HIGHER SECONDARY SECOND YEAR

BIO CHEMISTRY

Model Question Paper - III

Time : 2.30 Hours **Marks : 70**

PART – A

Answer all the questions

CHOOSE THE CORRECT ANSWER **15 x 1 = 15**

1. The buffering capacity of Haemoglobin is due to _____ residues.
   a) alanine
   b) lysine
   c) histidine
   d) valine
2. _____ ions are needed for the effective action of ptyalin.
   a) Na^+
   b) mg^{2+}
   c) k^+
   d) Cl^-
3. Pyruvate is converted to oxaloacetate by _____
   a) Pyruvate carboxylase
   b) Pyruvate kinase
   c) PFIC
   d) Phosphoenol pyruvate carboxylase
4. The enzyme peptidyl transferase is present in _____ sub unit.
   a) 50 s
   b) 30 s
   c) 70 s
   d) 80 s
5. L amino acid oxidase requires _____ co enzyme.
   a) FMN
   b) FAD
   c) Thiamine
   d) Pyridoxal phosphate
6. The rate limiting enzyme of cholesterol biosynthetic pathway is _____

a) Thialase
c) HMG CoA reductase
b) Acetyl CoA synthetase
d) HMG CoA Synthetase

7. Which one of the following is an example for a minor base.

a) Adenine
c) 5 methyl cytosine
b) cytosine
d) uracil

8. Haemophilia C is caused due to the deficiency of _____

a) Factor VIII
c) Factor XI
b) Factor IX
d) Factor XIII

9. The other name of **C**oenzyme Q is _____

a) NADH dehydrogenase
b) Cytochrome C reductase
c) Cytochrome C oxidase
d) Fo - F_1 particle

10. Glycerol is replaced by _____ in sphingo phospholipids

a) Inosital
c) sphingosite
b) Cholesterol
d) Lecithin

11. Chemiosmatic theory was proposed by

a) Peter Mitchell
c) Koshland
b) Dixon
d) Robertson

12. The unit of Ka is _____

a) moles / litre
c) mol^2 lit^2
b) moles / cm
d) L^3

13. _____ are first line defense against infected and cancerous cells

a) Natural killer cells
c) Inflammation
b) Interferons
d) Phagocytosis

14. Abnormal proliferation of cells is seen in _____

a) Neoplasm
b) Albinism
c) Alkaptonuria
d) Hemophilia

15. _____ causes contraction of the gall bladder to discharge bile into the duodenum

a) Gastrin
b) Pancreozymin
c) Motilin
d) Cholecystokinin

PART – B

Answer any six in which Q.No. 21 is compulsory 6 X 2 = 12

16. Differentiate endocytosis and exocytosis.
17. What are the four steps involved in the transport of Glucose across the intestinal mucosa?
18. What is meant by polydipsia?
19. How are aminoacids activated in the process of translation?
20. Write the structure of the following

    a. Cholesterol b. Cephalin

21. How is a phospho diester linkage formed?
22. Define redox potential.
23. What are metalloenzymes? Give example.
24. What is the role of MHC I & II molecules in the body?

PART – C

Answer any six in which Q.No. 29 is compulsory 6 X 3 = 18

25. Write any three biological applications of viscosity.
26. How are L aminoacids absorbed via gluta thione cycle?
27. Write the equations involved in the formation of NADH in TCA cycle.

28. How is thyroxin synthesized in thyroid gland? Write equation.

29. How is atherosclerosis manifested? Give the symptoms and causative factors.

30. Write about the leading and lagging strands.

31. What are ionophores? Give examples.

32. Write about hypomelanosis.

33. What is the role of natural killer cells?

PART – D

Answer all the questions 5 X 5 = 25

34. Name the chief enzymes of pancreatic juice that act on proteins. Explain any two action .

(Or)

Explain the elongation step of transcription.

35. Define Lineweaver Burk equation and explain the plot.

(Or)

Write about the Gluconeogenesis.

36. Write the classical and alternative pathway of complement system.

(Or)

Explain the cause and symptoms of Tay sachs disease.

37. Explain the buffering action of Haemoglobin.

(Or)

Write the reactions involved in urea cycle. (Only the equations with enzymes)

38. Give an account on β oxidation of fats.

(Or)

Write a note on the inhibitors of ETC.