

Time : 3 Hours

Max. Marks : 75

Note: Section A is Compulsory, attempt all questions in this section. Attempt any Two questions from Section B and Seven questions from Section C.

SECTION-A

(20×1=20)

(Answer ALL the questions)

1. Amino acids in proteins are usually in:
A. L-isomer B. D-isomer
C. A & B both D. None of above
 2.enzyme is required for oxidative decarboxylation of pyruvic acid.
A. PDH B. Pyruvate kinase
C. Enolase D. GADPH
 3. The successive nucleotides in DNA are linked throughbridge.
A. Phosphodiester B. Amide
C. Glycosidic D. None of these
 4. Synthesis of fatty acid takes place in
A. Cytosol B. Mitochondria
C. Both in A & B D. Membrane
 5.is an essential amino acid.
A. Lysine B. Tyrosine
C. Glycine D. Alanine
6. Bile acid is :
A. Cholesterol derivative B. Carbohydrate derivative
C. Amino acid derivative D. Nucleotide derivative
 7. Coenzyme derived from vitamin B3 is
A. NAD B. NADP
C. A & B both D. FAD
 8. Transports free fatty acid from cytosol to mitochondria.
A. Carnitine shuttle B. Citrate shuttle
C. Both A and B D. Neither A nor B
 9. ATP is
A. Nucleotide
B. Energy link between anabolism and catabolism
C. Hydrolysed with positive ΔG
D. All of the above
 10. For endergonic reactions ΔG is
A. Positive B. Negative
C. Zero D. Slightly negative
 11. In nucleotide nitrogenous base is linked with ribose by
A. N-glycosidic bond B. O-glycosidic bond
C. Peptide bond D. Phosphodiesterase
 12. Myocardial infarction can be diagnosed by isoenzyme of
A. LDH B. ALP
C. SGOT D. ACP
 13. Following hormone is not involved in the regulation of blood glucose:
A. Insulin B. Epinephrine
C. Glucagon D. Oxytocin

14. The successive nucleotides in DNA are linked throughbridge.
- A. Phosphodiester B. Amide
C. Glycosidic D. None of these
15.pathway recycle the free bases and nucleoside released from nucleic acid breakdown.
- A. Salvage B. De novo
C. Both A & B D. None of these
16. Glycogen is of glucose :
- A. Homo polysaccharide B. Hetero polysaccharide
C. Oligosaccharide D. Disaccharide
17. How many NADH molecules are generated in complete oxidation of one molecule of Acetyl-CoA
- A. 4 B. 2
C. 5 D. 3
18. The DNA strand which does not participate in transcription is referred to as :
- A. Non-coding strand B. Sense strand
C. Coding strand D. All of these
19. Formation of cyclic structure of α -D glucose is an example of:
- A. Nucleophilic addition B. Hemi-acetal formation
C. Acetal formation D. Both (a) and (b)
20. Storage material of fuel in plant is :
- A. Starch B. Glycogen
C. Glucose D. Galactose

SECTION-B

(2×10=20).

(Long Answer any TWO questions out of three)

21. Describe various steps of *de novo* synthesis of palmitic acid. Explain the role of citrate shuttle.
22. Describe the reactions of citric acid cycle and comment on its anaerobic nature.
23. Give outline for gluconeogenesis. Explain its biochemical significance.

SECTION-C

(7×5=35)

(Short note Answer any SEVEN questions out of nine)

24. Describe biosynthesis of catecholamines from tyrosine catabolism.
25. Differentiate between oxidative phosphorylation and substrate level phosphorylation.
26. Explain the mechanism of electron transport chain.
27. Discuss the biochemical causes of jaundice.
28. Compare glycolysis and gluconeogenesis.
29. Name the four level of protein structure. Briefly explain secondary structure of protein.
30. Describe reactions of urea cycle.
31. Describe the synthesis and biological significance of dopamine.
32. Explain various types of stereoisomerism present in monosaccharides.
33. Describe reactions of Krebs-Henseleit cycle.