

2023

Food Product Technology – I (Fruits & Vegetables)*Full Marks: 100*

Time: Three hours

*The figures in the margin indicate full marks for the questions.**Answer any five questions.*

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| 1. | a) | Write the difference between climacteric and non-climacteric fruits and give examples for each category. | 4+2=6 |
| | b) | Mention the biochemical reactions occurring during the ripening of fruits. | 4 |
| | c) | Define the term “Maturity Index” and explain it with suitable examples (any four). | 2+8=10 |
| 2. | a) | What is chilling injury? Write the symptoms of chilling injury. | 2+4=6 |
| | b) | Write the characteristics of packaging materials which are used for the packaging of fruits and vegetables. | 4 |
| | c) | Discuss about the following Traditional /Low-cost storage technologies for the preservation of fruits and vegetables: (i). Clamps (ii). In situ/ on-site/ field storage | 6+4=10 |
| 3. | a) | Define the terms- water activity and ERH. | 2+2=4 |
| | b) | Give short notes on IMF. | 6 |
| | c) | Mention the role of chemical preservatives in fruits and vegetables. Explain about the different types of acidulants and lipophilic acids used in the preservation of fruits and vegetables | 2+8=10 |
| 4. | a) | Give details about the various steps involved in pre-packaging of fruits and vegetables. Give few advantages also. | 10 |
| | b) | Define the terms fermented and unfermented fruit beverages. Give few examples also. | 4+2=6 |
| | c) | Write about any two methods involved in the clarification of juices. | 4 |
| 5. | a) | Explain the manufacturing process of cider with proper flow chart. | 10 |
| | b) | Give flow charts for the following products (any two) (i) Apple juice | 2*5=10 |

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| | | (ii) Dried fruits/vegetables (iii) Chutney (iv) Pickle | |
| 6 | a) | Explain about the jam making process with suitable flow chart. | 10 |
| | b) | Give details about the processing of any one of the tomato products with suitable flow chart. | 10 |
| 7. | a) | Briefly explain the different roasting methods used in the processing of cashew nuts. | 10 |
| | b) | Mention the methods used of the production of coffee. Explain about any one the methods with suitable flow chart. | 2+8 |

