PG Odd Semester (CBCS) Exam., December—2018

MICROBIOLOGY

(1st Semester)

Course No. : MIBCC–101

(General Microbiology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. In brief discuss about the major contributions made by Louis Pasteur and Robert Koch in the field of practical microbiology. 7+7=14

2. Enumerate the differences and make a comparison between Haeckel's three-kingdom concept and Whitener's five-kingdom concept. 7+7=14

UNIT—II

3. Compare and contrast the arrangement, different parts and movement of flagella in prokaryotic and eukaryotic organisms. 7+7=14

4. Briefly write about the various conformations and host to host transfer of plasmids. 14

UNIT—III

5. Write short notes on the following : 7×2=14

(a) Regulation of spore formation

(b) L-form bacteria

6. In detail discuss the role of active and passive transport processes occurring across the cell membranes. 14

UNIT—IV

7. Write the importance of techniques involved in pure culture methods. 14

8. Define the following : 2×7=14

(a) Growth curve

(b) Generation time

(c) Synchronous culture

(d) Batch culture

(e) Continuous culture

(f) Sterilization

(g) Disinfectants

UNIT—V

9. Write a short note on application of extremophilic microorganism in microbiology industry. 14

10. *(a)* Define the following : 2×5=10

(i) Ecological niche

(ii) Microbial diversity

(iii) Abundance

(iv) Density

(v) Heterocyst

(b) Give examples of the following : 1×4=4

(i) Methanogens

(ii) Methanotrophs

(iii) Methylotrophs

(iv) Thermophiles

★★★