HIGHER SECONDARY SECOND YEAR

BIO CHEMISTRY

MODEL QUESTION PAPER - II

Time : 2.30 Hours   **Marks : 70**

PART – A

Answer all the questions

CHOOSE THE CORRECT ANSWER   15 x 1 = 15

1. When RBCs are placed in hypotonic solution _____ occurs.

    a) Crenation

    b) hemolysis

    c) Donnan osmotic effect

    d) no change

2. _____ hydrolyses the linkage involving proline.

    a) lipase

    b) pepsin

    c) prolidase

    d) ptyalin

3. _____ is present in infants only.

    a) sucrose

    b) amylase

    c) phospholipase

    d) renin

4. The enzyme that forms a link between glycolysis and TCA cycle is _____.

    a) Pyruvate dehydrogenase

    b) Pyruvate kinase

    c) Pyruvate carboxylase

    d) Pyruvate decarboxylase

5. The branching enzyme involved in glycogenesis is _____.

    a) UDP pyrophosphorylase

    b) Adolase

    c) Enolase

    d) Amylo 1 – 4 to 1 – 6 transglycogylase

6. GPT requires cofactor.

    a) NADH

    b) NADPH

    c) Pyridoxal phosphate

    d) PAD

7. _____ is a derivative of cholesterol.

    a. Vitamin A

    b. Vitamin C

    c. Vitamin E

    d. Vitamin D

8. Arachidonic acid is an example for_____.

    a) Saturated fatty acid

    b) Unsaturated fatty acid

    c) essential fatty acid

    d) both b & c

9. _____ is involved in the termination of transcription.

   a) Rho protein

   b) deoxy ribose

   c) helicase

   d) single strand binding protein

10. Okasaki fragments are joined by _____

   a) helicase

   b) ligase

   c) RNA Primase

   d) translocase

11. Homogentisic acid derivatives are oxidized to black pigments called _____

   a) gangliosides

   b) aekaptons

   c) melanins

   d) cataract

12. Which one of the following in involved in electron transport chain?

   a) Glyceraldehyde

   b) Non heame iron protein

   c) Adenine

   d) Adenylase cyclase

13. According to Michaelis mention equation, the concentration of substrate is _____ than that of the enzyme.

   a) Greater

   b)Lesser

   c) Equal to

   d) Not affected

14. Antibodies belong to the family of globular protein called _____

    a) Immunoglobin

    b) Phospho protein

    c) glycoprotein

    d) histones

15. Recognition and destructive of the mutant cells that can become cancerous is known as _____

    a) immuno tolerance

    b) Haptens

    c) Perforins

    d) Immunosurveillance

PART – B

Answer any six in which Q No 23 is compulsory.   6 x 2 = 12

16. Calculate the ratio of bicarbonate to carbonic acid at PH 7.4 and the Pka value of carbonic acid are 6.1

17. Write the three irreversible steps in glycolysis.

18. How melanin is synthesized from Tyrosine

19. Write about fatty acid synthetase complex.

20. Define the following.

  a) Tertiary complex.

  b) Transcription bubble.

21. What are the characteristic features of cancer?

22. What is meant monophosphate cleavage?

23. What is uncompetitive inhibition?

24. What are interferons?

PART – C

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

25. Differentiate active transport and facilitated diffusion.

26. What is limit dextrin?

27. What are ketogenic amino acids? Give examples.

28. Explain the gluconeogenesis of glycerol.

29. How is Isolecithin formed?

30. How are m RNA molecules processed after transcription?

31. Write the symptoms of galactosemia?

32. What are phosphogene? Explain the role of creative phosphate as phosphogen.

33. Explain the condition "Erythroblastosis fetalis".

PART IV

Answer all the questions   5 x 5 = 25

34. Explain the digestion of fats in the duodenum.

(or)

How do you convert AcetylcoA – Palmitic acid?

35. How are catecholamines secreted from the medullary part of adrenal gland?

(or)

Explain the types of immunoglobulin with their significance.

36. Explain the various models of replication.

(or)

Explain the degradation of glycogen during hypoglycemia.

37. Write about the fluid mosaic model of cell membrane with diagram.

<div align="center">(or)</div>

Write a detailed note on Alkaptonuria.

38. Write a note on the role of complex III and complex IV in the electron transport chain.

<div align="center">(or)</div>

Explain competitive inhibition with suitable example and diagram.