

- a) Riboflavin
c) Niacin
- b) thiamin
d) none
- (ix) Identify the correct composition of nucleoside.
- a) a sugar + a phosphate
c) a base + a phosphate
- b) a base + a sugar
d) a base + a sugar + phosphate
- (x) Identify the normal blood sugar level.
- a) 80-120mg/dl
c) 100-140mg/dl
- b) 70-100mg/dl
d) 140-160mg/dl
- (xi) Select the chemical class of sodium lauryl sulfate.
- a) Detergent
c) Emulsion
- b) Surfactant
d) Baking soda
- (xii) Identify the following prosthetic group which is present in NADH dehydrogenase.
- a) NADH
c) NADPH
- b) FAD
d) NADPH
- (xiii) Select the factor which does not affect pKa value of an amino acid.
- a) The loss of charge in the α -carboxyl and α -amino groups
c) Other environmental factors
- b) The interactions with other peptide R groups
d) Molecular weight
- (xiv) Select the correct answer: for apoenzyme.
- a) It is a protein portion of an enzyme.
c) It is a complete, biologically active conjugated enzyme.
- b) It is a non-protein group.
d) It is a prosthetic group.
- (xv) Choose the correct average molecular weight of an amino acid residue in a protein.
- a) 128 Da
c) 110 Da
- b) 118 Da
d) 120 Da
- (xvi) Predict the correct answer that is not the example of conjugated proteins.
- a) Lipoproteins
c) Complete proteins
- b) Glycoproteins
d) Metalloproteins
- (xvii) Choose the correct co-factor responsible for the succinate formation.
- a) CDP
c) GDP
- b) ADP
d) NADP+
- (xviii) Choose the correct enzyme that participates in DNA replication process.
- a) Helicase
c) Both a) and b)
- b) Topoisomerase
d) None
- (xix) Identify the structure of hexokinase enzyme.
- a) U-shaped
c) E-shaped
- b) T-shaped
d) G-shaped
- (xx) Choose the precursor of glycine.
- a) Proline
c) Serine
- b) Glutamine
d) Glutamate

Group-B

(Short Answer Type Questions)

5 x 7=35

2. Distinguish between HDL and LDL.

(5)

3. Classify the lipids with example (5)
4. Define amino acid and explain why it is called as zwitterions. (5)
5. Define essential and non-essential amino acid with examples. (5)
6. What are the risk factors associated with developing Type 2 Diabetes Mellitus, and how can individuals mitigate these risks? (5)
7. Illustrate Michaelis Menten equation and draw the graphical diagram. (5)

OR

- Write a short note on Gout disease. (5)
8. Illustrate the synthesis of serotonin in a schematic way. (5)

OR

- Illustrate the replication process of DNA. (5)

Group-C

(Long Answer Type Questions)

10 x 2=20

9. Stating the definition of enzyme describe their mechanism of action with proper diagram and list out the factors affecting enzyme. (10)

10. Explain briefly the formation and utilization of ketone bodies in biological system. (10)

OR

- Explain the inhibitors name and functions of transcription process. (10)

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