**PG Odd Semester (CBCS) Exam., December—2016**

# 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.** Discuss the contributions made by Louis Pasteur and Robert Koch in the field of microbiology. 7+7=14

**2.** Enumerate the various differential factors of the three cellular domain systems in detail. 14





## UNIT—II

**3.** Discuss the various molecular approaches in microbial classification for identifying bacteria. 14

**4.** *(a)* Differentiate between Gram-positive and Gram-negative cell wall structures. 7

*(b)* Write short notes on : 3½+3½=7

*(i)* Acid fast bacteria

*(ii)* Bacterial endospore

## UNIT—III

**5.** Differentiate between sporulation and germination of spore. With the help of a diagram, explain the stepwise regulation of spore formation in detail. 4+10=14

**6.** Discuss the active and passive transport processes that occur across the plasma membranes. 14

## UNIT—IV

**7.** Discuss the functions and various types of media required for culturing bacteria in microbiological laboratory. 7+7=14

**8.** Write short notes on : 7+7=14

*(a)* Growth curve

*(b)* Anaerobic culture methods

UNIT—V

**9.** Discuss the various methods and techniques of sterilization and disinfection. 14

**10.** Write short notes on : 7+7=14

*(a)* Extremophiles

*(b)* Metagenomics

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