Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (BT) (2014 to 2017) (Sem.–3)

TECHNIQUES IN BIOTECHNOLOGY-I

Subject Code : BSBT-207

M.Code : 47038

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

1. Write briefly :

a) Which sterilization technique is used for :

i) Antibiotics solution

ii) Inoculating loop

b) Who is the father of Microbiology?

c) What is the mobile and stationary phase in paper chromatography?

d) Mention the culture condition for growing mesophilic bacteria.

e) What is buffer?

f) What is the difference between light microscope and electron microscope?

g) What is PCR?

h) Give the names of isotope of phosphorous and sulphur used in radioisotopy.

i) Give the principle of visible spectroscopy.

j) What is the difference between genomics and proteomics?

SECTION-B

2. Describe the set up and principle of dissecting microscope.

3. What is the advantage of using HPLC over thin layer chromatography?

4. What is hybridization? Mention the techniques which involve this process?

5. Brief the method for quantitative estimation of nucleic acid.

6. Give the principle and application of ion exchange chromatography.

SECTION-C

7. Write short note on **any two** :

   a) X-ray crystallography

   b) Electrophoresis

   c) Spectrophotoflorimetry

   d) Nanotechnology

8. What are the different methods of sterilizations used in microbiology? Discuss their mechanism of action and application.

9. Discuss about some industrial important microoragnism and their applications.

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.