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



**End Semester Examination – Nov / Dec – 2019**

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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. | a. | Enumerate the factors affecting quality of food products with cases and examples. | CO1 | 10 |
|  | b. | Explain the various functions of packaging with examples. | CO1 | 10 |
| **(OR)** | | | | |
| 2. |  | Review the various methods involved in two-piece can manufacturing with diagrams showing the steps involved. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Summarize the estimation of shelf life requirement of food products for packaging. | CO1 | 10 |
| b. | Describe the physical methods of test to evaluate strength of packaging materials. | CO1 | 10 |
| **(OR)** | | | | |
| 4. |  | Discuss the principle and manufacturing stages with diagrams for the following methods. Also appraise the applications of the methods.  (i) Injection moulding  (ii) Injection blow moulding. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Review the process of glass manufacturing with a flow chart and explain glass container manufacturing by blow-blow process with a neat sketch. | CO2 | 20 |
| **(OR)** | | | | |
| 6. |  | Define paperboard. Review the various types of paperboard products used in food packaging with diagrams. | CO2 | 20 |
|  |  |  |  |  |
| 7. |  | Discuss the types of vertical form-fill-seal machine for applications in various sectors of food industry. | CO2 | 20 |
| **(OR)** | | | | |
| 8. | a. | Compare conductance sealing and impulse sealing of plastic films. | CO2 | 10 |
| b. | Explain the various methods of printing on food packaging materials. | CO3 | 10 |
|  | | **Compulsory:** |  |  |
| 9. |  | Discuss the principle, importance of different gases used and the equipment used for achieving modified atmosphere packaging. | CO3 | 20 |