

KAMALNAYAN BAJAJ NURSING COLLEGE, AURANGABAD

QUESTION BANK

BIOCHEMISTRY

Unit 1

- a) Structure and function of cell membrane
- b) Structure and function of Mitochondria
- c) Differentiate between Prokaryote and Eukaryote cell

Unit 2

- a) Cytoskeleton
- b) Diffusion
- c) Osmosis
- d) Acid base balance
- e) PH buffers
- f) Explain in details different types of buffers and role of buffers in maintaining acid base balance
- g) What are blood buffers? Describe the factors maintain acid-base balance on the body
- h) What are blood buffers? Explain the role in maintaining blood pH
- i) Describe the fluid mosaic structure of cell membrane
- j) Enumerate various transport mechanisms. Add note on active transport

Unit 3

- a) Define carbohydrate. Types of carbohydrate
- b) Glycogenesis
- c) Sources of CHO

- d) Gluconeogenesis
- e) TCA cycle
- f) Describe pentose phosphate pathway of glucose oxidation .what is its significance.
- g) Describe cori's cycle
- h) Outline the pathway of glycolysis with its energetic
- i) Describe regulation of blood sugar level.
- j) Classify the CHO with suitable example
- k) Write significance of Hexose Monophosphate (HMP) shunt
- l) Write on Kreb's cycle with energetic.
- m) Define CHO. Explain glycolysis in details with its energetic
- n) Polysaccharides
- o) Describe aerobic and anaerobic glycolysis with its energetic
- p) Describe the steps of TCA cycle. add a note on its energetic.

Units 4

- a) Write a note on essential fatty acid
- b) Describe oxidation of fatty acid with its energetic
- c) Classify lipoprotein with their function.
- d) Name lipoprotein and mention one function of each. Add a note on atherosclerosis
- e) What are lipoprotein? classify them and give their function
- f) Metabolism of triacylglycerols.
- g) Write any five function of cholesterol
- h) Digestion and absorption of lipid
- i) Structure and function of cholesterol
- j) Lipoprotein
- k) Classify lipoprotein with their function
- l) Describe beta-oxidation of palmitic acid. Add note on its energetic

Units 5

- a) Describe steps of urea cycle
- b) Define protein. Classify them giving suitable example.
- c) Define oxidation and non-oxidation determination. Describe urea cycle with metabolic disorders.
- d) Function of protein
- e) Protein-energy malnutrition
- f) Principle and application of electrophoresis
- g) Draw urea cycle mentioning enzyme, coenzyme, substrate and product formed in the cycle.
- h) Define protein. Classify protein with suitable example. Write function of proteins.
- i) Write details about protein synthesis
- j) Classify enzyme giving suitable example
- k) Write any four factors affecting enzyme activity
- l) Define enzyme. Classify enzyme and give one example of each class. Add a note on iso-enzymes giving their clinical application.
- m) Competitive inhibition of enzymes.

Unit 6

- a) Enumerate fat soluble vitamins. Give an account of biochemical function of vitamin A.
- b) Describe sources, recommended daily allowances, biological function and deficiency manifestation of vitamin D
- c) Function and deficiency manifestation of vitamin A.
- d) Write any five functions of vitamin C
- e) Give sources and function of calcium. Describe serum calcium regulation.

- f) Write five biochemical function of calcium.
- g) Function and deficiency manifestation of calcium
- h) Function of iron

Units 7

- a) What is immunoglobulin? Give their types along with function.
- b) Transmission reaction
- c) Diagrammatic representation of immunoglobulin and state function of IgG and IgM.
- d) Classify immunoglobulin and write on function of each class.
- e) Free radicals and antioxidant
- f) ELISA test
- g) Write about HLA typing.