

**AS Miscellaneous 6**

- 1) Explain how co-transport works? (2)
- 2) Describe gas exchange in fish and insects? (6)
- 3) How can cardiac output be increased by regular exercise? (2)
- 4) Describe the process of mitosis? (6)
- 5) What are the roles of the SAN and AVN in the cardiac cycle? (2)
- 6) Describe the following processes;
  - a. Transcription (4)
  - b. Translation (4)
  - c. Transpiration (4)
  - d. Translocation (4)
- 7) Explain the structure and functions of the cell membrane? (4)
- 8) Describe the biochemical test for a lipid? (1)
- 9) How does a competitive inhibitor work? (3)
- 10) What is the secondary structure of a protein? (2)
- 11) What is the Bohr shift? (2)
- 12) Explain the reasons for the shape of the oxyhaemoglobin dissociation curve? (3)
- 13) Draw and describe the structure of an antibody molecule? (3)
- 14) What are the roles of humoral and cell mediated immunity? (4)
- 15) Distinguish between natural passive and artificial active immunity? (2)
- 16) What is a mutation and what are the different types? (4)
- 17) Compare;
  - a. DNA vs RNA (4)
  - b. Facilitated diffusion vs active transport (2)
- 18) Why is Simpson's Index of Biodiversity useful? (2)

- 19) Why is ATP a useful energy molecule? (4)
- 20) Describe the process of phagocytosis? (3)
- 21) What are the differences between collagen and cellulose? (4)

Total: **/81**