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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc.(BT) (2013 to 2017) (Sem.-4)

FUNDAMENTALS OF INDUSTRIAL BIOTECHNOLOGY

Subject Code : BSBT-208

Paper ID : [F0220]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q1) Answer briefly :

- a) Write the structure of LACTOSE.
- b) Write the names and structures of pyrimidines.
- c) Write the structures of C2 and C4 epimers of glucose.
- d) Write the names of hydrophobic amino acids.
- e) Write the amino acids present in a tripeptide Glutathione.
- f) What are biocatalysts and what are their monomeric units?
- g) Discuss the functions of triglycerides.
- h) Write the structure of a C18 saturated and unsaturated fatty acid.
- i) Classify the different types of lipids.
- j) Write the structure of 5'-ATGC-3'.

SECTION-B

- Q2) How many types of double helical DNA's are there? Differentiate them.
- Q3) Write the applications of hybridization of DNA.
- Q4) Describe mutarotation with an example.
- Q5) What are sphingolipids? Write the structure and function of sphingomyelin.
- Q6) Describe the structure and function of different types of RNA .

SECTION-C

- Q7) Elaborate on purification of nucleic acids. How is the purity checked?
- Q8) Describe the different levels of architecture present in proteins with the help of labeled diagrams.
- Q9) Classify Carbohydrates. How many types of polysaccharides are there? Write the structure and function of each type.