

## FORM 3 PP3

### BIOLOGY PRACTICAL MARKING SCHEME FORM THREE

1.

(a)

(12marks)

Food substance	Procedure	Observation	Conclusion
starch	Add 3 drops of iodine solution	Solution turns blue black	Starch present
protein	Add drops of NaOH Add drops of CuSO <sub>4</sub>	Solution turns purple	Protein present
Ascorbic acid/ Vitamin C	Into about 2cm <sup>3</sup> of DCPIP add drops of food solution X	Blue colour of DCPIP persists	Ascorbic acid absent

- (b) –body building food  
- Energy giving food

2.(a)a) Giving a reason in each case, classify the animal into the taxonomic units in the table below. (4 marks)

Taxonomic unit	Name of taxonomic unit	Feature
Phylum	Chordata	Presence of a notochord at a stage of embryo development
Class	Pisces	Presence of fins; presence of lateral line; Presence of gills

(b)i. Have moist surfaces to dissolve oxygen gas

ii .Have a thin epithelial lining for gases to move through a short distance

iii .Have a large capillary network for maximum gaseous exchange

(c i) answer on figure

ii.Counter current flow.

(d)i.Diffusion.

ii.A steep concentration gradient of oxygen gas.

(e)While in water filaments part and creates a large surface area for gaseous exchange.

When a fish is removed out of water into air, filaments sticks together reduces surface area for gaseous exchange fish suffocates and dies.

3.

(a)

Structure	Dispersal agent
X1	Wind
X2	Water
X3	Explosive mechanism
X4	Animal

(b)

Structure	Adaptive features
X1	Has wing like structures that enable it to float in wind
X2	Mesocarp fibrous and spongy to trap air; Air trapped make fruit light and buoyant to float on water.

(c i) Root system of R2- Tap root; star shaped xylem vessel

Leaf characteristics of R2 –Network venation; presence of petiole;

(ii) Polypetalous characteristic; petals are free/ petals are not fused

(iii) Funicle