussed and prepared by representatives of the USA, the USSR and China at Dunbarton Oaks in the USA in 1944.
- The United Nations charter was finalized and ratified by representatives of fifty countries in San Francisco in 1945.
- That same 1945, the U N O charter reaffirmed the prominence of the fundamental human rights, dignity and worth of the human person as well as the equality of all people and nations, large or small.
- The committee that drafted the United Nations charter on human rights prepared two documents.

Identify two documents that the committee that drafted the United Nations charter on human rights prepared.

- A declaration of general principles or standards of human rights.
- A convention to define specific human rights.

Identify the components of the International Bill of Human Rights.

In 1947, the committee, in its second session, agreed on the term International Bill on Human Rights, which is made up of:

- ✓ The Universal Declaration of Human Rights.
- ✓ The International Covenant on the economic, social and cultural rights.
- ✓ The International covenant on civil and political rights.
- ✓ Its two optional protocols i.e. the rights of the child and the United Nations Convention on the rights of the child.

Identify the rights that are contained in the United Nations Charter on Human Rights.

- The right to life, liberty and security.
- The right to recognition as a person before the law.
- the right to a fair and public hearing by an independent and impartial tribunal in the determination of one's rights and obligations.
- The right to nationality, which one is also free to change.
- The right to marry and start a family, to which a man and a woman of full age is entitled without any limitation due to race, nationality or religion.
- The right to social security.
- The right to rest and leisure. This includes reasonable working and periodic holidays with pay.
- The right to education.
- The right to work, free choice of employment, just and favourable conditions of work and protection against unemployment.
- The right to participate freely in the community's cultural life.
- The right to enjoy and share scientific advancement and its benefits.
- The right to freedom of thought, conscience and religion.
- Equality and freedom, to which all human beings are entitled.

THE UNIVERSAL DECLARATION OF HUMAN RIGHTS

This was adopted in 1948. It comprises a preamble and thirty articles that outline the human rights and fundamental principles to which everyone everywhere is entitled.

Explain why the Universal Declaration of human rights is the most important of all United Nations Declarations.

The Universal Declaration of Human Rights was and still is the most important and far reaching of all UN declarations because:

- It is a fundamental source of aspiration for international efforts to promote and protect human rights.
- It greatly influences numerous national statutes, constitutions and conventions on specific rights.
- It is an internationally endorsed statement of principles on human rights. Unfortunately, this advantage makes it lack the force of law.

Describe/explain the articles that lay out the universal declaration of human rights.

The Universal declaration of human rights is stipulated (laid out) in a series of articles, such as:

- ✓ Article 1, which states that all human beings are born free and equal in dignity and rights. It lays down the philosophy on which the declaration is based.
- ✓ Article 1, which forbids all forms of discrimination and therefore sets out the basic philosophy of equality and nondiscrimination with regard to enjoyment of human rights and fundamental freedom.
- ✓ Article 22, which is the second connection of the Universal declaration of Human Rights to the economic, social and cultural rights.
- ✓ Connecting Articles 28-30, which recognize that everyone is entitled to a secure international order in which human rights and freedoms are fundamental and stress the duties and responsibilities of each individual to their community.

ECONOMIC, SOCIAL AND CULTURAL RIGHTS

Identify the international legal provisions established and contained in the covenant on Cultural, social and economic rights.

The covenant on these rights acknowledges its responsibility in promoting better living conditions for its people. It contains essential international legal provisions establishing economic, social and cultural rights, such as:

- Self determination.
- Equal rights for men and women.
- The right to work.
- The right to just and favorable working conditions.
- Social protection and assistance, especially for the family.
- The right to adequate standards of living.
- The right to physical and mental health.
- The right to education.
- The right to cultural freedom and scientific progress.

Identify/outline civil and political rights.

(What rights could be categorized as civil and political rights?)

- Lawful protection against cruel, inhuman or degrading treatment.
- The right to life, liberty, security and privacy.
- ✓ Protection or freedom from slavery and forced labor.
- ✓ The right to a fair trial.
- ✓ Freedom of thought, conscience and religion.
- ✓ Freedom of movement, assembly and association.

THE RIGHTS OF THE CHILD

The concept of the rights of the child was inspired by the fundamental human rights as stated in the United Nations Convention on the rights of the child, which was adopted by the United Nations General Assembly in 1989 and was enforced in 1990, with the following achievements:

- State responsibility for protecting the child against the power of parents, economic exploitation and social neglect commenced in the course of the reform movement of the 19th century, followed by the League of Nations' adoption of the general declaration of the rights of the child in 1921.
- The United Nations convention on the rights of the child provided an up to date global perspective on the rights of the child, expressed in many international treaties and declarations. It set up the committee on the rights of the child to generate a permanent dialogue involving all parties in promotion of children's rights.

