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**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14FP2032** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PROCESS ECONOMICS AND PLANT LAYOUT DESIGN** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. |  | What is process flow? With a neat diagram, draw the process diagram for an industry manufacturing 1000kg/hr of orange squash. | CO1, CO2 | 20 |
| (OR) | | | | |
| 2. |  | Discuss in detail on hygienic design of food equipments. | CO3 | 20 |
| 3. |  | List the factors to be considered while deciding a location for setting up of a food processing industry? What are the factors that are very important for an industry manufacturing – Carbonated beverages (or) b. fish processing. Justify your selection. | CO3 | 20 |
| (OR) | | | | |
| 4. | a. | List out the common hazards observed in a Food Industry. | CO3 | 10 |
|  | b. | How will you prevent occurring of accidents under such conditions? | CO3 | 10 |
| 5. |  | Mr X plans to set up a plant manufacturing milk powder. The cost of the evaporator (10 kg/h) his friend bought for his concern was Rs. 10 Lakhs in 2001. The cost of steam boiler was Rs. 3 Lakhs then for an appropriate capacity. Calculate the cost of setting up a plant now for a plant manufacturing 25kg/h, by the method of Miller. CEPC index for 2001 = 394.3 and for 2016= 556.8. | CO1 | 20 |
| (OR) | | | | |
| 6. | a. | Discuss briefly on the following-   1. Module method of cost estimation 2. Cost-capacity factor | CO1  CO1 | 10  05 |
|  | b. | A steam kettle of 500 L capacity costed Rs. 50,000 in 1995. A wants to buy a kettle of 1000L capacity now. How can that be done? Given – CEPCI index – 1995 – 381.1, and that at 2016 – 556.8. | CO1 | 05 |
| 7. |  | Discuss in detail on the factors contributing to the direct manufacturing cost. | CO1, CO3 | 20 |
| (OR) | | | | |
| 8. |  | Discuss in detail on depreciation and the methods of estimating the same. | CO1, CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | What is a cash flow diagram? With the help of a neat diagram, explain the various aspects of the cash flow diagram. | CO1 | 12 |
|  | b. | What is discounted cash flow? How is it determined? | CO1 | 08 |

ALL THE BEST