

T.Y. B.Sc. Examination -April-2016

Microbiology

Paper : Mi-301-Virology,molecular biology & genetic engineering

Paper Code: 8955

Time: 2 Hours

Total Marks: 75

Instructions: (a) Figure to the right indicates total marks of respective question.
(b) Draw neat, clean and labelled diagram wherever necessary

- 1.(a) Discuss: Cultivation of virus. 09
(b) What is tabulation? Describe in detail with diagram. 09
- OR**
- 1.(a) Explain: Purification of virus. 09
(b) Define mutagens. Explain mode of action of 5-Bromouracil & acridine dyes as mutagen. 09
- 2.(a) Describe: PCR 09
(b) Define mutation. Explain types of mutation. 09
- OR**
- 2.(a) Discuss: The role of various proteins in gene transcription. 09
(b) Explain: Gel electrophoresis. 09
- 3.(a) What is an operon? Discuss lac operon in detail. 09
(b) Discuss: Types & significance of bacterial plasmids. 09
- OR**
- 3.(a) Explain: Interaction between host bacteria & its virus. 09
(b) Discuss: Mismatch DNA repair mechanism. 09
4. **Write short notes on:** 21
(a) Transfection
(b) Meselson & Stahl experiment.
(c) Generalized transduction
- OR**
4. **Write short notes on:** 21
(a) Insulin production by recombinant DNA.
(b) Western blotting technique.
(c) Bioinformatics & its applications.