

M.Sc. (Micro) Semester - 2 (CBCS) Examination
May/June-2022 (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.

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- Q.1 Answer the following** (any seven out of ten, each of **two** marks) **14**
1. What do you mean by immunogenicity?
 2. Mention the steps for animal tissue culture
 3. Explain the protoplast culture.
 4. Define the role of MCS in vector.
 5. Define the cosmid.
 6. Explain advantage of immobilization.
 7. Define phytoremediation?
 8. What is *in situ* bioremediation.
 9. Describe the various class of immunoglobulin.
 10. Define delayed hypersensitivity in brief.
- Q. 2 Answer the following** (any two out of three, each of **seven** marks) **14**
1. What is immobilization? explain enzyme immobilized techniques in detail.
 2. Write the basic principle and methods for the bioremediation.
 3. Discuss the principle and techniques of animal tissue culture.
- Q.3 Answer the following** **14**
1. Write a note on monoclonal antibody. **[5]**
 2. Write a note on adaptive immunity. **[5]**
 3. Write short note on precipitation. **[4]**
- OR**
- Q. 3 Answer the following** (each of **seven** marks) **14**
1. Discuss autoimmunity in detail.
 2. Explain the immediate hypersensitivity.
- Q.4 (A) Answer the following** (any two out of three, each of **five** marks) **10**
1. Explain the pUC18 vector with labelled diagram.
 2. Describe the DNA isolation techniques.
- Q.4 (B) Answer the following** (any One out of two) **04**
1. Write a note on restriction enzymes.
 2. Write a note on screening of recombinant clone.
- Q.5 Answer the following** (any two out of four, each of **seven** marks) **14**
1. Explain the techniques used for plant tissue culture.
 2. Discuss the types of tissue cultures.
 3. Write note on selection of media for plant tissue culture.
 4. Discuss basic principle and steps of plant tissue culture.
