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



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

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|  |  |  |  |
| **Code :** | **14ME2043** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INDUSTRIAL ENGINEERING** | **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 procedure of Method study. | CO1 | 10 |
| b. | Discuss the salient features of any one flow process chart with an example. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Appraise the Procedure of Time study. | CO1 | 10 |
| b. | Evaluate the various partial productivity indexes. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Expand the acronyms with respect to inventory i) FSN ii) HML. | CO1 | 2 |
| b. | Define Lead Time with respect to inventory control. | CO1 | 2 |
| c. | Compute ABC analysis and construct the graph for the following 10 items consumed in company.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Items | 1 | 2 | 3 | 4 | 5 | | Annual Usage (units) | 200 | 3000 | 25 | 1100 | 60 | | Unit Cost (Rs) | 11 | 14 | 9 | 6 | 5 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Items | 6 | 7 | 8 | 9 | 10 | | Annual Usage (units) | 250 | 140 | 850 | 550 | 80 | | Unit Cost(Rs) | 90 | 6 | 6 | 15 | 9 | | CO1 | 16 |
| **(OR)** | | | | |
| 4. | a. | Write the full form for the acronyms SOS and GOLF. | CO2 | 2 |
| b. | Define Re-order point in inventory control. | CO2 | 2 |
| c. | Illustrate the various inventory management techniques adopted in the industries, list the advantages and applications of each technique. | CO2 | 16 |
|  |  |  |  |  |
| 5. | a. | Differentiate between product lay out and process lay out. | CO2 | 4 |
| b. | Discuss the various features of GT (Group Technology), coding system and cellular layout. | CO2 | 16 |
| **(OR)** | | | | |
| 6. | a. | Distinguish Material Requirement planning from Manufacturing Resource Planning. | CO2 | 4 |
| b. | Explain the structure, inputs, outputs and benefits of Material Requirement planning. | CO2 | 16 |
|  |  |  |  |  |
| 7. | a. | List the advantages of Statistical Process Control (SPC) over 100 % inspection. | CO3 | 4 |
| b. | Assess the various variable and attribute control charts and write their applications in quality control and manufacturing industries. | CO3 | 16 |
| **(OR)** | | | | |
| 8. | a. | Define the terms ‘ Reliability’ and ‘Availability’. | CO3 | 4 |
| b. | How to compute the reliability of the total system when its elements are connected in series, parallel and mixed configuration. | CO3 | 16 |
|  | | **Compulsory**: |  |  |
| 9. |  | Evaluate the variant and Generative Computer Aided Process planning with suitable examples. | CO3 | 20 |