

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech III Semester

COURSE CODE: 14B11BI311

MAX. MARKS: 25

COURSE NAME Microbiology and Immune System

COURSE CREDITS: 4

MAX. TIME: 1Hr 30Min

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

- Q1. Give reasons FOR or AGAINST the following statement. (ANY FIVE) [2 X 5 = 10]
- Culture slants for two microbes *M. tuberculosis* and *E. coli* (generation time = 20 hrs and 20 mins respectively) after growth can be stored at 4<sup>0</sup>C for the same duration of time.
  - Heat sensitive culture media, vaccines, and antibiotic solutions can be sterilized by Lypholization.
  - Pasteurization of liquid food items is preferred over autoclaving even though it does not kill 100% microorganisms.
  - Fungi are usually responsible for spoilage of acidic foods.
  - Copper chloride is used to kill algae in pools and fish tanks.
  - X-rays are used to sterilize packaged spices, meat, microbiological plastic ware and medical supplies.
- Q2. Discuss Direct and Indirect methods of Microbial Growth Measurements with examples and their potential applications. [5]
- Q3. Draw a typical bacterial growth curve. Describe each phase of the curve and its significance. [5]
- Q4. Define and explain different classes of bacteria on the basis of their oxygen gas requirements. [5]