

THE KENYA NATIONAL EXAMINATION AND ASSESSMENT PREDICTION SERIES

Candidate's Name		Assessment Number	
School Name		School Code	
Candidate's Signature		Date	

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT

812/1

PRETECHNICAL STUDIES (theory)

PAPER 1

TERM 2 ENDTERM 2025

Time: 1 hour 40 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and assessment number in the spaces provided above.
2. Write the name and code of your school in the spaces provided above.
3. Sign and write the date of the assessment in the spaces provided above.
4. This paper consists of two sections: A and B.
5. Section A comprises Multiple Choice Questions numbered 1 to 30.
6. Section B comprises Short Structured questions numbered 31 to 50.
7. Answer ALL the questions in section A on the separate ANSWER SHEET provided.
8. Answer ALL the questions in section B in the spaces provided in this question paper.
9. Do not remove any page from this question paper.
10. Answer all questions in English.

For official use only: SECTION B

Task	Task 1								Task 2				Task 3							
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Cand. Score																				
Max Score/Task	25								12				13							
Cand. Score/Task																				

This paper consists of 10 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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Turn over

SECTION A (30 marks)

Answer All questions in this section on the answer sheets provided.

1. The Competency Based Curriculum in Pre-Technical Studies aims to equip learners with:

- A. Theoretical knowledge only.
- B. Practical skills and entrepreneurial competencies.
- C. Historical facts about technology.
- D. Advanced scientific research abilities.

2. Which of the following is an example of a good workshop practice that promotes safety?

- A. Leaving tools scattered on the workbench.
- B. Wearing loose clothing while operating machinery.
- C. Keeping the work area clean and organized.
- D. Operating machinery without proper training.

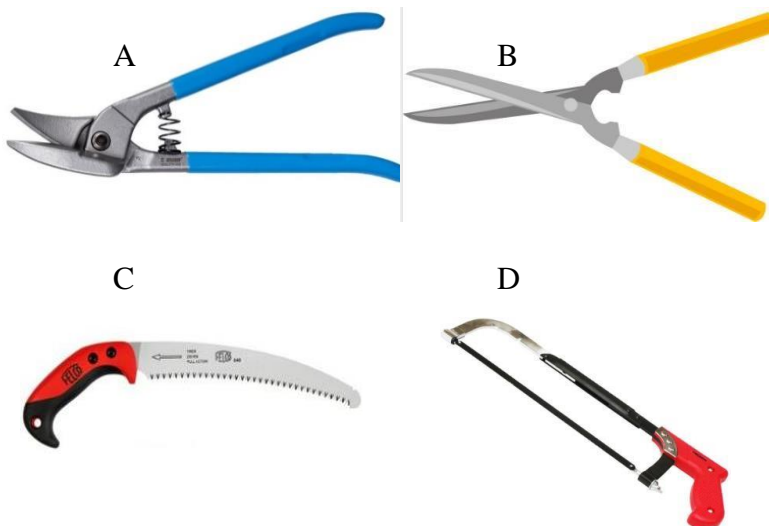
3. When drawing a mechanical component, Wafula drew the line shown below.



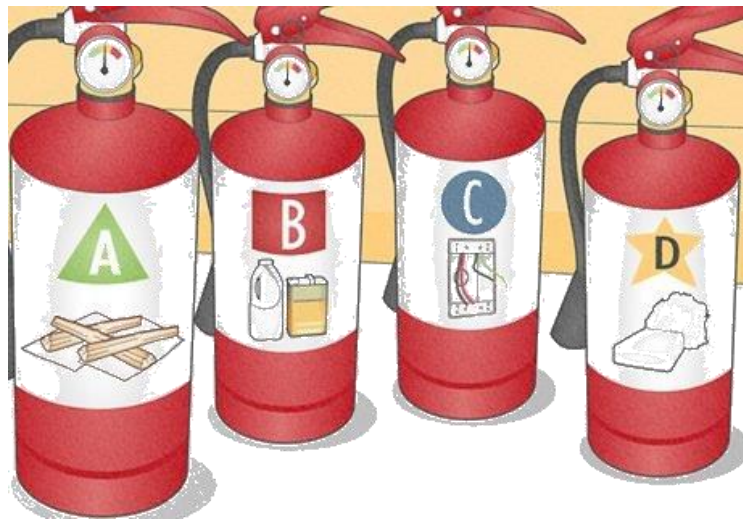
The line drawn is called a?

- A. Centre line
- B. Hidden line
- C. Continuous line
- D. Dimension line

4. A Grade 8 learner is designing a simple metallic toy car. Which tool would be used to cut the metal sheets?



5. During a fire safety drill, Mr. Mwangi asked Grade 8 learners of Olalui Junior School to put out an electrical fire. Which one of the following extinguishers was the most appropriate to use?



6. In a carpentry workshop, which safety precaution is specific to preventing injuries from flying wood chips?

- A. Wearing ear protection.
- B. Using a dust mask.
- C. Wearing safety glasses or goggles.
- D. Having a fire extinguisher nearby.

7. Which of the following materials is known for its excellent thermal insulation properties, making it suitable for constructing roofs and walls in hot climates?

