

BIOCHEMISTRY
QP Code: 2529
(QP contains two pages)

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

(Note - Answer Section-A and Section-B in separate answer booklets)

Section - A

Multiple Choice Questions
10 X 1 = 10 Marks

1. 5'-Terminus of mRNA molecule is capped with
 - a. Guanosine triphosphate
 - b. 7-Methylguanosine triphosphate
 - c. Adenosine triphosphate
 - d. Adenosine diphosphate
2. Which of the following carbohydrate is a dietary fibre
 - a. Glycogen
 - b. Starch
 - c. Inulin
 - d. Cellulose
3. Normal level of serum cholesterol
 - a. 70-110 mg/dl
 - b. 9-11 mg/dl
 - c. 200-240 mg/dl
 - d. 20-40 mg/dl
4. All the following are Sphingolipids, except
 - a. Sphingomyelin
 - b. Cerebroside
 - c. Ganglioside
 - d. Lecithin
5. During denaturation of the protein following bonds are disrupted, except
 - a. Hydrogen
 - b. Hydrophobic
 - c. Peptide
 - d. Sulphide
6. Beriberi is caused by the deficiency of
 - a. Thiamine
 - b. Riboflavin
 - c. Thymine
 - d. Folic acid
7. Normal adult hemoglobin (A1) has the following polypeptide chains
 - a. $\alpha_2\beta_2$
 - b. $\alpha_2\gamma_2$
 - c. $\alpha_2\delta_2$
 - d. $\alpha_2\varepsilon_2$
8. Cytochrome oxidase of Electron transport chain is inhibited by
 - a. Cyanide
 - b. Sulphide
 - c. Sulfite
 - d. Sulfate
9. Lesch Nyhan syndrome is characterized by the deficiency of
 - a. PRPP synthase
 - b. HGPRTase
 - c. AlanineTransaminase
 - d. Tyrosinase

10. Respiration is directly linked up with the buffer systems of
- Bicarbonate
 - Phosphate
 - Protein
 - Hemoglobin

Section B**LONG ESSAYS (Answer any two)****2 X 10 = 20 Marks**

- Enumerate the reactions of Citric acid cycle. Add a note on its energetics.
- What is the normal level of fasting blood glucose? Explain the hormonal regulation of blood glucose.
- Explain about the dietary sources, RDA, absorption, transport, storage, biochemical functions, deficiency and toxicity manifestations of Iron.

SHORT ESSAYS (Answer any ten)**10 X 5 = 50 Marks**

- Plasma proteins
- Transamination.
- Genetic code.
- Basal metabolic rate
- Electron transport chain
- Essential fatty acids
- Biochemical functions of Vitamin A.
- Role of Buffers in the regulation of blood pH
- What are enzymes? Classify them with examples.
- List the kidney function tests. Explain any one of them.
- What is the normal level of serum uric acid? How it is synthesized
- What is fatty liver? Explain what conditions are causing fatty liver. Add a note on lipotropic factors

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