

M.Sc. (Micro) Semester - 2 (CBCS) Examination
March/April -2019 (Old Course)
BIOTECHNOLOGY AND IMMUNOLOGY (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q 1 ANSWER THE FOLLOWING (ANY SEVEN)**14**

1. Name any three synthetic carriers used in enzyme immobilization.
2. What is ex situ bioremediation ?
3. What is the source and use of Ti Plasmid ?
4. What is gene library ?
5. What is blue white screening ?
6. How is serum an ideal medium for animal cell cultivation ?
7. What is callus and explant ?
8. What are opsonins and hemagglutinins ?
9. What are major chemical mediators of allergy ?
10. Give examples of non organ specific autoimmunity.

Q 2 ANSWER THE FOLLOWING (ANY TWO)**14**

1. Describe the scopes of biotechnology.
2. Write a note on bioremediation technology.
3. Describe cell immobilization techniques.

Q 3 ANSWER THE FOLLOWING

- A) What are Restriction endonucleases ?
- B) Explain methods of inserting recombinant vector in host cell
- C) Explain pBR 322 in detail.

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OR

Q 3 ANSWER THE FOLLOWING

- A) Describe the use of viruses as vectors in gene cloning.
- B) Write an overview of R-DNA Technology

07**07****Q 4 ANSWER THE FOLLOWING (ANY TWO)****14**

1. Describe procedure and applications of callus culture.
2. Explain in detail – Animal Tissue Culture
3. Describe types of plant tissue culture in detail.

Q 5 ANSWER THE FOLLOWING (ANY TWO)**14**

1. Explain the activation of adaptive immune response.
2. Describe factors affecting immunogenicity of antigen.
3. Explain various in vitro agglutination and precipitation reactions.
4. Describe autoimmune diseases in detail.
