

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

CLASS: IMSc  
BRANCH: FOOD TECHNOLOGY

SEMESTER: III  
SESSION: MO/2022

SUBJECT: FT203 FOOD MICROBIOLOGY

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
  2. Candidates attempt for all 25 marks.
  3. Before attempting the question paper, be sure that you have got the correct question paper.
  4. The missing data, if any, may be assumed suitably.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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			CO	BL
Q1	(a)	Throw light on the history of food microbiology.	[2] CO1	1
Q1	(b)	Discuss about the different types of microorganisms associated with food.	[3] CO1	1
Q2	(a)	With the help of a neat diagram discuss the morphology of a typical bacteria.	[2] CO1	1
Q2	(b)	Discuss the rationale and procedure of Grams Staining.	[3] CO1	2
Q3	(a)	What are the intrinsic and extrinsic factors which affect the growth of microbe?	[2] CO2	2
Q3	(b)	Discuss the importance of microorganisms in food industry.	[3] CO2	2
Q4	(a)	What are the different methods of inactivation of microbes in food?	[2] CO2	2
Q4	(b)	Discuss the growth curve of bacteria giving the formula for generation time. A researcher inoculated 5 cells of <i>E. coli</i> into the nutrient broth. How many cells would there be after 4 hours if <i>E. coli</i> has a generation time of 20 minutes.	[3] CO2	3
Q5	(a)	Define D Value, Z Value, F Value & 12-D concept	[2] CO2	1
Q5	(b)	What do you mean by Pasteurization? What are the factors affecting heat resistance in microorganisms?	[3] CO2	1

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