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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14FP2037** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Technology of Packaging** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Discuss in detail about the biologicalfactors affecting quality of food products with cases and examples. | CO1 | 20 |
| (OR) | | | | |
| 2. | a. | What are the different types of methods involved in two piece cans making? Draw necessary diagrams. | CO1 | 15 |
|  | b. | Write notes on vacuum packaging and its applications in food industry. | CO1 | 5 |
| 3. | a. | Write about the following:  (i) Different Strategies used in food packaging | CO2 | 10 |
|  | b. | (ii) Functions of food packaging | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Explain the following methods of manufacturing of rigid plastic packaging materials  (i) Injection blow molding | CO2 | 10 |
|  | b. | (ii) Stretch blow molding | CO2 | 10 |
| 5. | a. | Discuss in detail about manufacturing glass containers using blow and press process of container making with a neat sketch. | CO2 | 20 |
| (OR) | | | | |
| 6. | a. | Discuss in detail about the following with the help of diagrams:  (i) Corrugated paperboard | CO2 | 10 |
|  |  | (ii) Tenter frame process | CO3 | 10 |
| 7. | a. | Write in detail about horizontal form-fill-seal machine with a neatly labelled diagram. | CO3 | 20 |
| (OR) | | | | |
| 8. | a. | Write short notes on hot bar sealing with a sketch of the equipment used. | CO3 | 10 |
|  | b. | Discuss the various moisture absorbants and different scavengers used for maintain freshness in active packaging of foods. | CO3 | 10 |
|  | | **Compulsory:** |  |  |
| 9. | a. | How is modified atmosphere packaging achieved by active and passive methods? | CO3 | 8 |
|  | b. | Write in about the importance of different gases and the equipment used for MAP. | CO3 | 12 |

ALL THE BEST