(i) Printed Pages: 3 Roll No. .....

(ii) Questions : 9 Sub. Code : 1 0 4 8 8

Exam. Code : 5 0 0 2

Bachelor of Arts (FYUP) 2nd Semester

(2055)

BIO-TECHNOLOGY

Paper : General Microbiology

Time Allowed : Three Hours] **[Maximum Marks : 45**

Note :— Attempt **FIVE** questions in all, including Q. No. **1**, which is compulsory and selecting **TWO** questions each from Unit-I and Unit-II.

1. Explain the following :

(a) Resolution 2

(b) Chemotaxis 2

(c) Lag phase 2

(d) Ectoparasites 2

(e) HEPA filters 2

(f) Mutualism 2

(g) Virion 1

UNIT–I

2. (a) Discuss the key contributions of Louis Pasteur and Robert Koch to the development of microbiology. 4

   (b) Describe the working principle and components of a compound microscope. 4

3. (a) Compare and contrast the cell wall structures of Gram-positive and Gram-negative bacteria. 4

   (b) List the various types of bacterial flagellar arrangements along with an example. 4

4. (a) Name all the structural components of a fungal cell along with their functions. 4

   (b) Differentiate between yeast and mold in terms of morphology. 4

5. (a) What are the basic structural components of a virus ? 4

   (b) Explain how a virus multiplies using the lytic cycle. 4

UNIT–II

6. (a) What is pasteurization, and how does it help in food safety ? 4

   (b) List various types of physical agents used to kill microbes. 4

7. (a) Explain how UV radiations are used for microbial control. 4

(b) What are antiseptics, and how are they different from disinfectants ? 4

8. (a) Name some common bacteria found in the human skin microbiota. 4

(b) Name two bacterial and two viral diseases in humans along with their causative agents. 4

9. (a) Explain the following terms : Virulence, Opportunistic pathogens. 4

(b) What is antibiosis, and how does it differ from symbiosis ? 4