JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 3 EXAMINATION- Dec 2019

M.Sc. Ist Semester

COURSE CODE: 18MS1BT111

COURSE NAME: GENERAL MICROBIOLOGY

MAX. MARKS: 35

COURSE CREDITS: 3

MAX. TIME: Two Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. ALL PARTS OF A QUESTION MUST BE ATTEMPTED AT THE SAME PLACE

Q1. Describe the microbial communities involved in Biogas Production? Explain their relationship in a Biogas reactor. (CO-5) **[3]**

Q2. How do Thermophiles and Hyperthermophiles survive at high temperatures? (CO-5) **[2]**

Q3. Explain the 'Intuitive Method' of classification of bacteria. (CO-1) **[2]**

Q4. Contrast an aerotolerant and an obligate anaerobe in terms of sensitivity and ability to grow in the presence of oxygen. (CO-3) **[1]**

Q5. Describe the events that place during conjugation between: (CO -4) **[2]**
   a. $F^+ \times F^-$ b. $F' \times F^-$

Q6. Differentiate between the following with appropriate description and suitable diagrams:
(CO -4) **[4.5 X 2 = 9]**

   i. Generalized and Specialized Transduction for genetic transfer

   ii. Lytic and Lysogenic Cycle of Replication

Q7. Write Notes on: (CO -4) **[4 X 2 = 8]**

i. Conjugation in Bacteria.

ii. Griffith's transformation experiment

Q8. Discuss direct and indirect methods for measurement of bacterial growth (CO-5) **[4]**

Q9. Write notes on contributions of the following in development of microbiology (Any Two):
(CO-1) **[2 X 2 = 4]**

i) Louis Pasteur   ii) Anton van Leeuwenhoek   iii) Edward Jenner