Choose any 5 questions

1. a) Describe the structure of eukaryotic cells. [8]

b) Explain the effect of temperature increase on the rate of an enzyme catalyzed reaction

i) from low to optimum (3)

ii) beyond the optimum (3)

c) Relate the structure of collagen to its functions. (6)

1. a) Outline the process of genetic fingerprinting. [8]

b) Discuss how light intensity limits the process of photosynthesis. [6]

c) Relate the structure of a mitochondria to its functions. [6]

1. a) Describe how a polypeptide chain is produced from DNA. [8]

b) Distinguish between cytokinesis in plants and animals. [6]

c) Discuss the possible benefits and hazards of gene therapy. [6]

1. a) Describe photosynthesis in C4 plants. [6]

b) Describe the structure of the phloem. [8]

c) Explain how heart action is initiated and controlled. [6]

1. a) Describe the process of fertilization in humans. [8]

b) Explain the effect of excessive application of nitrogen containing fertilizers on the ecosystem. [6]

c) Explain the meaning of the terms secondary, tertiary and quaternary structures of proteins. [6]

1. a) Describe the characteristics of the kingdom Fungi. [8]

b) Explain why measles was eradicated. [6]

c) Discuss the socio-economic importance of kingdom Animalia. [6]

1. a) Explain the production of ATP by non-cyclic photophosphorylation. [6]

b) List features of the ATP molecule. [5]

c) Outline any 4 features of the genetic code. [4]

d) Explain the global distribution of CHD. [5]

Good luck!!!!