

2014-2015

Sem - IV

QP Code : 15851

[3 Hours]

[Total Marks: 70]

- N.B. : (1) All questions are compulsory.
(2) Draw a neat labelled diagram wherever necessary.

1. Answer the following:—

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| (a) Name two examples of sporulating bacteria. | 1 |
| (b) Define pasteurization with examples. | 1 |
| (c) Explain D value with its applications. | 1 |
| (d) Write the biological indicator for filtration sterilization. | 1 |
| (e) Give the importance of positive control used in sterility testing. | 1 |
| (f) Name the causative agent for botulism. | 1 |
| (g) Write the diagnostic test for tuberculosis. | 1 |
| (h) Define differential media with suitable examples. | 2 |
| (i) Name two Rickettsial infections with the causative agents. | 2 |
| (j) Write Robert Koch's contribution in the field of Microbiology. | 2 |
| (k) Define Resolving power and give its significance. | 2 |

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| 2. (a) Discuss in detail phase contrast microscopy with its applications. | 4 |
| (b) Discuss dry heat sterilization with respect to method, mode of action and applications. | 4 |
| (c) Write a note on cultivation of anaerobic bacteria. | 3 |

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| 3. (a) Discuss in detail phenol coefficient test and its applications. | 4 |
| (b) Describe lytic cycle in T ₄ bacteriophage with suitable diagram. | 4 |
| (c) Distinguish between (any one):— | 3 |
| (i) Bacteria and fungi | |
| (ii) Electron and compound microscope | |

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| 4. (a) Write a note on fungal infections. | 4 |
| (b) Explain in brief growth phases of bacteria. | 4 |

OR

Write a note on bacterial flagella.

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| (c) Explain the mechanism and applications of gaseous sterilization. | 3 |
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[TURN OVER

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5. (a) Describe in detail cultivation of viruses. 4
(b) Write a note on mode of action and application of halogens as disinfectant. 4
(c) Describe protozoal infections. 3

OR

Define pure culture and explain any two techniques of isolation of pure culture.

6. (a) Explain identification of bacteria on the basis of morphological and nutritional characters. 4
(b) Write a principle of spore staining and Capsule staining. 4

OR

Why Gram positive bacteria appear purple and gram negative appear pink in colour explain with suitable theory.

- (c) Explain in brief biological and economic importance of algae. 3

WG-Con. 884-15.