THE UNITED NATIONS CONVENTION ON THE RIGHTS OF THE CHILD

This convention defines a child as anyone below 18 years of age. It entitles the child to:

- peace,
- Dignity,
- Tolerance,
- Freedom,
- Equality
- Solidarity.

Identify the rights that the United Convention on the rights of the child entitles a child apart from those contained in the Bill of rights.

Apart from rights contained in the bill of rights, the convention entitles children to the following rights:

- Protection. Governments are under an obligation to ensure that children's rights are respected and honoured within their jurisdictions without any discrimination and to always act in the best interests of the child by providing institutions, services and facilities of an appropriate standard with qualified staff.
- Registration. Every child has the right to a name, identity and nationality, by which they are registered immediately after birth. The state is therefore expected to ensure that the child is not separated from their parents against their will, except in situations believed to be in the child's best interest.
- Information. The state is expected to ensure availability of both local and international material for intellectual, social, moral and spiritual well being in addition to physical and mental health for its children by encouraging production and distribution of such material while protecting children from harmful content.
- Dignity. The state should ensure dignity for all children, especially those with special needs, by promoting self reliance and their active participation in the community through provision of facilities for their care, self development and expression.
- Education. The state should make Primary education free and compulsory and encourage development and provision of secondary education by availing infrastructure and finance and put in place measures that promote discipline in and discourage dropping out of school.
- Leisure. Children ought to be given the opportunity to rest and engage in play and other recreational activities, including arts and cultural life.

- Protection from exploitation. This is possible by prohibiting the engagement of children in tasks that are hazardous to children's development.
- Protection from drugs. The state should institute measures that protect children from production, trafficking, obtaining and using narcotic drugs and psychotropic substances.
- Protection in conflict zones. The state is expected to protect the children caught in conflict zones and ensure that no child below the age of 15 is drafted into the military. It must promote rehabilitation and reintegration of Child victims of all forms of violence.
- Protection from criminal guilt. Children charged with criminal offences must be treated in a manner that will not destroy their sense of self worth and dignity.
- The right to adoption.
- The right to special protection.
- The right to practice religion.
- Refugees' right to assistance and protection.
- Healthcare. The state should ensure its children's enjoyment of the highest possible standard of health.
- Survival rights.
- Development rights.
- Rights to protection.
- Rights to participation.

Discuss/explain the rights of the child as provided for in the United Nations Convention on the rights of the child under the following headings:

- (a) Healthcare;
- (b) Survival rights;
- (c) Development rights;
- (d) Rights to protection;
- (e) Rights to participation;
- (f) Protection from criminal guilt;
- (g) Education.

HEALTHCARE

The state should ensure its children's enjoyment of the highest possible standard of health by:

- Prevention services e.g. education on hygiene, nutrition and harmful traditional practices.
- Preparation and provision of facilities for treatment and rehabilitation in order to deal with children's illnesses.
- Institution of appropriate prenatal and postnatal healthcare and family planning programs.

SURVIVAL RIGHTS

These include:

- ✓ The right to life.
- ✓ The right to name and identity.
- ✓ The right to good medical care.
- ✓ The right to good clothing.
- The right to shelter.
- The right to good food.

DEVELOPMENT RIGHTS

These include:

- ✓ The right to education.
- The right to play and leisure.

- The right to access information.
- The right to social security.
- The right to parental love.

RIGHTS TO PROTECTION

These include:

- ✓ Protection from exploitation.
- ✓ Protection from disaster.
- ✓ Protection from sexual abuse.
- ✓ Protection from discrimination.
- ✓ Protection from abuse, neglect and drugs.
- Rights to participation. These include:
 - ✓ Freedom of expression.
 - ✓ freedom of association.
 - ✓ Freedom of thought and opinion.
 - ✓ Freedom to express feelings and contribute towards development in the community.

PROTECTION FROM CRIMINAL GUILT

- Children charged with criminal offences must be treated in a manner that will not destroy their sense of self worth and dignity.
- The state must establish a minimum age below which children are presumed innocent of criminal guilt.
- The convicted child must be permitted to respond freely without any coercion.

EDUCATION

- The state should make Primary education free and compulsory.
- Development and provision of secondary education must be encouraged.
- Infrastructure and finance must be availed.
- Measures that promote discipline in school must be put in place.
- Dropping out of school must be discouraged.

