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 – April/May – 2017**

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| **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. |  | Describe the environmental factors affecting food quality and appraise how food packaging counteracts them. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Enumerate the various methods involved in can manufacturing and explain them with diagrams showing the steps involved. | CO1 | 20 |
| 3. | a. | Define the different levels of food packaging with a simple diagram. | CO1 | 8 |
|  | b. | Explain the principle and methods of vacuum packaging and point out the applications in food industry. | CO2 | 12 |
| (OR) | | | | |
| 4. | a. | Discuss the principle and manufacturing stages with diagrams for the following methods. Also appraise the merits of the methods.  (i) Cast film process  (ii) Bubble film process. | CO2 | 10  10 |
|  |  |
| 5. |  | Review the process of glass manufacturing with a flow chart and explain glass container manufacturing by blow and blow process with a neat sketch. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Describe the different stages of paper manufacturing from pulp with the help of diagrams. | CO2 | 20 |
| 7. |  | Enumerate the types of form-fill-seal machine for applications in various sectors of food industry. | CO2 | 20 |
| (OR) | | | | |
| 8. | a. | Compare impulse sealing and conductive sealing of plastic films. | CO2 | 8 |
|  | b. | Elaborate the various aspects of active packaging and explain how they enhance freshness of food products. | CO3 | 12 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Active modified atmosphere effectively protects food than passive method. Justify. | CO3 | 5 |
|  | b. | Discuss the various methods of achieving modified atmosphere in food packaging and explain the equipment used. | CO3 | 15 |

ALL THE BEST