

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Scheme of Valuation/Answer Key**  (Scheme of evaluation (marks in brackets) and answers of problems/key) | | | | | |
| **APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  FOURTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019 | | | | | |
| **Course Code: FT206** | | | | | |
| **Course Name: FOOD BIOTECHNOLOGY (FT)** | | | | | |
| Max. Marks: 100 | | |  | Duration: 3 Hours | |
| **PART A** | | | | | |
|  |  | ***Answer any threefull questions, each question carries 10 marks.*** | | | Marks |
| 1 |  | DNA Replication- Introduction  Replication in prokaryotes-semi-conservative  Mechanism of replication  Enzymes in DNA replication  Proofreading | | | (2)  (2)  (2)  (2)  (2) |
| 2 |  | Translation-introduction  Steps involved  Genetic code  Diagram | | | (2)  (2)  (3)  (3) |
| 3 | a) | rDNA technology-introduction  Process  Diagram | | | (2)  (2)  (1) |
|  | b) | Restriction endonucleases-Definition  Nomenclature and examples | | | (1)  (4) |
| 4 |  | Operon concept-introduction  Trp operon  Explanation  Diagram | | | (2)  (2)  (3)  (3) |
| **PART B** | | | | | |
| ***Answer any threefull questions, each question carries 10 marks.*** | | | | | |
| 5 |  | Biopresevatives- Introduction  Types  Nisin/Natamycin  Apllications | | | (2)  (2)  (3)  (3) |
| 6 | a) | Tempeh –Definition and introduction  Tempeh-Flow chart  Nutritional benefits | | | (2)  (2)  (1) |
|  | b) | Food fermentation-Introduction  Importance of food fermentation in nutritional enhancement | | | (1)  (4) |
| 7 |  | Citric acid-Definition  process-introduction  Organisms involved  Diagram/flow chart | | | (2)  (2)  (3)  (3) |
| 8 | a) | Mushroom-introduction  Production process  Flow chart | | | (1)  (2)  (2) |
|  | b) | Beer-introduction  Ingredients | | | (1)  (4) |
| **PART C** | | | | | |
| ***Answer any fourfull questions, each question carries 10 marks.*** | | | | | |
| 9 | a) | GM foods-introduction  Labelling  Traceability | | | (1)  (2)  (2) |
|  | b) | Golden rice-introduction  Production process | | | (1)  (4) |
| 10 |  | Functional foods-introduction  Examples  Applications | | | (2)  (4)  (4) |
| 11 | a) | IBSC  Major functions | | | (1)  (4) |
|  | b) | GM foods-introduction  Ethical issues | | | (2)  (3) |
| 12 |  | Introduction-Endogenous enzymes  Effects of endogenous enzymes in the colour  Effects of endogenous enzymes and texture of the food | | | (2)  (4)  (4) |
| 13 |  | Immobilized enzymes-introduction  Methods  Applications | | | (2)  (2)  (4) |
| 14 |  | Introduction- enzymes in food industry  Meat industry  Baking industry | | | (2)  (4)  (4) |
| \*\*\*\* | | | | | |