# FORM FOUR EXAMINATION

# PAPER 231/3

# PRACTICAL.

# MARKING SCHEME

# MAX.40 MKS.

|  |  |  |  |
| --- | --- | --- | --- |
| **Food substance** | **Procedure** | **Observation** | **Conclusion** |
| Starch | To a little of substance L  in a test tube,add a little iodine | Blue-blackcolour 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)

1. **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;

Hairly 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)

1. 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 S1** | **Structure in S2** |
| Plumule  Radicle  Cotyledon | Stern system /shoot  Root system;  Seed leaf |

Max 2

d.i) S1 – Epigeal (1mk)

ii) S3 – Hypogeal (1mk)

d.ii)

|  |  |
| --- | --- |
| S1 | S3 |
| -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)