Roll No…….. **Total No. of Printed Pages: 1**

Total No. of Questions: [13]

B. Pharmacy (Semester –3rd)
PHARMACEUTICAL MICROBIOLOGY
Subject Code: BP303T
Paper ID: [17170116]

Time: 03 Hours **Maximum Marks: 75**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 9 questions of 5 marks each. The student has to attempt any 7 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1 Attempt the following:

a. Write a short note on EMEM media.
b. Differentiate between Disinfectant and antiseptic.
c. What precautions are required while autoclaving empty test tubes or petriplates?
d. What do you mean by gram staining?
e. What is Microbial Spoilage
f. What are the common gases used for sterilization in microbiology?
g. Why it is necessary to wrapped brown paper before autoclaving?
h. Describe the main differences between prokaryotic and eukaryotic cells.
i. Explain the significance of culture media composition in bacterial growth.
j. What do you mean by Oxidase test.

Section – B **(5 marks each)**

Q2 Highlight the application of cell culture in Pharmaceutical Industry.
Q3 What are the different types of media used for growth of bacteria?
Q4 Write notes on: a) Importance of preservation of pure cultures b) Gram staining
Q5 Explain construction, working, principle and validation of horizontal Autoclave.
Q6 Write short notes on: a) Monitoring of sterilization process b) BCG vaccine
Q7 Explain laminar air flow device.
Q8 How will you carry out microbiological assay as per IP?
Q9 What is Microbial Spoilage? Discuss the various factors affecting spoilage.
Q10 Write a note on IMViC.

Section – C **(10 marks each)**

Q11 Explain briefly the study of principle, procedure, merits, demerits and applications of physical, chemical gaseous, radiation and mechanical sterilization methods.
Q12 Write a note on various sources of contamination. Explain briefly.
Q13 Describe the principle and working of phase contrast microscopy, dark field, microscopy and electron microscopy.