

(c) How is the presence of *S. aureus* detected in food sample using a culture medium? (3)

6. Write short notes on the following (any 3):
(3x4=12)

(i) Salmonella-Shigella Agar

(ii) Antimicrobial susceptibility

(iii) FSSAI

(iv) Sterility testing of pharmaceutical products

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3063

I

Unique Paper Code : 2534001005

Name of the Paper : GE 3: Microbial Quality Control and Testing

Name of the Course : **Microbiology NEP (UGCF), Part - II**

Semester : III

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll. No. on the top immediately on receipt of this question paper.

2. Attempt **any five** questions.

3. **All** questions carry equal marks.

4. Attempt **all parts** of the question together.

1. (a) Define the following (any 3): (2x3=6)

(i) Biosensors

(ii) Bioburden

(iii) Differential Medium

(iv) ISO

(b) Outline the principles of HACCP and explain how these can be applied to the production of any food product with the help of a flowchart. (6)

2. (a) Expand the following terms and explain their significance (any 5): (2×5=10)

(i) EMB

(ii) EPA

(iii) XLD

(iv) COB

(v) GMLP

(vi) CAC

(b) Enlist the sources of microbial contamination in food industries. (2)

3. (a) What do you understand by Biosafety? Tabulate the equipment and protective measures used in each biosafety levels. Give one example of microbe being handled in each category. (2+5+2=9)

(b) Explain the principle behind the phenol coefficient and give its formula. (3)

4. (a) List various methods of microbial detection. Discuss one immunological and one molecular detection method. (8)

(b) Explain a dye reduction method used for detecting milk quality. (4)

5. (a) Discuss any one method for pyrogen testing. (4)

(b) Outline the steps involved in assessing the potability of water. (5)