231/3 – BIOLOGY (PRACTICAL) PAPER 3 MARKING SCHEME

1.	(a)	Food substance	Procedure	Observation	Conclusion
		Reducing sugar ;	Put food substance in T.T Add equal amount of Benedict's solution. Heat gently;	Orange colour;	Reducing sugar present;
		Proteins ;	Put food substance into a T.T. Add equal amount of NaOH. Followed by $CuSO_4$ dropwise;	Purple ;	Proteins present;

(b) (i) Diffusion ;
(ii) Blue/black colour ;
(iii) Iodine molecules diffuse from the beaker into the visking tubing ; due to their small sizes pass through pores of visking tubing ; starch molecules are large in size ; hence retained in the visking tubing ;

2. (a) Division – Spermatophyta;
Reason – They are flowers from flower bearing plants;

(b) Agents – Animals/Insects;
Reason – Stigma above anthers/Anthers enclosed by corolla;

(c)	A_1	A_2	
	Stigma single lobed	Stigma with many lobes;	
	Placenta marginal	Placenta axile;	
	Androecium and gynaecium enclosed in keel (modified petal)	Androecium and gynaecium expose;	(Any two correct)

(d) (i) J – Petal;
K – Ovule;
R – Receptacle;
M – Anthers;
(ii) Chemotropism;

(e) Multi-lobed stigma (5 lobes) ;
Partly fused anthers (acc. No is counted) ;
Poly sepalous (free sepals) ;
Superior ovary;

3. (a) Vegetation;
Reason: Large caecium and appendix;

(b) S – Appendix;
T – Colon;
U – Rectum;

(c) (i) On the diagram.
(ii) Secrete cellulose enzyme that digests cellulose into glucose;

(d) (i) Long to increase surface area for digestion and absorption;
(ii) Coiled to slow down movement of food hence more time for digestion and absorption;

(e) Salivary amylase;
Pancreatic amylase;