Dr. Sudhir Syal

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT TEST -1 EXAMINATION

## September 2018

B.Tech. 3<sup>rd</sup> Semester (Biotechnology)

Course Code: 10B11BT313

MAX. MARKS: 15

Course Name: Microbiology

Course Credits: 04

MAX. TIME: 1 hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1: a) Discuss the four phases of growth curve in a closed system and discuss the case of each.

b) What is the significance of pure culture?

{4+1}

Q2: a) Discuss the work of Pasteur on microbial fermentations.

- b) Write a note on Numerical Taxonomy.
- c) What is the application of Actinomycetes in the field of Medical Microbiology? Justify your answer giving at least two examples. {2+2+1}
- Q3: a) Differentiate between:
  - i) Archaea and Bacteria
  - ii) Selective and Differential Media
  - iii) Chemolithoautotrophs and Chemoorganoheterotrophs
  - b) Discuss the possible mechanism of Gram staining in terms of differences in structure and chemistry between the walls of Gram positive and Gram negative bacteria. {3+2}