# Pharma Unit

# Biochemistry 1 Marks Important Questions and Answers

**According To New Syllabus ER 2020-2021**

## 2nd Year D. Pharmacy

**1. Define Biochemistry?**

**Ans.** Biochemistry is the study of chemistry of living organism which deals with structure of tissues, cells, and biomolecules.

**2. Define Biomolecules?**

**Ans.** Biomolecules is any organic molecule that is produced by a living organism essential for life processes, which includes carbohydrates, lipids, proteins, and nucleic acids.

**3. Define cell and enlist components of cells?**

**Ans.** The cell is the basic, living, structural and functional unit of living organism. Nucleus, Plasma membrane, Cytoplasm, Cytoskeleton, Endoplasmic reticulum, Golgi apparatus, Mitochondria, Ribosomes.

**4. Name the site of protein synthesis in cell?**

Ans. Ribosomes are the sites in a cell in which protein synthesis takes place.

**5. Which part of cell is known as suicidal packet?**

Ans. Lysosome is the part of the cell known as the suicidal packet.

**6. What is most important function of mitochondria?**

Ans. Mitochondria create energy (ATP) for the cell through cellular respiration. Mitochondria is the powerhouse of the cell. Mitochondria also perform Cellular Respiration.

**7. Define carbohydrates?**

Ans. Carbohydrates can be defined as organic compounds which are polyhydroxy aldehydes or polyhydroxy ketones. Carbohydrates are also called as saccharides or sugar.

## 8. Define Monosaccharides, disaccharides, polysaccharides?

**Ans.**

- Monosaccharides: Monosaccharides contain one saccharin unit. These are the polyhydroxy aldehydes or ketones, which cannot be further hydrolysed into simple sugar.
- Disaccharides: The sugars that undergo hydrolysis to produce only two moles of monosaccharides are called disaccharides.
- Polysaccharides: Several monosaccharides combine to form polysaccharides.

## 9. Give examples of Monosaccharides, disaccharides, polysaccharides?

**Ans.**

- Monosaccharides: Glucose, fructose, galactose
- Disaccharides: Sucrose, lactose, maltose
- Polysaccharides: Starch, glycogen, cellulose

## 10. Define proteins?

**Ans.** Proteins are naturally occurring polymers made-up of amino acids linked together by peptide bonds.

## 11. What is functional unit of protein?

**Ans.** The functional unit of a protein is the amino acid.

## 12. Define amino acids?

**Ans.** Amino acids are the monomers of proteins having an amino and carboxyl group attached to the same carbon atom.

## 13. Define lipids?

**Ans.** Lipids are heterogenous group of organic compounds related to fatty acids which are insoluble in water and soluble in organic solvents like ether, chloroform, and benzene.

## 14. What are fatty acids?

Ans. A fatty acid is a carboxylic acid with an aliphatic chain, which is either saturated or unsaturated.

## 15. What are lipoproteins?

**Ans.** Lipoproteins are particles made of protein and fats (lipids). They carry cholesterol through our bloodstream to our cells. The two main groups of lipoproteins are called HDL (high-density lipoprotein) and LDL (low-density lipoprotein)

## 16. Define nucleic acids?

**Ans.** Nucleic acids are very complex, colourless, amorphous compounds made-up of carbon, hydrogen, oxygen, nitrogenous bases, i.e. purine or pyrimidine, sugar and phosphorous. Example - DNA & RNA.

## 17. Write full form of DNA & RNA?

**Ans.** DNA: Deoxyribonucleic acid. RNA: Ribonucleic acid

## 18. Write any 2 functions of DNA?

**Ans.** DNA is a chemical basis of heredity. DNA is known as the reserve bank of genetic information.

## 19. Write any 2 functions of RNA?

**Ans.** RNA as ribonucleoprotein, participates in the post-transcriptional modification of other RNAs. RNA is the genetic material carrying hereditary information in many viruses.

## 20. Define enzymes?

**Ans.** Enzymes are proteins that act as biological catalysts by accelerating chemical reactions. This are soluble, colloidal, organic catalysts, protein in chemical nature, produced by living cells.

## 21. Define coenzymes?

**Ans.** Coenzymes are low-molecular weight organic substances, which are derived from vitamin B complex group and are required for catalytic reactions. e.g. pyridoxal phosphate.

## 22. What is functional unit of enzyme?

**Ans.** The functional unit of enzyme is called holoenzyme, which is made up of apoenzyme and coenzyme.

## 23. Define vitamins?

**Ans.** Vitamins are the organic compounds which are found in natural food stuffs and are essential for normal growth and metabolic functions of the body.

## 24. What is water soluble vitamins?

**Ans.** Water-Soluble Vitamins: Vitamins that dissolve in water and are easily absorbed into the bloodstream are called as water-soluble vitamins. Examples include Vitamin C and the B vitamins.

## 25. What are fat soluble vitamins?

**Ans.** Fat-Soluble Vitamins: Vitamins that dissolve in fat and are absorbed along with dietary fats in the small intestine are called as fat-soluble vitamins. Examples include Vitamin A, Vitamin D, Vitamin E, and Vitamin K.

## 26. Define metabolism?

**Ans.** Metabolism is a process in which number of biochemical changes occurs in a body which helps in exchange of material and energy between cell and its environment.

## 27. Define catabolism?

**Ans.** Catabolism is the degradative phase of metabolism which provides metabolic fuel and building blocks for the cell.

## 28. Define anabolism?

**Ans.** Anabolism is the process by which the absorbed food helps in the formation of new cells, new molecules and structural and functional units of cell and essential metabolites.

## 29. What are minerals?

**Ans.** Minerals are the elements which are necessary for a variety of physiological functions and a number of biochemical processes.

## 30. Define biotechnology?

**Ans.** Biotechnology is the application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services to the human welfare.

## 31. Define blood?

Ans. Blood is a body fluid connective tissue in the circulatory system of humans and other vertebrates that delivers necessary substances such as nutrients and oxygen to the cells and transports metabolic waste products away from those same cells.

## 32. Define haemoglobin?

**Ans.** Haemoglobin is a protein containing iron that facilitates the transport of oxygen in red blood cells.

## 33. Define organ function test?

**Ans.** Organ function tests are the tests carried out to assess whether a particular organ is functioning normally or not. The following organ function tests are most common: Liver function tests. Renal function tests. Thyroid function tests.

## 34. Write any 2 functions of lymphocytes?

**Ans.** Detect and eliminate pathogens. They are responsible for formation of antibodies.

## 35. Write any 2 functions of erythrocytes?

**Ans.** Deliver oxygen to tissues. Remove carbon dioxide from tissues. Help regulate blood pH.

## 36. What is total life span of RBC?

**Ans.** The total life span of RBC is 120 days.

## 37. Define Glomerular filtration rate?

**Ans.** Glomerular filtration rate is the amount of glomerular filtrate formed in all the nephrons of both the kidneys per minute. In a healthy individual, it is about 125 mL/minute.

## 38. What is lipid profile test?

**Ans.** Lipid profile/lipid panel is a panel of blood tests that acts as a initial screening tool for abnormalities in lipid, such as cholesterol and triglycerides.



**Notes:**

1) **Please Read All the Topics & All the Chapters of Biochemistry Very Carefully.**
2) **This Pdf Notes/Questions & Answers Are Only for Reference Purpose.**