

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc., Winter 2018 - 19 Examination

Semester: 2**Date: 11/12/2018****Subject Code: 11101151****Time: 10:30 am to 01:00 pm****Subject Name: Principles of Microbiology****Total Marks: 60****Instructions:**

All questions are compulsory.

Figures to the right indicate full marks.

Make suitable assumptions wherever necessary

Start new question on new page.

- Q1. A) Essay type/ Brief note (4x2)(Each of 4 marks) (08)**
i) In what way did Koch's postulates influence the development of Microbiology?
ii) Name several applied areas of microbiology. Describe the importance of microorganisms in each of these applied fields.
- Q1. B) Answer the following questions (Any two)**
i) What is meant by pure culture concept? (04)
ii) Write a short note on fermentation theory. (04)
iii) Write a note on Pasteur's contribution in the field of Microbiology. (04)
- Q2. A) Answer the following Questions.**
i) Discuss microbial types of nutrition in detail on the basis of carbon and energy source. (04)
ii) Explain Ionising and Non-ionising radiations as antimicrobial technique. (04)
- Q2. B) Answer the following Questions.(Any two)**
i) Explain requirement of P and S source. (03)
ii) Define the following term: (03)
a) Sterilization,
b) Vermicide,
c) Antiseptic
iii) Describe Characterization of ideal disinfectant. (03)
- Q3. A) Essay type/ Brief note (4x2)(Each of 4 marks) (08)**
i) Draw a typical bacterial growth curve and label the various phases with detail explanation of each phase.
ii) Explain modes of reproduction in bacteria in detail.
- Q3. B) Answer the following Questions. (Any two)**
i) Explain measurement of microbial growth by various methods. (04)
ii) Explain batch culture with diagram. (04)
iii) Discuss synchronous bacterial culture. (04)
- Q4. A) Answer the following Questions.**
i) Define streak plate. Write about significance of Streak plate. (04)
ii) Give difference between Selective and differential media. (04)
- Q4. B) Answer the following Questions. (Any two)**
i) Explain cultivation of anaerobes. (03)
ii) Define Culture media. Properties of good culture media. (03)
iii) Describe about single cell isolation. (03)