

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

**CLASS: IMSC
BRANCH: FOOD TECHNOLOGY**

**SEMESTER : III
SESSION : MO/2022**

SUBJECT: FT203 FOOD MICROBIOLOGY

TIME: 3:00 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 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) Define Industrial microbiology. [2]
Q.1(b) Discuss the process of gram staining and the interpretation. [3]
Q.1(c) Enumerate the importance of microorganisms in food industry with examples. [5]
- Q.2(a) Define Thermal Death Time (TDT). [2]
Q.2(b) Write a short note on the growth curve of bacteria along with the graph of growth curve. [3]
Q.2(c) Describe the various emerging methods of food preservation. Also discuss the effect of temperature on thermal inactivation of microorganisms. [5]
- Q.3(a) Define probiotics with examples. [2]
Q.3(b) Discuss the effect of intrinsic and extrinsic factors on growth and response of microbes in food. [3]
Q.3(c) Throw some light on the different fermented milk products. [5]
- Q.4(a) Define botulism and name the causal agents. [2]
Q.4(b) Write a short note on microorganisms causing food poisoning. [3]
Q.4(c) Describe the methods of food preservation and discuss any two food borne diseases caused by microbes. [5]
- Q.5(a) Define single cell protein. [2]
Q.5(b) Discuss the advantages of traditionally fermented fish products. [3]
Q.5(c) Describe the process of production of any two fermented food products. [5]

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