

2023

Food Packaging Technology

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) | What is Food Packaging? Describes the various functions of food packaging. | 5 |
| | b) | Discuss about the various levels of food packaging. Give examples of each level. | 5 |
| | c) | Explain and draw the schematic diagram of steps involve in DRD technique used for making of two-piece tin can. | 10 |
| 2. | a) | Define Active Packaging System? | 2 |
| | b) | How the active scavenging system helps in improving the food quality and safety. | 9 |
| | c) | Write the mechanisms and reaction of oxygen, carbon dioxide and ethylene scavengers. | 9 |
| 3. | | Write short notes on any four (4) of the followings | 5x4 |
| | a) | Tin-can | 5 |
| | b) | Tin-free can | 5 |
| | c) | Bisphenol A | 5 |
| | d) | Antioxidant emitter | 5 |
| | e) | Polyethylene terephthalate (PET) | 5 |
| 4. | a) | What are biobased packaging materials. Give the advantages and limitations of edible and biobased packaging materials. | 2+8 |
| | b) | What is the main difference between edible films and edible sheets. Mention any five materials used for edible packaging and give the applications and functions of any three materials. | 2+8 |

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| 5. | a) | Name any four plastic materials commonly used for food packaging. Discuss about the four steps involved during the manufacture of plastic packages. | 2+8 |
| | b) | Name three materials used for metal packaging and give three qualities of each metal packaging required for food packaging applications. | 2+8 |
| 6. | a) | List the raw material and different furnaces used for manufacturing of Glass. | 5 |
| | b) | Explain the various steps involve in manufacturing of Glass bottles by “Blow and Blow Process” by giving a schematic diagram. | 10 |
| | c) | Differentiate between thermoplastics and thermosetting plastics. | 5 |
| 7. | | Write the principle and mechanisms of any two of the following Indicators | 10+10 |
| | a) | Time-Temperature Indicators (TTI) | |
| | b) | Freshness Indicators | |
| | c) | Ageless-eye, an oxygen Indicator | |

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