

FORM FOUR EXAMINATION

PAPER 231/3

PRACTICAL.

MARKING SCHEME

MAX.40 MKS.

1.

Food substance	Procedure	Observation	Conclusion
Starch	To a little of substance L in a test tube, add a little iodine	Blue-black colour forms	Starch present;
Reducing sugar	To a little of substance L in a test tube add equal amount of Benedict's solution and heat to boil.	Colour remains blue	Reducing sugars absent
Proteins	To a little L, add a little sodium hydroxide followed by a little copper(II) sulphate solution and shake the mixture.	Purple colour forms	Protein present;

(9mks)

2. a)Animal	Steps followed	Identity
E	1b,2a;	Mollusca
F	1b,2b,3a,4a,6a,7b;	Crustacea;
G	1b,2b,3a,4a,6b,8a;	Arachnida;
H	1b,2b,3a,4b,5a;	Annelida;
J	1a,9a;	Cestoda;

½mk

b.i)Phylum: Arthropoda(1mk)

Class:Insecta (1mk)

ii) Has three body parts;

- Has three pairs of legs
- Has one pair of wings;
- Has one pair of antennae;

max 3mks

c.i) Presence of legs that walk on contaminated surfaces;

Presence of wings that facilitate movement to and from contaminated surfaces;

Hairy body on which disease causing microorganisms attach;

Has a proboscis to suck /contaminate food; any 2 (2mks)

ii) Cholera/dysentery(1mk)

iii) Covering food;

Proper disposal of waste /rubbish;

Eradication of houseflies using insecticides; any 2 (2mks)

3. a)

Magnification – 1mk.

Each correct label-½ mk.

Correct drawing (1mk)

b) Class: Dicotyledonae;(1mk)

Reason :Has two cotyledons has network veins /has at a tap root system.(1mk)

c)

Structure in S ₁	Structure in S ₂
Plumule	Stern system /shoot
Radicle	Root system;
Cotyledon	Seed leaf

Max 2

d.i) S₁ – Epigeal (1mk)

ii) S₃ – Hypogeal (1mk)

d.ii)

S ₁	S ₃
-Cotyledons pushed above the ground -Hypocotyl elongates	-Cotyledons remain in the soil -Epicotyl elongates

2mks

iii)S₁- has little food store; hence leaves develop early to start photosynthesis ;
(2mks)

S₃- has a lot of food stored; which is enough for early growth, hence no need for early photosynthesis ;(2mks)