

M.Sc. FOURTH SEMESTER EXAMINATIONS, 2021

Subject: BOTANY

Course Code: BOT/404 EB (T)

Course ID: 41354

Course Title: Microbiology .

Full Marks: 30

Time: 2 Hours

The figures in the margin indicate full marks

Answer all the questions.

1. Answer *any* four of the following questions: 1x4=4

- a) What is meant by xerophiles?
- b) What is chronic infection?
- c) Define sanitary survey.
- d) What is the causal organism of aspergillosis?
- e) What do you mean by acquired immunity?
- f) Define "Multiplicity of infection" of virus?
- g) What do you mean by "Therapeutic index" of a drug?
- h) What is the significance of Ti plasmid in RDT?

2. Answer *any* two of the following questions: 5x2=10

- a) What is compatible solute? How do compatible solutes maintain water balance of microbial cells? 1+4=5
- b) What are vaccines? Briefly describe different types of vaccines. 1+4=5
- c. Discuss in short about the classification criteria of viruses. What are conjugative plasmids?

1+4=5

- d. What are energy parasites? Describe in brief about the mechanism of bacterial pathogenicity. 1+4=5

3. Answer any two of the following questions:

8x2=16

- a) Define bioremediation. Write the importance of microbes in degradation of hydrocarbons from natural oils. What are the factors that affect bioremediation? 2+4+2 =8
- b) Define immunoglobulin. Elucidate the different types of immunoglobulin with suitable diagrams. 2+6=8
- c) How microbes are used in the treatment of municipal waste water? What are the indicator organisms for water pollution? 6+2=8
- d) Write down the pathogenicity of Hepatitis B virus. Add a note on prevention and control of Hepatitis B virus. What are Hela cell lines? (4+2+2=8)