

**2024 SEED MSCE MOCK
PROVISIONAL MARKING KEY
BIOLOGY I
BIOLOGY PAPER 1 MARKING SCHEME**

1. a) Phloem (tube)

b) Sieve plate

c) It has companion cell -It has sieve tube

-It has sieve plate -It's made up of living cells

Any 2x1=2 marks

Total 4 marks

2. a) To control/coordinate body movement (balance)

-To control fine movement of body parts (like fingers)

b) Control reflex actions

c) To insulate the neurone

-To speed the rate of nerve impulse transmission

Any 1x1=1 mark

3. a) It has a villus (1) to increase surface area for diffusion (1)

-It is long (1) to increase surface area for diffusion (1)

-It is highly folded to increase surface area for diffusion (1)

-It is thin for easy diffusion of substances

Any 2x2=4 marks

b) (i) For ovulation

(ii) Further thickening of the uterine walls

(iii) Preparing the body for emergencies

Total 7 marks

4. a) (i) Osmosis

(ii) Diffusion/active transport

b) (i) Plant growth response to stimulus/Undirected growth of plant to the stimulus

(ii) Plant growth hormones

c) Quick root development

-Quick shoot development

-Induce parthenocarpy

-Lengthens ripening period in plants

-Quick ripening of fruits



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d) The glucose produced from photosynthesis (1) combines with nitrogen (1) (sulphur) (to make protein)

Total 8 marks

5. a) Water supply (1) move water supplied to a plant increases the rate of transpiration

-When temperature increases the rate of transportation increases

-Wind/air (1) on a windy day the transpiration rate increases

-Humidity (1) when amount of water vapour in the atmosphere is high (high humidity), transpiration rate decreases (1)

-Light intensity (1) high light intensity higher rate of transpiration (1)

Any 2x2=4

b) To transport water (from soil to leaves)

-To transport mineral salts (from soil to leaves)

-To cool the plants.

Any 2x1=2 marks

Total 6 marks

6. a) (i) Starch/carbohydrates

(ii) Salivary amylase/ptyalin

b) Digestion

-Absorption

c) It is long (1) to increase surface area for absorption (1)

-It has villus (1) for easy absorption (1) (for nutrients)

-It is highly folded (1) to increase surface area for absorption (1)

-It is surrounded by blood capillaries (1) to carry the nutrients (1) (to all parts of the body)

Any 2x2=4 marks

d) Constipation -Indigestion -Heartburn- Nausea

-Diarrhoea -Appendicitis -Ulcer -Vomiting

Any 2x1=2 marks

Total 10 marks

7. a) Invertebrates

b) X-Soil

Y-Crab



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c) X- Mollusc
Y- Crustaceans

Total 5 marks

8. a) X- artery
Z-Vein

b) It is thin (1) (one cell thick) for easy diffusion (1) (substances)

X	Y
-Has narrow lumen	Has wide lumen
-Has no valve	Has valve
-Has thick muscles	-Has thin (not thick) muscles

Any 2x1=2 marks

NB: Correct matching

d) It helps to carry the oxygen around the body
-It as highly affinity for oxygen transportation
-It combines with oxygen to form oxyhaemoglobin

Any 1x1=1 mark

Total 7 marks

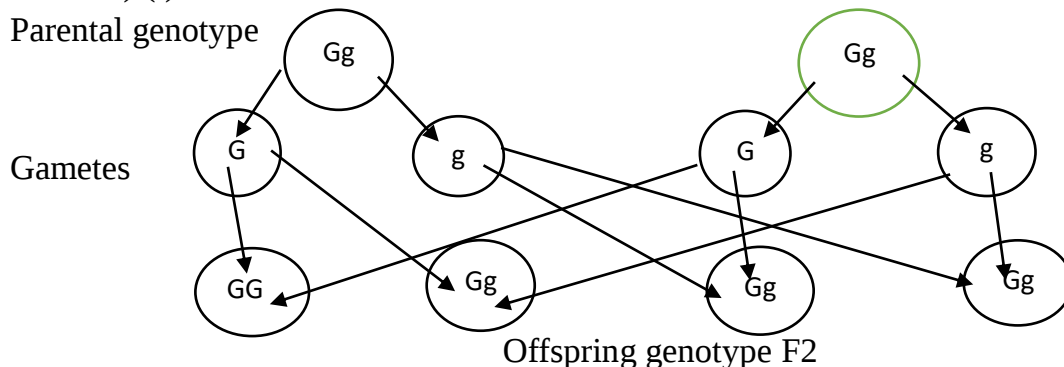
9. a) (i) It is genetic combination

-Combination of genes/gene makeup

Any 1x1= 1 mark

(ii) Condition in which dissimilar genes control a character

b) (i)



(ii) a) 1GG:2Gg:1gg/ GG:2Gg:gg

b) 3 Grey: 1 White
3:1

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iii) Total ration=3+1=4

$$\text{For grey} = \frac{3 \times 12}{4}$$

= 9 (Grey chicks)

1 mark for correct substitution

1 mark for cancellation

1 mark for correct answer

Total 12 marks

10. a) Helper T -Killer T -Memory T cells

b) filters blood

c) Pulmonary veins

d)

Motor	Sensory
-Has cell body at one end of neurone	-Cell body along neurone
-Has no Dendron	-Has Dendron

11. a) Heart attack- this occurs due to blockage of the coronary artery by a blood clot resulting in shortage of oxygen and nutrients to the muscles (occurs when low supply to the heart is blocked)

b) Cardiac arrest- occurs when the heart stops pumping blood around the body because it cannot beat.

c) High blood pressure is caused by stress/anxiety/narrowing of lumen of arteries due to accumulation of fats and this results in pressure of blood flowing in the blood vessels to be higher than normal.

d) Fainting/passing out- it occurs when there is temporary insufficient blood flow to the brain or blood pressure is too low and the heart does not pump normal supply of oxygen to the brain.

e) Heart failure occurs when the heart muscles do not pump blood

f) Varicose veins occur due to insufficient function of the valves in veins

g) Leukaemia



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12. Deforestation (1) leading to soil erosion (1) (destruction of habitat)/unrealistic (erratic) rainfall/global warming.

- Introduction of alien (1) (foreign/new/exotic/strange) leading to killing (extinction) of local species/compete for resources with local species (1)
- Pollution of air (1) spread of diseases (1) /global warming/climate change/acidic rain/green house effect/depletion of ozone layer.
- Pollution of soils (1) spread disease (1) (loss of nutrients(fertility))/destruction of vegetation/death of soil(living) organisms.
- Overfishing (1) leads to death/depletion/extinction of fish
- Poaching (1) leads to depletion, reduction/extinction of species
- Flooding (1) Leading to spread of diseases (1) (death of organisms) destruction of habitats

Any 5x2=10 marks

13. Eating balance diet (1) to reduce deficiency diseases (1)

- Vaccination (1) to eradicate the disease (1)
- Sleeping under treated mosquito net (1) to control(prevent) the spreading of malaria (1)
- Food treatment (1) to suffocate(kill/control) germs (1) (thereby prevent waterborne diseases)
- Provision/seeking of health service (1) to reduce the spread of diseases (1).
- Civic education (1) to reduce the spread of diseases (1)
- Food inspection (1) (in hotels, lodges, restaurants) to check hygiene (1)
- Pest control (1) to prevent vector transmission (1)
- Proper waste disposal (1) to keep vectors away (1) (reduce disease transmission)
- Bathing/washing to reduce germs (1) (pathogens)

Any 5x2=10 marks

END OF MARKING SHEET

