

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: IMSC
BRANCH: FOOD TECH.

SEMESTER : III
SESSION : MO/18

SUBJECT: IMF3007 FOOD MICROBIOLOGY AND SAFETY

TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) List the factors affecting the growth of Microorganisms. [2]
Q.1(b) Discuss about the scope of food Microbiology. [4]
Q.1(c) What are the different milestones achieved in microbial Techniques? Explain in Detail. [6]
- Q.2(a) Give a brief account of probiotics. [2]
Q.2(b) What do you understand by food poisoning? Why it is advised to eat freshly cooked food instead of frozen/repetitively freeze thaw foods. [4]
Q.2(c) Define food contamination. How it occurs and what precautions should be taken in food industry to prevent this? [6]
- Q.3(a) Discuss the beneficial role of microorganism in food. [2]
Q.3(b) Explain the role of enzymes in food processing with examples. [4]
Q.3(c) What are the fermented food products? Give a detailed overview of fermented milk and a beverage. [6]
- Q.4(a) What are the good laboratory practices for isolation of food microorganisms? [2]
Q.4(b) Discuss a methodology for enumeration and detection of *Salmonella* in food. [4]
Q.4(c) Why rapid detection methods are useful in food microbiology? List some DNA based methods for food borne pathogens detection. [6]
- Q.5(a) Define the role of curator in a microbial culture collection lab. [2]
Q.5(b) What are the major instruments in food microbiology lab? [4]
Q.5(c) Draw the schematic diagram of autoclave and explain its application in food technology. [6]
- Q.6(a) Why Food Safety Legislation is important? [2]
Q.6(b) Give an insight into FSSAI act. What are the general provisions in FSSAI act 2006? [4]
Q.6(c) What are the initiatives Indian government should take to improve the Food safety laws? [6]
- Q.7(a) Define quality control. [2]
Q.7(b) What are the different standards for quality assurance of food product? [4]
Q.7(c) Explain food microbiological hazards. How these are controlled? [6]

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