THE RIGHTS OF THE CHILD IN KENYA

State the provisions of the 2001 child's act in Kenya.

In an attempt to domesticate the United Nations Convention on children's rights, the 2001 Child's act was published to safeguard the rights of the Kenyan child. Among its significant provisions are:

- The right to parental care.
- The right to education.
- The right to religious education.
- The right to healthcare.

Identify the legal provisions that safeguard the child's rights as stipulated in the 2001 Child's act.

The 2001 Children's Act of Kenya also has legal provisions that safeguard the child's rights.

These include:

- Realization of the rights of the child.
- Best interests of the child.
- Nondiscrimination.
- The right to parental care.

- The right to education.
- The right to healthcare.
- Protection from child labor and armed conflict.
- Name and nationality.
- Care of the disabled child.
- Protection from abuse.
- Protection from harmful cultural rites.
- Protection from sexual exploitation.
- Protection from drug abuse.
- Leisure and recreation for the child.
- Protection from torture and deprivation of liberty.
- The right of the child to privacy.
- Penalties for violating Child rights.
- Duties and responsibilities of the child.
- Enforcement of rights.

CLASSIFICATION OF HUMAN RIGHTS

Into what categories are human rights divided?

The main categories of human rights include:

- Classical rights, also referred to as fundamental or civil rights. These include individual, political and civil rights i.e. the right to vote, think and access information. These rights aim at limiting the state's interference in people's personal lives and protect the individual from cruel, inhuman or degrading treatment.
- Solidarity rights. These require the state to pursue policies that do not destroy natural resources or waste financial resources, but create conditions for peaceful and consensual living. They include the right to a clean health and a sustainable environment and the right to peace and development. They are contained in the constitution to ensure their protection.
- Social, economic and cultural rights. These compel the state to promote individual development and fulfillment of material needs. They include the right to start a family, the right to education, the right to work and the right to own property.
- To create legally binding obligations for member nations, the Universal Declaration of Human rights came up with two covenants. These were:
 - the international covenant on economic, social and cultural rights. This came into effect in January 1976.
 - The International Covenant on civil and Political Rights, which dealt with classical human rights and came into effect in March 1976.
- **State the provisions of the two covenants of the Universal Declaration of Human Rights.**

Though the covenants reflected the rights contained in the Universal declaration of Human rights, they both contain the right of all peoples to self determination and enjoyment of their natural resources through the following provisions:

 - Recognition of the inherent dignity of a human person.
 - Recognition of the ideals of human beings who enjoy civil and political freedom from fear and want.
 - Ensuring enjoyment of political, economic, social and cultural rights.
 - Universal respect for human rights and freedom.

- Self determination in terms of political status and pursuit of economic, social and cultural development.

These rights were especially campaigned for by the newly independent countries of the Third world. They are often referred to as solidarity or Third Generation human rights. However, there is no standard classification of human rights.

Identify the major United Nations instruments that define and guarantee human rights.

The following are the major United Nations instruments that define and guarantee human rights:

- the Universal Declaration of Human Rights.
- The International Covenant on economic, Social and Cultural rights.
- The International covenant on civil and Political rights.
- Two optional protocols

Human rights are further classified into individual and collective rights. This classification is due to the fact that, although most fundamental rights apply to the individual, there are those that can only be exercised by and in groups e.g. Religious, Political or Social groups. However, none of these classifications is absolute, for many of the rights tend to overlap the classes into which they are categorized.

Identify the specialized bodies through which the United Nations Organization implements human rights.

The united Nations Organization has worked on implementing policies on human rights through specialized bodies such as:

- The covenant on the prevention and punishment of the crime of Genocide.
- The commission on human rights, which coordinates the implementation of the charter on human rights.

Identify the areas of human rights that the commission on human rights deals with.

- The International Bill of Rights.
- International covenants on civil liberties, status of women and freedom of information.
- Protection of minorities.
- Prevention of all forms of discrimination.

Identify the types of rights that conventions were adopted on.

From early 1970s, conventions were adopted on specific types of rights. These were:

- the International Covenant on the Suppression and punishment of the crime of Apartheid (1976).
- The Covenant on the elimination of all forms of discrimination.
- The Convention against Torture and other degrading forms of treatment and punishment.
- The second optional protocol to the international covenant on civil and political rights (for elimination of the Death sentence (1989).
- The convention on the rights of the child (1989-1990).
- The International Convention on the protection of the rights of migrant workers and their families.

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