

Botany (P.G.)

[CBCS]

M.Sc. First Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER- 101

[Microbiology]

Full Marks: 40

Time: 02 Hrs

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group A

1. Answer any four questions of the following: 2x4= 8

- a. Mention 2 characteristics of Archeobacteria.
- b. Distinguish between innate and acquired immunity.
- c. Name two human disease caused by air-borne microorganisms and their causal organisms.
- d. What is cold sterilization?
- e. Give four properties of transformation as found in Gram Positive bacteria.
- f. What is Bioplastic? Give Example.
- g. What is oxygen toxicity?
- h. Mention two contributions of Joseph Lister.

(2)

Group B

- 2. Answer any four questions of the following: 4x4= 16**
- a. Describe the six kingdom concept as per Woese classification.
 - b. Distinguish between monoclonal and polyclonal antibodies.
 - c. Discuss in short about various types of reserve materials found in microorganisms
 - d. Describe the Widal test.
 - e. Draw and describe the ED pathway?
 - f. Write down the steps of production of wine.

Group C

- 3. Answer any two questions of the following: 8x2=16**
- a. Describe the detail structure of bacterial ribosome with suitable diagrams.
 - b. Describe the biological nitrogen fixation cycle with labeled diagrams.
 - c. Discuss in detail about the role of molecules responsible for lysogeny to lytic conversion. Add a short note on prions. 4+4
 - d. Describe the enrichment culture technique. What is synchronous batch culture? 6+2

-----O-----