

Reg. No.

--	--	--	--	--	--	--	--	--	--



**BSS 453**

**Second Semester M.Sc. Degree Examination, September/October 2022  
(CBCS)  
BIOSCIENCES  
Applied Microbiology**

Time : 3 Hours

Max. Marks : 70

1. Write short notes on **any four** of the following (**not** exceeding **2** pages **each**) : **(4×4=16)**
- a) Microbes in the extreme environments.
  - b) Food spoilage microorganisms.
  - c) Bioconversion and decomposition.
  - d) Water quality and microbial indicators.
  - e) Fungal toxins.
  - f) Probiotics.

Write explanatory notes on **any five** of the following (**not** exceeding **3** pages **each**) : **(5×6=30)**

- 2. Rumen microbiota and their role in digestion.
- 3. Milk borne pathogens and symptoms of infection.
- 4. Methods used for the estimation of soil microbial load.
- 5. MPN method and its applications in water quality.
- 6. Major components of the air microflora.
- 7. Advantages and disadvantages of bioremediation using microbes.
- 8. Critical environmental issues with genetically modified microorganisms.

P.T.O.



Write essay on **any two** of the following (**not** exceeding **8** pages **each**) : **(2×12=24)**

9. Explain the fermentation process with suitable example. Add note on different microbial strains used for production of ethanol and lactic acid.
  10. Explain in detail on the water-borne diseases and importance of water quality standards.
  11. Soil microbes have significant role in maintaining the soil health. Justify with rational discussion.
-