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**CEKENAS END OF TERM TWO EXAM-2022**

**FORM FOUR EXAM**

*Kenya Certificate of Secondary Education. (K.C.S.E)*

***Biology paper 3***

***231/3***

***Marking scheme***

1. i) Fruit (1mk)

ii) Has two scars (1mk)

b)

|  |  |  |  |
| --- | --- | --- | --- |
| Food  | Procedure  | Observation  | Conclusion  |
| Vitamin C (Ascorbic acid) reject. Vit.C or wrong spelling  | Put DCPIP in a test tube, add food substance (the juice) dropwise. | DCPIP colour is decolourised - DCPIP colour disappears | Vitamin C (Ascorbic acid) is present |
| Non reducing sugar | - Put juice/ food substance in a Test tube.-Add a few drops of hydrochloric acid and heat, add few drops of sodium hydrogen carbonate until fizzing stops, and add some drops of Benedict’s solution and heat. | Colour turns orange or colour changes from blue, green, yellow and orange;**NB:** Colour sequence must be correct | Non reducing sugar present; |
| Protein (s) | To the food substance add few drops of sodium hydroxide and (shake), add copper sulphate (drop by drop) | No colour change;/ blue colour persists | Absence of proteins |

(9mks)

**NB: No mark for food substance**

c) Importance of dispersal

i) Colonise new place/ area

ii) Reduce overcrowding/ reducing competition

iii) Reduce the spreading of diseases.

2. a) Angiospermaphyta (1mk)

Reason – it’s a flower (1mk)

b) Dicotyledonae (1mk)

Reasons 5 stigma, 5 petals, / 5 floral parts. (1mk)

c) Insect

- Brightly coloured petals/ anthers. (1mk)

d) 5 petals; fused from the base but free at tips.

- Petals are star shaped;

- Net veined; purple in colour; (2mks)

Androecium – 5 anthers; free surrounding style;

- Each anther has short style;

- Anthers below the stigma;

- Anthers yellow in colour. (2mks)

e)

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L = 3mks

D = 1mk

3. A – Lumbar vertebra reject. Lumbar bone, lumbar vertebrae

B- Sacrum

C- Pubic bone/pubis

b) Z- Obturator foramen (1mk)

- Passage of blood vessels/ nerves/ muscles (1mk)

c) T- Pubis Symphysis

Role – During birth, it opens for easy passage of new born. (1mk)

d) Femur

e) Pelvic girdle

f) i) Pelvic region/ Hip region

ii) 