

HIGHER SECONDARY SECOND YEAR

BIO CHEMISTRY

Model Question Paper - I

Time : 2.30 Hours

Marks : 70

PART – A

Answer all the questions

CHOOSE THE CORRECT ANSWER

15 x 1 = 15

1. Erythrocyte fragility test is based on the principle of _____
 - a) Surface tension
 - b) osmosis
 - c) viscosity
 - d) buffering action

2. Which one of the pair of enzymes is example for an endopeptidase
 - a) amylase and lipase
 - b) Gastrin and esterase
 - c) nuclease and rennin
 - d) pepsin and trypsin

3. D amino acids are absorbed by
 - a) Passive diffusion
 - b) active transport
 - c) both of them
 - d) none of the above

4. At the time of starvation _____ undergoes glyconeogenesis?
- a) glycine
 - b) glycerol
 - c) propionate
 - d) sucrose
5. Translocation is catalysed by the enzyme_____
- a) RNA polymerase
 - b) helicase
 - c) ligase
 - d) translocase
6. _____ is an example for biogenic amines
- a) Tryptophan
 - b) Histamine
 - c) Alanine
 - d) Tyrosine
7. Atherosclerotic individuals will have _____ in plasma
- a. LDL, VLDL
 - b. Wax and fatty acids
 - c. HDL and EFA
 - d. Lysolecithin
8. Which one is a saturated acid?
- a) oleic acid
 - b) cerebronic acid
 - c) nervonic acid
 - d) stearic acid

9. G-C rich region followed by A-T rich region is a signal for
- a) initiation
 - b) elongation
 - c) termination
 - d) primer termination
10. The metabolite that accumulates in Tay Sachs's disease in _____
- a) galactose
 - b) tyrosine
 - c) ganglioside
 - d) glucose
11. Succinate dehydrogenase in mitochondria is a marker of
- a) outer membrane
 - b) inner membrane
 - c) matrix
 - d) inter membrane space
12. When FADH_2 is the substrate in ETC, _____ molecules of ATP are formed
- a) 3
 - b) 2
 - c) 4
 - d) 7
13. The reciprocal of Michaelis Menton equation was considered by
- a) lineweaver Burk
 - b) Fischer
 - c) Koshland
 - d) Dixon

14. In AIDS, the cells which are affected by HIV

- a) mast cells
- b) T helper cells
- c) T suppressor cells
- d) B memory cells

15. The causative agent of pneumonia in _____

- a) Adeno virus
- b) mumps virus
- c) Rabies virus
- d) Varicella

PART – B

Answer any six in which Q No 23 is compulsory.

6 x 2 = 12

16. Write about Hay's test?

17. Write about the digestion of nucleic acids in small intestine

18. How pyruvate is converted to lactate?

19. What is the other name of Niacin? How is it synthesized from Tryptophan?

20. What are essential fatty acids? Write their functions. Give examples.

21. Write any three differences between replication and transcription.

22. Write the cause of Galactosemia.

23. What is irreversible enzyme inhibition?

24. What are haptens?

PART – C

Answer any six in which Q No 28 is compulsory.

6 x 3 = 18

25. Explain Starling's hypothesis.

26. Write a note on Gastrin.

27. Calculate the energy field per glucose molecule upon oxidation in glycolysis.

28. How is methionine converted to active methionine?
29. How are Bile salts formed?
30. Write a short note on Exonucleases.
31. What are tumour markers? Given an example.
32. Define oxidative phosphorylation.
33. What are the role of antigen presenting cells?

PART – D

Answer all the questions.

5 x 5 = 25

34. Explain the arrangements of proteins in the cell membrane.

(or)

Write the equations involved in the conversion of glucose – 6 – phosphate to D – Ribose 5 phosphates in HMP shunt.

35. Explain the action of enzymes present in the small intestine to hydrolyse the carbohydrates.

(or)

Write a note on synthesis of Lecithin.

36. What is meant by transamination? Explain with suitable examples .

(or)

Explain Non competitive inhibition with suitable diagram.

37. Explain Phagocytosis. (or)

Write about the cause and pathology of Vonhierge's disease.

38. What is the role of t RNA in protein synthesis?

(or)

How will you prove that ATP is the high energy compound?