

Combined Miscellaneous 3

- 1) How can high blood pressure result in proteinuria? (3)
- 2) Describe the pathology in HIV and TB? (4)
- 3) How do the CD8 T Killer cells work? (2)
- 4) Infective endocarditis can affect the function of heart valves; if these do not function properly, suggest the likely problems and implications? (3)
- 5) How can the effectiveness of different antibiotics be compared experimentally? (4)
- 6) What is a silent mutation? (2)
- 7) A mutation to Rubisco inhibits its function; what would be the result and why? (3)
- 8) What is the role of cortisol and where is it produced? (2)
- 9) ADH secretion is suppressed by a pituitary tumour; what would be the likely effects? (2)
- 10) What is the purpose of the refractory period and what are the 2 subtypes? (2)
- 11) What are the disadvantages of having fast twitch muscle fibres only? (3)
- 12) Why is oxygen described as the final electron acceptor? (2)
- 13) Colchicine inhibits spindle fibre formation; what would be the likely consequences? (2)
- 14) RNA polymerase is mutated and cannot function. How would this affect protein synthesis?
(3)
- 15) Describe the semi-conservative model of DNA replication? (4)
- 16) Describe the following stages of meiosis (6);
 - a. Prophase 1
 - b. Metaphase 2
 - c. Anaphase 2
- 17) Why are boys more likely to suffer from Red-Green colour blindness? (3)
- 18) How do insects minimise water loss during gas exchange? (3)

- 19) What is surfactant and where is it produced? (2)
- 20) Describe the mechanism by which changes in blood pH and pressure can bring about changes in the heart rate? (8)
- 21) What is chemiosmosis? (2)
- 22) What is the Bohr shift and why is it functionally useful? (3)
- 23) Explain how the foetus is able to obtain oxygen from the maternal blood? (2)
- 24) Carbon monoxide can cause death. How does it do this? (2)
- 25) How is the majority of carbon dioxide transported in the blood? (2)
- 26) Summarise the functions of the liver and kidneys? (6)
- 27) Compare;
 - a. Dialysis and kidney transplant (4)
 - b. Type 1 and 2 diabetes (4)
- 28) What is rigor mortis? (2)
- 29) Describe the nitrogen cycle? (4)
- 30) What are the different divisions of the Autonomic Nervous System and compare them? (4)
- 31) Compare insect and wind pollination? (3)
- 32) On a labelled diagram, show the male and female reproductive organs in a plant and human and state their functions? (8)
- 33) Describe the process of gametogenesis? (6)
- 34) State 3 causes of subfertility? (3)
- 35) Describe how superbugs such as MRSA have evolved? (3)
- 36) Progressive demyelination can cause paralysis. Explain how? (3)
- 37) Using a diagram, show how a leaf is adapted for gas exchange? (4)

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