- A. Glass
- B. Steel
- C. Timber
- D. Aluminium

8. When working with a hacksaw to cut metal, what is the correct technique to ensure safety and efficiency?

- A. Apply pressure only on the return stroke.
- B. Apply pressure only on the forward stroke.
- C. Use short, quick strokes.
- D. Cut without clamping the work-piece.

9. Which of the following is not a method of putting out fire.

- A. Smothering method B. Starving method
- C. Interrupting method. D. Hacking method.

10. Observe the item below keenly.



The item above has been made using which type of metal?

- A. Gold B. Copper C. Aluminium D. Steel

11. What is the primary purpose of a fire drill in a school or workshop environment?

- A. To cause panic among learners.
- B. To practice emergency evacuation procedures.
- C. To test the fire alarm system only.
- D. To identify individuals who are slow.

12. Which of the following is a common cause of electrical fires in a workshop?

- A. Overloading electrical sockets.
- B. Properly maintained machinery.
- C. Using the correct wire gauge.
- D. Regular inspection of electrical cords.

13. Which tool is used to hold small components securely while they are being worked on, preventing them from moving?

- A. Claw hammer B. Screwdriver
- C. Bench vice D. Spanner

14. Mary bought a new blender, but after a week, it stopped working. The seller refused to replace it or give a refund, claiming she misused it, which she denies. Mary wants to report this unfair practice.

Which government body in Kenya is primarily responsible for ensuring consumer rights are protected in such a case?

- A. Kenya Revenue Authority (KRA)
- B. Central Bank of Kenya (CBK)
- C. Competition Authority of Kenya (CAK)
- D. Kenya Bureau of Standards (KEBS)

15. A new company is asking the public to buy shares, promising very high and quick returns. Some potential investors are wary about the risks and want to ensure their money is safe from scams. The primary purpose of investor protection in this situation is to:

- A. Guarantee profits for all investors.
- B. Safeguard investors from fraudulent practices and ensure fair trading.
- C. Limit the amount of money an investor can put into a business.
- D. Force investors to invest in specific companies.

16. The school principal wants to inform parents about the upcoming sports day, including highlights of previous events and a visual representation of the schedule.

Which of the following is the most effective channel for the principal to use to achieve this?

- A. A radio advertisement on a local station.
- B. A face-to-face meeting with a few parents.
- C. A television commercial played on a community channel.
- D. A phone call to each parent.

17. During a conflict resolution session between two learners, the mediator wants to observe their body language, listen to their tone, and understand their feelings instantly to de-escalate the situation.

Which form of communication is ideal for the mediator to use to achieve this understanding?

- A. Written communication via notes.
- B. Oral communication (face-to-face discussion).
- C. Formal reports submitted by each learner.
- D. Email communication after the session.

18. Recent cases of expired food products being sold in local shops have raised concerns among consumers. People want assurance that they are buying safe goods.

Consumer protection laws aim to:

- A. Benefit businesses by reducing competition.
- B. Ensure fair prices for all goods and services.
- C. Protect consumers from unfair trade practices and unsafe products.
- D. Promote monopoly in the market.

19. Ms. Akinyi started a successful tailoring business by identifying a market gap for custom-made school uniforms, taking risks, and organizing resources.

The reward Ms. Akinyi receives for her innovation, risk-taking, and organization in setting up the business (entrepreneurship) is:

- A. Wages B. Rent C. Interest D. Profit

20. Prudence is a Grade 8 learner managing her pocket money. Which of the following actions demonstrates effective money management?

- A. Spending all her money as soon as she receives it.
- B. Making a list of her needs and wants before spending.
- C. Borrowing money from friends frequently.
- D. Ignoring future financial goals.

21. Which of the following is an advantage of saving money in a financial institution like a bank?

- A. No interest is earned on savings.
- B. The money is easily accessible for impulsive spending.
- C. Safety and potential for earning interest.
- D. High risk of losing money.

22. Mwende is a small-scale farmer considering diversifying her produce. Which of the following is the most reliable source of a new business idea for her?

- A. Listening to random rumours.
- B. Identifying a gap in the local market for specific agricultural products.
- C. Copying a successful farmer from a different region.
- D. Waiting for government grants to appear.

23. Which component of a computer is responsible for executing instructions and performing calculations?

- A. Random Access Memory (RAM)
- B. Hard Disk Drive (HDD)
- C. Central Processing Unit (CPU)
- D. Graphics Processing Unit (GPU)

24. Which type of computer is designed for use by a single user at a time and is typically found in homes and offices?

- A. Supercomputer
- B. Mainframe computer
- C. Personal computer
- D. Server

25. When working in a computer lab, what is the best practice for maintaining proper posture and preventing strain?

- A. Slouching in the chair to relax.
- B. Sitting upright with feet flat on the floor and elbows at a 90-degree angle.
- C. Leaning very close to the screen.
- D. Resting wrists on the keyboard at all times.

26. Phishing is a common online scam. Which of the following is a characteristic of a phishing attempt?

- A. An email from a known sender asking you to update your software.
- B. A message asking for your personal login details, often with a sense of urgency.
- C. A notification about a new software update from a reputable company.
- D. An advertisement for a product you recently searched for.

