

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

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

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| 1 | a) Who was Robert Koch? What was his contribution to the field of microbiology? | (5) |
| | b) Comment on the important methods used for preservation and maintenance of pure cultures. | (5) |
| 2 | a) Draw the bacterial growth curve and explain the four stages. | (6) |
| | b) Describe dye reduction and discuss on the dyes used to distinguish viable from nonviable cells. | (4) |
| 3 | a) Describe how various extrinsic parameters affect the ability of microorganisms to grow in foods. | (5) |
| | b) List the steps involved in Gram Staining Technique. | (5) |
| 4 | Elaborate on the different bacterial genera normally associated with food. | (10) |

PART B

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

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| 5 | a) Define the terms intoxication and infection. Give an example for each. | (4) |
| | b) List and discuss the various toxin types of S.aureus. | (6) |
| 6 | a) Write a short note on Aflatoxins and its types | (6) |
| | b) Describe the general characteristics of <i>Clostridium botulinum</i> and its toxins | (4) |
| 7 | Describe the principles of HACCP, its logical sequence and draw a sample worksheet | (10) |
| 8 | What are the major objectives of FSSAI, CAC and BIS | (10) |

PART C

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

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| 9 | a) What are the characteristics of effective probiotics? Give examples of probiotics. | (5) |
| | b) Write about the important enzymes used in food industry. | (5) |
| 10 | Explain the preparation of Fermented beverages-Beer and Vinegar. | (10) |
| 11 | a) Name some organisms that are commonly used as starter cultures in dairy fermentation. | (4) |
| | b) Comment on fermented vegetable products. | (6) |
| 12 | Explain the principle and working of biosensors. | (10) |
| 13 | a) Define and describe immunological methods for detection of microorganisms. | (5) |
| | b) Elaborate on flow cytometry and ATP measurement. | (5) |
| 14 | Write notes on rapid methods used for detection of food borne Pathogens. | (10) |
