

Paper Name: 301 – Introduction to Microbiology

Paper Code: 3791

Time: 2:30 Hours

Total Marks: 70

Instructions: (a) Figure to the right indicates total marks of respective question.
(b) Draw neat, clean and labeled diagram wherever necessary

- 1.(a) How microorganisms are distributed in nature? 10
1.(b) Give contribution of Robert Koch. 04

OR

- 1.(a) Explain: Germ theory of disease and spontaneous generation theory. 10
1.(b) Give contribution of Louis Pasteure. 04

- 2.(a) Explain: SEM. 10
2.(b) Write applications of simple and differential staining technique. 04

OR

- 2.(a) Explain: Phase – Contrast microscopy. 10
2.(b) Write in brief: Types of dyes. 04

- 3.(a) Discuss in detail size, shape and arrangements of bacterial cell. 10
3.(b) Write on Protoplast. 04

OR

- 3.(a) Describe structure internal to the cell wall. 10
3.(b) What is capsule? Give it's functions 04

- 4.(a) Describe different field and applied area of microbiology. 10
4.(b) Write in brief: Antony Van Leeuwenhoek. 04

OR

- 4.(a) Explain: Fluorescence microscopy. 10
4.(b) Write in brief: Wet mounting. 04

- 5.(a) Discuss cell wall structure of gram positive and gram negative and Archaea bacteria in detail. 10
5.(b) Write short note on Germination of spores. 04

OR

- 5.(a) Describe: Micrometry 10
5.(b) How to prepare and fix smear? 04