3KNT

BIOLOGY 231/3 (PRACTICAL)

MARKING SCHEME

1. (a) (i) piece in solution S1 (1mk

firm/hard/stiff/rigid

piece in solution S2

 Limp/soft/flexible/flabby

 (ii) solution S1 is hypotonic ; water moved into the cells by osmosis; making the cells turgid(3mks)

 Solution S2 is hypertonic ; water moved out of the cells by osmosis making the cells flaccid(3mks)

(b) (i) S1 slit open wider ; strip bend outwards; S2 slit remains closed;

(ii) in S1 cells in inner surface enlarged more ; because they took in more water than the outer cells.

 In S2 cell in inner surface shrunk; because they lost more water than the cells in the outer surface.(4mks)

1. (a) A – Vegetation.(1mk)

Reason : presence of diastema/(1mk)

B – Flesh /meat(1mk)

Reason: presence of pnaelinent canines/presence of carnassial teeth.(1mk

(b) (i)A- - diastema (1mk)

Function – allow manipulation of food by the tongue (1mk)

(ii) molar tooth(1mk)

Function – for grinding and crushing food.(1mk)

(iii) canine(1mk)

Function – catching/ killing the prey.(1mk)

(c) Carnivorous .(1mk)

3(a) (i)



For diagram to be awarded:

* Epicarp with continuous double line
* Mesocarplaryer than epicarp drawn in free hand
* Endocarp with seeds
* Indication of juicy sacs in at least one locules
* Minimum of four loculus drawn
* Centrally placed placenta. Radial arms accepted

NB: Three marks to awarded when evidence of using free hand is noted no shading

(ii) centralAxile/ axile

(b) – succulent /fleshy /juicy to attract animals

 - scented /aromatic smell/ sweet smell to attract agent

 - hardseedcoat / slippery coat/ indigestible /seed to prevent digestion.(3mks)

|  |  |
| --- | --- |
| Observation  | Conclusions  |
| DCPIP decolourised | Ascorbic /vitamin C present |
| Blue colourpersists | Protein absent |
| Colour changes to green, yellow,orage,brown/red or colour changes to orange/brown/red | Reducing sugars/present/simple sugars present |
|  |  |

(6mks)

Note: conclusion mark tied to observation)