

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot
Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER 2018

B.Sc. Biochemistry

16UBCDC02 – BASIC MICROBIOLOGY

Duration of Exam – 3 hrs

Semester – V

Max. Marks – 70

Part A (10x1= 10 marks)

Answer **ALL** questions

1. Which external structure is used by bacteria for conjugation?
2. Give one example of storage inclusions.
3. What is Colony Forming Units?
4. Define: Obligate anaerobe.
5. What is synthetic media?
6. Explain pure culture.
7. The protein coat that surrounds a virion's nucleic acid is called as ____
8. What are prions?
9. Name the causative agent for AIDS.
10. State the mode of action of Penicillins.

Part B (5x5= 25 marks)

Answer **ALL** questions

- 11a. Describe the fluid mosaic model of membrane structure.
OR
- 11b. Write a note on ultrastructure of bacterial flagella.

- 12a. Explain the process of nitrification.
OR
- 12b. Give a short note on chemolithoheterotroph and chemoorganoheterotroph.

- 13a. Explain: selective media and differential media
OR
- 13b. Write a note on variations in bacterial colony morphology.

- 14a. Write a note on structure and life cycle of Herpesviruses along with diseases they cause.
OR
- 14b. Describe different ways for cultivation of viruses.

- 15a. Write a note on antimicrobial agents that are protein synthesis inhibitors.
OR
- 15b. Explain the mechanisms by which bacteria resist the action of antibiotics.

Part C (5X7= 35 marks)

Answer **ALL** questions

16a. Describe the common bacterial structure and functions.

OR

16b. Give a note on peptidoglycan structure.

17a. Describe the phases of bacterial growth curve.

OR

17b. Explain in detail: bacterial cell cycle.

18a. Write a note on few common approaches for obtaining pure culture.

OR

18b. Discuss about heat and filtration as practice of sterilization.

19a. Describe the Baltimore classification of viruses.

OR

19b. Discuss with diagram: Lytic cycle of virulent phage.

20a. What are vector borne diseases? Explain with two examples in detail.

OR

20b. Name the causative agents and describe the symptoms of Aspergillosis and Candidiasis.
