Total number of printed pages-5

53 (FPT 301) BMCR

no to

ALL LIBRARL

2021

BASIC MICROBIOLOGY

Paper : FPT 301

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions.

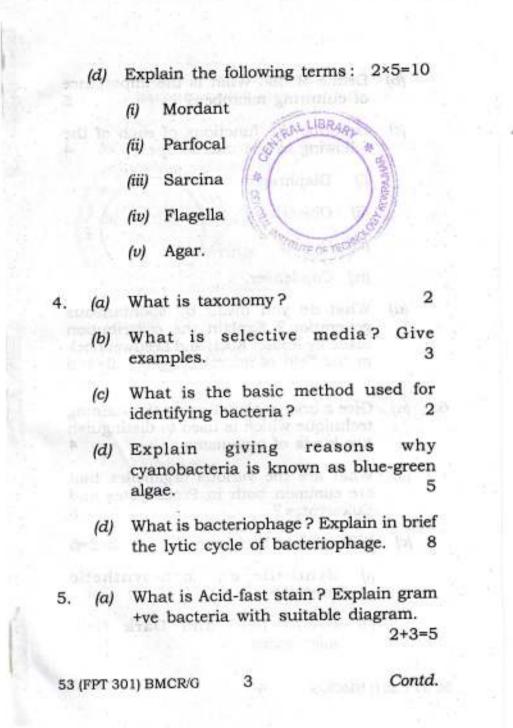
- 1. (a) Write two characteristics of Eukaryotic cell. 1
 - (b) Give two examples each of yeast and fungi. 3
 - (c) What are the different physical and chemical conditions required for the growth of microorganisms? 5
 - (d) What is Endotoxin ? What are the important types macromolecules found in bacterial cell wall ? 5

Contd.

| | (e) | What are Antimicrobial drugs? Draw a diagram showing the sites of action of |
|-----|-----|--|
| | | different antimicrobial agents. 6 |
| 2. | (a) | What is Lysogenic cycle? 3 |
| | (b) | Define Enrichment culture technique. 4 |
| | (c) | Draw the structure of Bacillus and Spirillum. 4 |
| | (d) | Explain in brief the uptake of nutrients by bacteria. 5 |
| | (e) | What causes of antibiotic resistance in bacteria ? 4 |
| 3. | (a) | What are the <i>three</i> main types (in terms of their physical forms) o microbiological culture media? |
| | (b) | What is wet mount? How is i prepared? |
| and | (c) | What are the functions of decolorize |

4

THUTE OF TEOR



- (b) Define Media. What is the importance of culturing microbes? 5
- (c) Describe the functions of each of the following in the microscope: 4
 - (i) Diaphragm
 - (ii) Objective
 - (iii) Ocular
 - (iv) Condenser.
- (d) What do you mean by spontaneous generation? Explain the contribution made by Robert Koch and Leeuwenhoek in the field of microbiology. 2+4=6
- (a) Give a brief explanation on the staining technique which is used to distinguish two kinds of organisms.
 - (b) What are the various organelles that are common both in Prokaryotes and Eukaryotes? 5
 - (c) Differentiate between: 2×3=6
 - Synthetic and non-synthetic medium
 - (ii) Bright field and Dark field microscope.

53 (FPT 301) BMCR/G

| | (d) | Explain the formation of endospore in bacteria giving suitable diagram. 5 | |
|----|-----|---|--|
| 7. | (a) | Explain the various steps involved in media preparation. 4 | |
| | (b) | Write short notes on: 4×4=16 | |
| | | (i) DNA virus | |
| | | (ii) Archaebacteria | |
| | | (iii) Rickettsia | |
| | | (iv) Streak plate method. | |
| | | ALL UP- | |



53 (FPT 301) BMCR/G