

AS Miscellaneous 3

- 1) Describe the fluid mosaic model of the cell membrane? (3)
- 2) Some anticancer drugs block RNA polymerase. Suggest what effect this will have and why it is beneficial for cancer patients? (4)
- 3) The foetal haemoglobin lies to the left of the adult haemoglobin. Why is this and what are the benefits? (3)
- 4) Explain how insects carry out gas exchange? (3)
- 5) A particular chemical inhibits the formation of spindle fibres. What effect will this have and why? (3)
- 6) Describe what happens in interphase? (3)
- 7) Describe how sugars are transported in plants? (4)
- 8) What are the features and adaptations of xylem and phloem? (4)
- 9) Describe the structure of arteries? (3)
- 10) How is lymph formed and drained? (4)
- 11) What are the roles of cytokines? (2)
- 12) What are the functions of antibodies? (3)
- 13) What is natural passive immunity and why does it only last for a few months? (2)
- 14) What are the benefits of herd immunity? (2)
- 15) What is the role of the AVN and why is this important? (2)
- 16) Describe the stages of the cardiac cycle? (6)
- 17) Explain how plants carry out gas exchange? (3)
- 18) What are the similarities between facilitated diffusion and active transport? (1)
- 19) What is the purpose of cytotoxic T cells? (1)
- 20) Explain why only a particular type of antibody can respond to a particular pathogen? (2)
- 21) What is 'antigenic mimicry'? (2)

- 22) What is clonal selection and clonal expansion? (2)
- 23) No memory is built against virus infections. Why? (2)
- 24) Why is water potential always negative? (2)
- 25) What features of gills make it good for gas exchange? (4)
- 26) Why are blood clots more likely to form in veins? (3)
- 27) Describe the structure of (15);
- a. Cellulose
 - b. Glycogen
 - c. Triglycerides
 - d. Phospholipids
 - e. Haemoglobin
- 28) Why are fungi eukaryotes? (4)
- 29) What are the differences between scanning and transmission electron microscopes? (3)
- 30) Describe the functions of (6);
- a. Smooth ER
 - b. Golgi apparatus
 - c. Ribosomes
- 31) A particular condition means there is a lack of sufficient tRNA molecules. What impact will this have and why? (4)
- 32) The conservative model of DNA replication was disproven and replaced by a newer model. Explain how this happened? (4)
- 33) Draw the structure of an ATP molecule and explain what makes it good for its function? (4)

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