231/1 BIOLOGY (2018) PAPER 1 (Theory) MARKING SCHEME

| 1.a) carbon(IV) oxide fixation | b) stro | ma |
|--|--------------------------|------------------|
| 2Coarse adjustment knob | -Revol | lving nose piece |
| 3. a) Does not produce antibodies ag | gainst the donors antige | ens |
| b) has –antigen A | - antigen B | - rhesus antigen |
| 4. (i) Pancreas (ii) Insulin | | |
| 5. i) Chloroplastii) Mitochondria | | |
| 6, a) - posses a notochord Visceral clefts at early sta Single dorsal tubular nerv Presence of myotomes Posses post anal tail at learly b) Pisces | ve cord | |
| 7. i) <i>Entamoeba histolytica</i>ii) Schistosoma spp | | |
| 8. A –opposite | | B- Whorled |
| 9. Glucagon | | Adrenaline |
| 10. a) Nucleolus | | b) Golgi bodies |
| 11. i) Parenchymaii) Collenchymaiii) Sclerenchyma / xylem vessel | s and tracheids | |
| 12. Increased rate or breathing and h | neart beat | |

13. Requires more oxygen for oxidation and its insoluble in water hence not easily transported

14. Site for fertilization and passage of ovum

15. a) Negative geotropism

b) Due to gravity auxins accumulate more on lower part causing more growth on lower part than the upper one making the shoot bend upward.

| 16. a) C-U-G-U-C-Ab) -Protein synthesis | -Carry genetic materials for inheritance | |
|--|--|----------------|
| 17. a) Olecranon process | b) Humerous | c) Hinge joint |

1

18. The passage process of water is osmosis which does not require energy.

19. Study of blood proteins and antigens contained in the plasma shows that organisms that are more phylogenetically related have more immunological reaction that forms more precipitate after antigen- antibody reaction than those not related.

20.a (i) Hypogeal

(ii) Cotyledons left below the ground level

- b) A- Protects the plumule as it emerges through the soil.B- Stores food reserves utilized by the germinating seedling.
- 21. Fat emulsification

- Neutralises the acidic chyme and provide basic pH for the enzymes

- 22. a) Respiration
 - b) 6600kJ
 - c) 45kJ
- 23. a) Traspiration
 - b) To prevent water evaporation from the beaker.

c) Use of a leafless shoot/ using of a shoot whose leaves are smeared with oil/ jelly

- 24. i) Prolactin
 - ii) Dissolves the membranes of the ovum allowing the sperm to penetrate
 - iii) Leads to variation and hybrid vigour due to mixing of genetic materials.
- 25. a) To create more space for packaging of haemoglobin.
 - b) To create more surface area for diffusion of respiratory gases.
- 26. –Gaseous exchange.

-Absorption of mineral ions.

- 27. a) Sensory neurone
 - b) Its bipolar/ cell body located along the axon.
 - c) B- Controls the activities of the neurone
 - D- Secret the myelin sheath
- 28. -Contains salivary amylase which digest starch
 - Has mucus that lubricate the food and lining or the mouth
 - contains water that dissolves soluble food materials and moisten it.

29.
$$AA \times BO$$

AB AO AB AO = $\frac{1}{2}$

30. -Some fossils were distorted during fossilization which gives wrong impression of the organisms.

- Missing links make it hard to construct evolutionary linage of organisms.

31. i) To dissolve the diffusing gases

ii) To reduce the distance through which the diffusing gases pass through.