

**231/3**  
**BIOLOGY PAPER 3**  
**TERM 3 2017**

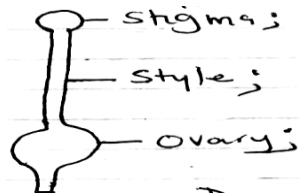
**MARKING SCHEME**

1.

FOOD SUBSTANCE	PROCEDURE	OBSERVATION	CONCLUSION
Proteins	<ul style="list-style-type: none"> <li>Put 2cm<sup>3</sup> of food sample D into a test tube.</li> <li>Add sodium hydroxide solution</li> <li>Add copper sulphate solution and shake;</li> </ul>	No colour change / blue colour of copper sulphate persists / retains / maintains;	Proteins / absent / Absence of proteins;
Non-reducing Sugar	<ul style="list-style-type: none"> <li>Put 2cm<sup>3</sup> of food sample D into a test tube.</li> <li>Add dil. Hydrochloric acid, boil and cool;</li> <li>Add sodium hydrogen carbonate until the fizzing stops;</li> <li>Add Benedict's solution and boil;</li> </ul>	Colour changes from Blue to green / yellow orange and brown. Acc Redbrown / if only one colour is mentioned.	Non-reducing sugar(s) present; Rej. Reducing sugar(s); present after hydrolysis.
Starch	<ul style="list-style-type: none"> <li>Put 2cm<sup>3</sup> of food sample D into a test tube.</li> <li>Add iodine solution and shake</li> </ul>	Coour changes to blue black / blue-black / blue / black;	Starch present

2. (i) (a) Dichotyledonae;  
(ii) - Network venation / net veined leaves;  
- Presence of leaf petiole / leaf stalk;  
- Broad leaf;  
(iii) Insect;  
(iv) - Brightly coloured petals to attract insects;  
- Large and conspicuous;  
- Scented;  
- Has landing platform for insects;  
- Anthers are firmly attached to the filament;

(v)



3. (a)

K	M
<ul style="list-style-type: none"> <li>- Has 3 pairs of legs</li> <li>- Has 3 body parts</li> <li>- Has wings</li> <li>- Has antennae</li> </ul>	<ul style="list-style-type: none"> <li>- Has 4 pairs of legs;</li> <li>- Has 2 body parts;</li> <li>- Lack wings;</li> <li>- Lack antennae;</li> </ul>

- (b) (i) Phylum - Arthropoda;  
Reasons: - Jointed appendages;  
- Segmented body ; -Presence of exoskeleton;  
- Bilaterally symmetrical;  
(ii) Class - Arachnida  
Reasons: - has 4 pairs of legs;  
- body divided into two parts;  
- lack antennae;  
(c) exoskeleton;  
(d) (i) Pisces;

- (e) (ii) - Presence of fins;
  - Presence of scales;
  - Presence of lateral line;