

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

CLASS: IMSC
BRANCH: FT

SEMESTER : VII
SESSION : MO/19

SUBJECT: SAF1001 ADVANCED FOOD MICROBIOLOGY

TIME: 3:00 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) Describe the stages of growth kinetics of micro-organisms in batch culture. [6]
Q.1(b) Classify bacteria based on (a) temperature (b) pH [6]
- Q.2(a) Describe the following chemical agents in terms of its chemical nature, mechanism of action, mode of application, effectiveness, advantages and disadvantages: phenolics, alcohols, and quaternary ammonium compounds. [6]
Q.2(b) Describe physical methods for control of micro-organisms. [6]
- Q.3(a) Explain the mechanism of Rhizobia & PGPR synergistic interaction of N₂ fixation. [6]
Q.3(b) Write short note on spoilage of food by thermophilic & mesophilic bacteria. [6]
- Q.4(a) Describe food borne disease of Salmonellosis. [6]
Q.4(b) Enlist the characteristics of viral food borne infection and describe hepatitis A [6]
- Q.5(a) Distinguish between index and indicator organism and enlist the limitations of pathogen as indicator organisms. [6]
Q.5(b) Describe E coli as indicator organism, [6]
- Q.6(a) Write short note a) XYLO Oligosaccharide b) Soybean Oligosaccharide [6]
Q.6(b) Describe lactic acid homofermentation. [6]
- Q.7(a) Explain the importance & objective of microbiological examination. [6]
Q.7(b) Describe any two qualitative methods of microbiological examination. [6]

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