

M.Sc.(Biotechnology) CBCS Pattern Semester-III  
**PSBIT112 - Paper-IV : Applied Biotechnology**

P. Pages : 1

Time : Three Hours



**GUG/W/23/11239**

Max. Marks : 80

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- Notes : 1. All questions are compulsory.  
2. Draw the diagram wherever it is necessary.

1. Describe the processing of Recombinant proteins by refolding and stabilization. **16**
- OR**
- a) What are Expression vectors? Add a detailed note on expression of eukaryotic genes. **8**
- b) Modification of metal cofactor. **8**
2. What are Monoclonal Antibodies? Explain its production by phage display technique in details. **16**
- OR**
- a) Write a detailed account on Gene therapy. **8**
- b) Retrovirus gene transfer system. **8**
3. What are Recombinant vaccines? Give details about role of r-DNA technology in production of Polio vaccine. **16**
- OR**
- Explain production of alcohol by GMOs. **16**
4. Explain production of plant secondary metabolites by Shikimate pathway in detail. **16**
- OR**
- a) Therapeutic proteins . **8**
- b) Green house technology. **8**
5. a) Write a note on PCR. **4**
- b) Write a note on Gene replacement or Augmentation. **4**
- c) Insulin production by rDNA technology. **4**
- d) Oleosin partitioning technology. **4**

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