

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

SEMESTER END EXAMINATION NOVEMBER - 2017

M.Sc. Microbiology / M.Sc. Biotechnology

16PMBDC10 / 16PBTDC10 – PHARMACEUTICAL TECHNOLOGY

Duration of Exam – 3 hrs

Semester – III

Max. Marks – 70

Part A (5X2= 10 marks)

Answer **ALL** questions

1. What is BP? Write two last amendments of BP
2. What is biologics and biopharmaceuticals give two examples?
3. Write types of 'Water' in Pharma industries and give requirements for water analysis
4. Why Microencapsulation is important?
5. What are DNA Vaccines?

Part B (5X5 = 25 marks)

Answer **ALL** questions

6a. Explain Active Pharmaceutical Ingredients and its requirement in Industry

OR

6b. Write a note on Formulation unit

7a. When deviation occurs due to SOP what will be the action next to it?

OR

7b. Explain Quality Management system in Pharma Industry

8a. Discuss about sterility testing of any one Pharma product

OR

8b. Write down protocol for MLT of tablets

9a. Write down modes of transfer of bacterial antibiotics resistance

OR

9b. Discuss in details about nanoparticles in drug delivery

10a. Write advances in manufacturing technology

OR

10b. What are multivalent subunit vaccines give two examples

Part C (5x7 = 35 marks)

Answer **ALL** questions

11a. Illustrate Quality Assurance and its regulatory actions e.g. Review, Log book etc.

OR

11b. Explain Indian Pharmacopoeia Commission (IPC)

12a. Describe safety in microbiology laboratory in pharmaceutical industry

OR

12b. Illustrate Designing of microbiology laboratory in sterile manufacturing plant

13a. Illustrate the complete Environmental monitoring process as per standards

OR

13b. Explain : A protocol of Growth promotion test

14a. Describe Liposomes in drug delivery systems.

OR

14b. Explain factors for microbial contamination and spoilage of pharmaceutical products

15a. Details on: Biosafety levels and Cabinets types and Subtypes

OR

15b. Describe in details applications of microbial enzymes in pharmaceutical industry
