



M.Sc. III Semester Degree Examination, April/May - 2024

BIOTECHNOLOGY

Medical Biotechnology and Diagnostics

(NEP)

Time : 3 Hours

Maximum Marks : 70

Note : 1. Answer **any five** of the following questions with **Question No. 1 (Q1) compulsory**, each question carries **equal** marks.

2. Draw neat diagrams wherever necessary.

1. Write a detailed note on the scope and application of medical biotechnology. **14**
2. Define Hemopoiesis. Explain the types of hematopoietic stem cells and their disorders. **14**
3. What are stem cells ? Explain the immunological principles, preservation techniques and their clinical applications. **14**
4. What are molecular diagnostic tools ? Mention their types and explain any two in detailed account with reference to disorders. **14**
5. Describe the gene therapy, their methods, clinical studies, applications and regulative measures in pharmaceutical industries. **14**
6. Enumerate in detail on the process of bone marrow transplantation and replacement therapy. **14**
7. Write note on monoclonal antibodies, their diagnostic features, production and application in medical biotechnology. **14**
8. (a) Comment on the diagnosis of inherited diseases **5**
(b) Write a short note on clinical applications of recombinant technology **5**
(c) Briefly explain the nanodevices **4**

