

1. a)

Food substance	Procedure	Observation	Conclusion
Starch	To (a little of) liquid C on a white tile add a few drops of iodine solution/solution K;	The mixture/colour turns blue black;	Starch present;
Reducing sugars	To (2 ml of) liquid C add equal amounts of Benedicts solution/solution D and boil /heat;	Mixture turns green,yellow,orange and lastly brown in colour	Reducing sugars present;
Proteins	To (2 ml of) liquid C add 10% sodium hydroxide/G then copper (II) sulphate/solution H (drop by drop);	Mixture turns purple/violet/mauve;	Proteins present;
Non-reducing sugars	To 2 ml of liquid C add dilute hydrochloric acid/E and warm/heat/boil; cool and add sodium hydrogen carbonate/F (until fizzing stops);Add Benedict's solution/D and boil;	The mixture turns green,yellow,orange, and finally orange;	Non-reducing present;
		14 max	12 marks

NOTE: - For the procedure, observation and conclusion to be correct, the food substance must be correct

- A ward marks for procedure, observation and conclusion only.

- Formulae of 4 3,, CuSO NaHCOHCl should be correct if used.

- A ward for Benedict's solution and heating once under reducing sugars and give equivalent if they are correct under no-reducing sugars.

Food nutrient	Function in human body
Starch	Is digested into glucose/reducing sugars before it is oxidized to release energy.
Reducing sugars	Oxidized in the body cells to release energy for carrying out various body activities.OWTTE
Proteins	For growth/information of protoplasm; For repairing worn out tissues; Any one

(3 marks)

NOTE: - Function is tied to the food nutrients. -

(b) is tied to (a)

2. (a) X - Vein; Reason:
 -Has thin/thinner/less muscular;
 -Has wide/wider lumen; Y- Artery Reason:
 -Has thick/thicker/more muscular wall;
 -Has narrow /narrower lumen; (4marks) Any 1st one Reason is tied to the identity.
- (b) X-Carries/transport deoxygenated blood from body tissues;
 Y-Carries/transport oxygenated blood to body tissues; (2marks)
- (c) Y-Thick muscular walls to withstand high pressure of blood; -
 Narrow lumen which increases pressure of the blood for ultrafiltration; (2marks)
- (d) X-Varicose veins; Y-Arteriosclerosis; rej wrong spellings
3. (a) (i) Fruit; (1mark) Rej plural fruits but acc correct reason
 (ii) Has/presence of two scars/points of attachment of receptacle and of style; (1mark)
 (iii) Has pericarp/fruit wall; Any 1st one.

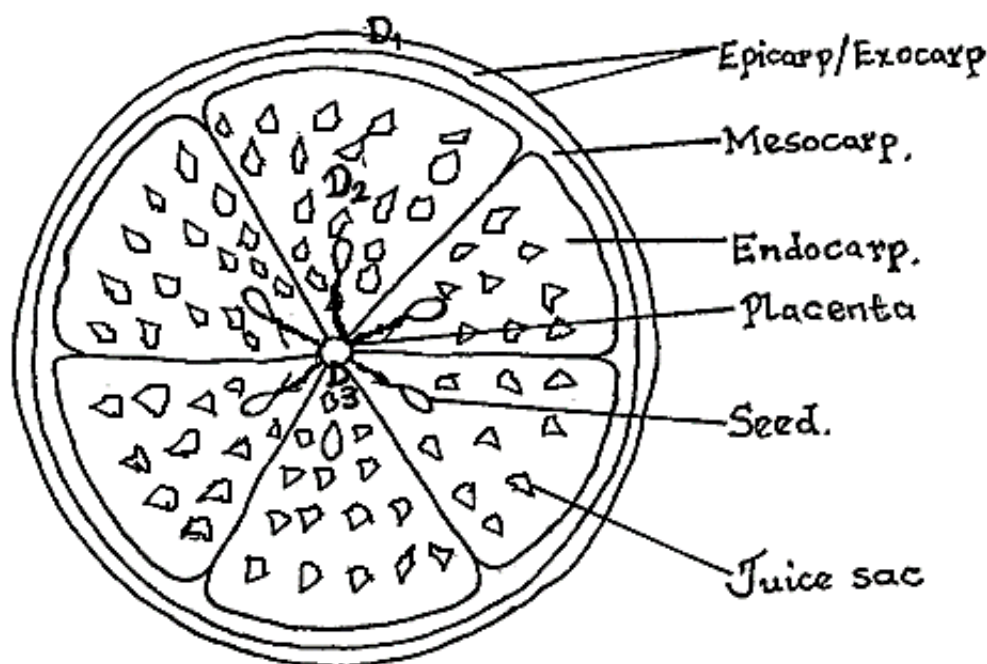
Note: Drawing marks

D1 Continuous outline.

D2 Endocarp drawn with seeds/loculi and juice sacs shown.

D3 Central placenta enclosed in a ring.

Rej: if epicarp is single line



(b) (ii)
$$\text{Magnification} = \frac{\text{Drawing size}}{\text{Actual size}} = \frac{\text{cm}}{\text{cm}} = X \frac{1}{2} - X3;$$

cm

(iii) Axial/Axile/central; (1mark)

(c) (i) Animal dispersal; acc animals

(ii) -Brightly coloured to attract animals/agents of dispersal;

-Scented to attract animals;

-Seeds have hard/slimy/slippery coat to prevent digestion;

-Succulent/juicy to attract animals; (ii) tied to (i)