

OPENER EXAMINATION: TERM 1 2024

FORM 4

231/1

BIOLOGY PAPER 1

MARKING SCHEME:

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1. (a) Fungi
(b) Cephalo thorax
 2. (a) 8
(b) 24
 3. (a) (i) Anaerobic respiration
(ii) Aerobic respiration
(b) $\frac{6}{6} = 1$;
 4. (a) Granum
(b) Photolysis to avail hydrogen atom for dark stage; ATP formation for dark stage
 5. Collechyman; Sclerenchyma; Xylem tissues;
 6. Highly vascularised; one cell thick; moist
 7. (a) 42
(b) (i) Carnivorous;
(ii) Presence of canines for tearing of prey;
 8. (a) P – Antipodal cells;
Q – Pollar nuclei;
R – Egg cell;
S – Synergids;
(b) Double fertilization;
 9. (a) Diffusion;
(b) - Raising temperature of water;
- Reducing the size or using a small beaker;
- Reducing the amount of water in the beaker;
 10. (i) State during which a seed cannot germinate/state of rest before seed germination;
(ii) Abscisic acid;
 11. (a) Rubber – To manufacture rubber goods e.g. shoes, tyres, chewing gums;
(b) Papain – Used as meat tenderizer;
 12. The adult and larvae exploit different niches food to avoid competition; Pupal being a non-feeding stage enable organisms to go thorough adverse conditions/survive adverse conditions;
 13. Prophase I
 14. (a) Excretion – Is the removal of metabolic waste products from the body of an organism;
(b) Secretion – Production of useful substance in the body
 15. Repair and healing of endometrium/uterus wall; Stimulates production of luteinizing hormone;
 16. Light intensity decreases with depth; Temperature decrease with depth;
 17. - Stomata found only on upper epidermis to allow efficient gaseous exchange;
- Aerenchyma tissues have large air spaces to float/buoyancy/storage of air;
- Absence of cuticle to enhance gaseous exchange;
 18. (a) Iron;
(b) Magnesium;

19. - Secretes progesterone and oestrogen hormones;
 - Point of exchange of gases between mother and foetus;
 - Allows entry of nutrients to foetus;
20. (a) Blood passes through the heart once of every complete circulation;
 (b) Blood pressure decreases thus slow movement of blood;
 - Animals are less active;
21. - Blood cells;
 - Plasma proteins;
22. (a) Kingdom;
 (b) Species;
23. Blood group O has antibodies 'a' and 'b' which correspond to antigen 'A' and 'B'; of the donor hence agglutination will occur;
24. (a) Potometer;
 (b) -Remove excess water;
 - Cools the plant;
 - Maintain transpiration stream;
 - Enhance absorption of water;
 - Brings turgor pressure in plants;
25. Excretion;
 Homeostasis;
26. (a) Testis;
 (b) During the first four months, the ovary secretes progesterone hormone; which maintains pregnancy;
 After four months placenta takes over the role of secreting progesterone hormones;
27. (a) (i) Gycogen;
 (ii) Glucose;
 (b) Breakdown toxic hydrogen peroxide; into harmless water and oxygen;
28. (a) Mitochondrion; RJ mitochondria;
 (b) Highly folded; to increase surface area, for respiration/attachment of respiratory enzymes
 (c) Carbon (IV) oxide; rej Co₂
29. (a) Digest membrane of cells that produce them and those of the gut;
 (b) Covered with mucus lining;
30. (a) - Rapid accumulation of toxic waste because animals are active;
 - Waste not utilized as in plants;
 - Proteinous waste which are toxic are produced unlike in plants;
 - Waste products are not stored as in plants;
 (b) Loop of henle ;