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

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**End Semester Examination – Nov/Dec – 2018**

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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. | Give a descriptive note on the effects of packaging on the environment. | CO3 | 8 |
| b. | Write a short note on packaging strategy along with its design and development framework. | CO2 | 12 |
| (OR) | | | | |
| 2. | a. | Brief on the basic function of packaging along with the levels. | CO1 | 7 |
| b. | Discuss on the key properties of packaging media. | CO2 | 13 |
|  |  |  |  |  |
| 3. | a. | Write a short note on two piece and three piece cans. | CO1 | 10 |
|  | b. | Shortly discuss on the sterilization of glass bottles using irradiation and chemical treatment. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Discuss on the basics of canning operation. | CO1 | 8 |
|  | b. | Write a note on vacuum and inert gas packaging with its application | CO2 | 12 |
|  |  |  |  |  |
| 5. | a. | Discuss on the manufacturing of films using extrusion method. | CO1 | 12 |
|  | b. | Discuss on the pre-treatments done before coating the film. | CO1 | 8 |
| (OR) | | | | |
| 6. | a. | Write a note on the manufacturing of polyester, their types and specific application in packaging industry. | CO1 | 10 |
|  | b. | Elucidate on the manufacturing of paper. | CO2 | 10 |
|  |  |  |  |  |
| 7. | a. | Explain the retort pouch packaging and the process involved. | CO1 | 7 |
|  | b. | Demonstrate on the form fill sealing machine along with its type. | CO1 | 13 |
| (OR) | | | | |
| 8. | a. | Discuss on the closures function, construction and types used in glass and plastic containers. | CO2 | 7 |
|  | b. | Write a note on thermoforming and injection molding of plastic packaging material. | CO2 | 13 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Elucidate on MAP used in packaging food products. | CO3 | 10 |
|  | b. | Write a short note on WVTR | CO2 | 10 |