**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$\frac{3}{3}$ c$\frac{1}{1}$ pm $\frac{4}{4}$m $\frac{2}{3}$) = 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 seedFleshy mesocarpFibrous endocarpBasal placentationStony endocarp |
| T1 Pea-pod | Legume  | Two suturesMonocarpous fruitMarginal placentationDevelops 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 colouredFleshy mesocarpSucculent/scented |
| T1  | Self-explosive mechanism | Two lines of weaknessSuture 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)**