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PG CBCS
M.Sc. Semester-I Examination 2021
MEDICAL LABORATORY TECHNOLOGY (MLT)
PAPER: MLT 103
(CLINICAL BIOCHEMISTRY)

Full Marks: 40**Time: 2 Hours****Answer any FOUR questions of the following:****4X10=40**

1. i) what are the body organs composed of carbohydrate molecules? Mention the physiological importance of any two mucopolysaccharides.
 ii) Discuss the protein sparing action of carbohydrate. Mention one polysaccharide used in laboratory media preparation. (2+2+3)+(2+1)
2. Define oligosaccharides with example. Which types of oligosaccharides consider as prebiotics. Write about the monosaccharide derivatives with examples? 2+2+6
3. Classify amino acids according to their polarity. Give two examples of both essential and non-essential amino acids. Mention two aromatic amino acid one aliphatic amino acid. 3+4+3
4. What is protein folding? Describe the α -helical structure of a protein. Give two examples of super secondary structure of a protein. Differentiate between domain and motif. 2+3+2+3
5. Give two examples of both derived lipid and compound lipid. What is ceramide? Classify glycolipids. Mention two essential fatty acids. 3+2+3+2
6. i) Describe the structure of a plasma lipoprotein. Classify lipoproteins. 3+2
 ii) Classify eicosanoids. Mention two functions of prostaglandin. 3+2
7. i) What is nucleotide? Describe the Watson - Crick Model of DNA double helix.
 ii) Differentiate between A, B and Z DNA. What is hyperchromatic shift? (1+5)+(3+1)
8. i) Mention the features of genetic code. What is nonsense codon? Give two examples of nonsense codon. What is the initiation codon in eukaryotes?
 ii) What is codon bias? (3+2+2+1)+2
9. State about the functions of vitamin A & D. What are the sources and deficiency symptoms of these two vitamins? (3+3)+(2+2)
10. i) What is Scurvy? Mention the functions and sources of vitamin C.
 ii) What is megaloblastic anaemia? Write the sources of vitamin B12. (2+4)+(2+2)
