

M.Sc.(Biotechnology) (NEP Pattern) - Semester-III
STPG03BTH004 - Elective-I : Applied Bio-technology

P. Pages : 1

Time : Two Hours



GUG/W/24/15949

Max. Marks : 80

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1. Discuss in detail about processing of recombinant proteins. 16
- OR**
- a) Discuss in detail about DNA amplification using PCR. 8
- b) Write a detailed note on protein engineering using appropriate example. 8
2. Discuss in detail about production of monoclonal antibodies using phage display technique. 16
- OR**
- a) Give a detailed account on germ line gene therapy. 8
- b) Write a detailed note on in-vivo gene delivery systems. 8
3. What are recombinant vaccines? Give a detailed account on production of polio vaccine by r-DNA technology. 16
- OR**
- a) Write in detail about insulin production using r-DNA technology. 8
- b) Give a detailed account on production of vitamin B₁₂ using r-DNA technology 8
4. Discuss in detail about applications of nanobiotechnology in medicine. 16
- OR**
- a) Give an account on green house technology. 8
- b) Discuss in detail about production of plant secondary metabolites through phenylpropanoid pathway 8
5. Write a note on
- a) Expression vectors. 4
- b) Somatic gene therapy. 4
- c) r-DNA technology in alcohol production 4
- d) Industrial enzymes. 4
