

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**THIRD SEMESTER B.TECH DEGREE EXAMINATION(R&S), DECEMBER 2019**

**Course Code: FT201**

**Course Name: FOOD MICROBIOLOGY**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any three full questions, each question carries 10 marks.*

Marks

- |   |  |      |
|---|--|------|
| 1 | a) What are the contributions of Louis Pasteur to the field of microbiology?   | (5)  |
|   | b) Differentiate Gram Positive and Gram negative bacteria based on cell wall compositions with the help of a diagram   | (5)  |
| 2 | Differentiate between pure culture and mixed culture. Write in detail about the technique used for isolation of pure culture with special emphasis on streak plate technique, its application and draw diagrams wherever necessary | (10) |
| 3 | a) List out any four methods of preservation and maintenance of pure culture   | (4)  |
|   | b) Write about any three intrinsic factors affecting spoilage of food  | (6)  |
| 4 | Write an essay on different types of spoilage and causative organisms in milk  | (10) |

**PART B**

*Answer any three full questions, each question carries 10 marks.*

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|---|---|------|
| 5 | Write an essay on codes of Good Manufacturing Practices in food industry      | (10) |
| 6 | a) Define the terms intoxication and infection with two examples each         | (6)  |
|   | b) Classify food borne diseases   | (4)  |
| 7 | a) What are the five preliminary steps in HACCP and outline a HACCP worksheet | (5)  |
|   | b) Classify food safety hazards with examples                                 | (5)  |
| 8 | a) Differentiate between exotoxins and endotoxins with examples               | (5)  |
|   | b) Define the term mycotoxin with two examples                                | (5)  |

**PART C**

*Answer any four full questions, each question carries 10 marks.*

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|----|--|------|
| 9  | a) Write about any two enzymes and its applications in food industry                             | (4)  |
|    | b) Explain in detail about probiotic foods with examples   | (6)  |
| 10 | Write an essay on yoghurt fermentation with detailed description on various steps involved in it | (10) |
| 11 | a) Classify cereal based fermented foods and give two examples of rice-based                     | (5)  |

fermented foods

- b) Outline different stages in beer manufacture process with flow chart (5)
- 12 Write an essay on working principle, types and applications of biosensors (10)
- 13 a) What is immunoassay? Mention its applications and advantages (5)
- b) Write about ATP measurement and its salient features (5)
- 14 a) Write about any two qualitative method used for microbial enumeration (5)
- b) Explain PCR with the help of a neat sketch (5)

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