**SET 8**

231/3 BIOLOGY PAPER 3

CONFIDENTIAL &MARKING SCHEME &

**1.**

1. X - Ulna

Y - Radius

1. Lower forelimb
2. Proximal end – Ball and socket joint

Because of rounded head that fits into the glenoid cavity

Distal end – hinge joint

Presence of trochlea which articulates with the forearm to form a hinge joint

1. **(i)** To provide large surface area for muscle attachment

To prevent the elbo from forming inside out

**(ii)** Flesh

Presence of carnassial teeth for slicing flesh and crushing bones

1. C 2(i c pm m ) = 42

**f.** They have a sharp edge to slice flesh and crush bones

**2.**

**I** S2 Pericarp S4 Seed

S3 Mesocarp S5 Hard/Stony endocarp

**II**  T2 – Remains of calyx

T3 – Placenta

T4 – Seed/ovule

T5 – Funicle

|  |  |
| --- | --- |
| Specimen S1 | Specimen T1 |
| Fruits is juicy/fleshy | Dry fruit |
| Has a seed | Numerous seed |
| Has endocarp and epicarp separated | Endocarp, mesocarp and epicarp fused |
| Placenta is central based | Marginal placentation |
| Absence of sutures | Presence of sutures |

(5 marks)

(b)(i) Complete the following table showing the type of fruit and reasons for each answer (6 marks)

|  |  |  |
| --- | --- | --- |
| Specimen | Type of fruit | Reasons |
| S1 Mango | Drupe | One seed  Fleshy mesocarp  Fibrous endocarp  Basal placentation  Stony endocarp |
| T1 Pea-pod | Legume | Two sutures  Monocarpous fruit  Marginal placentation  Develops from a superior ovary |

(3mk)

iii) Complete the following the method of dispersal and reasons for each answer

|  |  |  |
| --- | --- | --- |
| Specimen | Method of dispersal | Reasons |
| S1 | Animal | Brightly coloured  Fleshy mesocarp  Succulent/scented |
| T1 | Self-explosive mechanism | Two lines of weakness  Suture along which it dehisces on dying |

(4mk)

**3.** Separation of homologous chromosomes which leads to reduction

Separation of sister chromatids which move to different daughter cells **(2mks)**

**b)**

1. prophase 1
2. metaphase 1
3. anaphase 1
4. telophase 1 **(4 mark)**

prophase 1

Leads to intermixing of genetic material which results to variations **(1mk)**