27. Which keyboard shortcut is commonly used to copy selected text or objects in most computer applications?

- A. Ctrl + X
- B. Ctrl + V
- C. Ctrl + C
- D. Ctrl + Z

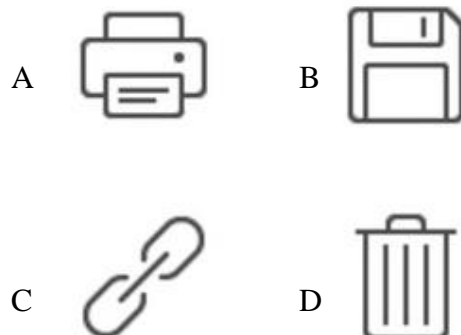
28. Antivirus software is an example of which category of computer software?

- A. Operating System
- B. Utility Software
- C. Application Software
- D. Programming Language

29. An algorithm is a set of instructions to solve a problem. In visual programming, what is the most common way to represent steps in an algorithm?

- A. Writing long lines of text code.
- B. Using mathematical equations.
- C. Connecting graphical blocks or symbols.
- D. Drawing complex flowcharts with only text.

30. Which of the following icons typically represents the "Print" function in most computer applications?



SECTION B (50 marks)

Answer ALL the questions in this section in the spaces provided.

31. State two ways in which Pre-Technical Studies promote critical thinking skills in learners. (4 marks)

- i. _____
- ii. _____

32. Technical drawing uses different types of projections to represent objects.

a) Name two types of pictorial projections. (2 marks)

- i. _____
- ii. _____

b) State one advantage of using isometric projection over oblique projection. (1 mark)

33. The picture below shows a common marking tool used in carpentry.



a) Identify the tool shown above. (1 mark)

b) State two uses of the tool. (2 marks)



34. Sustainable practices are encouraged in the use of materials.

a) Give two examples of composite materials. (2 marks)

- i. _____
- ii. _____

b) Name one application for each composite material in 34(a). (2 marks)

a) _____

35. Freehand sketching is an important skill in technical communication. Make a free hand sketch of a **cone** with a circular base. (4 marks)

36. Metal joining is a crucial process in fabrication. State three factors to consider when choosing a method for joining two pieces of metal. (3 marks)

- a) _____
- b) _____
- c) _____

37. Geometrical constructions require precision. Construct a circle with a radius of 4cm using a pair of compasses and a ruler. (3 marks)

38. Businesses often interact with various stakeholders. State two ways in which businesses contribute to the welfare of the community. (2 marks)

- a) _____
b) _____

39. A business had the following balances for the month of April 2025:

Item	Amount (Ksh)
Opening Inventory	15,000
Purchases	25,000
Sales	40,000
Closing Inventory	10,000

Calculate the **Cost of Goods Sold** for the month. (3 marks)

40. Consumer protection is important for a fair marketplace. State two responsibilities of consumers in ensuring they are not exploited. (2 marks)

- a) _____
b) _____

41. Mwangi is an aspiring entrepreneur and needs to conduct market research. Outline two reasons why market research is important before starting a business. (2 marks)

- a) _____
b) _____

42. Financial literacy is a key life skill.

a) Distinguish between **needs** and **wants** in the context of personal finance. (2 marks)

b) Give one example of a **need** and one example of a **want** for a Grade 8 learner. (1 mark)

Need: _____

Want: _____

43. A teacher wants to store a large amount of educational videos and share them with learners. State one computer hardware device that offers large storage capacity and portability for this purpose. (1 mark)

a) _____

44. Match each of the following computer accessories with their primary function. (2 marks)

Accessory	Primary Function
Web Camera	Provides temporary power backup during outages.
Printer	Captures video and images for online communication.
Flash Drive	Produces hard copies of digital documents.
Uninterruptible Power Supply (UPS)	Portable storage device for files.

45. Digital citizenship involves responsible and ethical use of technology. Name two positive uses of social media for learning purposes. (2 marks)

a) _____

b) _____

c) _____

46. The following are steps for sending an email. They are not arranged in the correct order.

- (i) Click the "Send" button.
- (ii) Compose your message in the body of the email.
- (iii) Open your email client or webmail.
- (iv) Enter the recipient's email address in the "To" field and a subject.

Arrange the instructions in the correct order. (2 marks)

47. What is the main difference between **hardware** and **software** in a computer system? (1 mark)

48. Cyberbullying is a serious online threat. State one action a learner should take if they experience cyberbullying. (1 mark)

a) _____

49. A Grade 8 teacher wants to calculate the average score of learners in a spreadsheet. The scores are in cells B2, B3, B4, and B5. Write the formula that the teacher would use to calculate the average score in cell B6. (2 marks)

50. A Pre-Technical Studies teacher created the following simple program to determine if a learner has passed or failed an exam based on a pass mark of 60.

Start

Input Score

If Score \geq 60

Output **"EXCEEDS EXPECTATION"**

Else

Output **"MEETS EXPECTATION"**

End

What will be the output if a learner scores:

a) 75: _____ (1 mark)

b) 50: _____ (1 mark)

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