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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc.(BT) (2014 to 2017) (Sem.-1)

**INTRODUCTION AND FUNDAMENTALS OF BIOTECHNOLOGY**

Subject Code : BSBT-105

M.Code : 47023

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) How do biomolecules separates in gradient centrifugation?
- b) Give the name of model organism use to study prokaryotic system.
- c) What is biotechnology?
- d) By which microscope you can visualize
  - i) Bacterial cell
  - ii) Flagella
- e) Define magnification of microscope.
- f) Give the name(s) of medium used for culturing fungi.
- g) Why do we preserve microbial culture? Name **any one** method.
- h) Give the name of microbial culture collection bank in India.
- i) What is the stationary and mobile phase in paper chromatography?
- j) Which type of incident rays are used in Electron microscope?

### SECTION-B

- Q2. Discuss different types of isotopes used in radioisotopy technique.
- Q3. What is the basis of separation of nucleic acid in electrophoresis?
- Q4. What is the principle of ion exchange chromatography?
- Q5. Briefly explain the eukaryotic system used in biotechnology.
- Q6. What are the different parameters to characterize a microbe?

### SECTION-C

- Q7. What is spectroscopy? Discuss the principle and application of **any one** spectroscope?
- Q8. Discuss about different branches of modern Biotechnology and their future scope.
- Q9. Give different methods for preserving microbial culture.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**