**KASSU JET EXAMINATION  
Kenya Certificate** **of Secondary Education**

***231/3***

**BIOLOGY**

**Paper 3**

**(Practical)**

**June, 2018**

**1 3/4 Hours**

**Marking scheme**

1 .a. (8marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Food substance** | **Procedure** | **Observation** | **Conclusion** |
| Starch; | Put 2cm3 of test solution in a test tube, add 3 drops of iodine solution; | Brown colour of iodine solution persists; | Starch absent; |
| Reducing sugar | Put 2 cm3of test solution in a test tube. Add equal amount of Benedict’s solution, heat to boil; Rej. warm | Orange colour observed;  Accept green, yellow | Reducing sugar present; |

(3 marks)

b) Starch absent; all starch hydrolysed/broken down by enzyme (diastase); into simple sugars;

accept. Converse

c) Epigeal germination;

2. (a) (i) Atlas (1mark)

-Wide neural canal for passage of the large spinal cord in the neck region; (3marks)

-Broad facets for articulation with the occipital condyles of the skull;

-Broad and flattened wing-like transverse process to offer a large surface area for attachment of neck muscles;

ii) Occipital condyles; (1mark)

(iii) (a) M – Tendrils; R – Twining stem; (2 marks)

(b) Turgidity of cells / Prop roots / Adventitious /Spines of climbers /Lignified cells /Cellulose / Pectin; @any one for 1 mrk (1 mark)

b) i) Sacral vertebra rej. Vertabrae (1mark)

ii) S-Illium; (3marks)

T-Pubis symphysis; (On the diagram)

M- Greater trochanter;

iii) Proximal: Ball and socket joint; (2marks)

Distal: Hinge joint;

iv) Immovable/ fixed joint; (1mark)

3. a) Drawing-1mark; Label any three parts- 3 marks; Mag- 1 mark; Total = 5mrks

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b) i) Insect pollinated; (1mark)

ii) Brightly coloured; (3marks)

Large/Conspicuous;

Scented;

Tubular/funnel shaped;

iii) Syncarpous; (4marks)

Floral parts in fives;

Polysepalous;

Hypogynous ovary (Superior)/ Ovary above other floral parts;

Stigma positioned higher than anthers;

Pedicillate flower;