Regina. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2017**

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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. | Define standard time of an activity. | CO1 | 1 |
| b. | What are the components of work study? | CO1 | 1 |
| c. | Name some allowances. | CO1 | 2 |
| d. | Distinguish ‘work content’ and ‘ineffective time’. | CO1 | 2 |
| e. | Explain a detailed procedure to conduct time study. | CO1 | 14 |
| (OR) | | | | |
| 2. | a. | How productivity measured? | CO1 | 1 |
| b. | List the various partial productivity indices. | CO1 | 1 |
| c. | Differentiate production and productivity. | CO1 | 2 |
| d. | What is ‘productivity deflator’? | CO1 | 2 |
| e. | Expound the various factors influencing productivity. | CO1 | 14 |
|  |  |  |  |  |
| 3. | a. | Expand the acronyms with respect to inventory i. ABC ii. VED | CO2 | 1 |
|  | b. | Define re-order point in inventory control. | CO2 | 1 |
|  | c. | Differentiate Material Requirement planning and Manufacturing Resource planning. | CO2 | 2 |
|  | d. | What are the outcomes of capacity planning? | CO2 | 2 |
|  | e. | Explain the salient features of master production schedule. | CO2 | 14 |
| (OR) | | | | |
| 4. | a. | Distinguish ordering cost and holding cost. | CO2 | 1 |
|  | b. | Write a note on the term ‘Economic ordering Quantity (EOQ)’. | CO2 | 1 |
|  | c. | What is buffer stock? | CO2 | 2 |
|  | d. | Define WIP in inventory. | CO2 | 2 |
|  | e. | Explain the various inventory control techniques with suitable examples. | CO2 | 14 |
|  |  |  |  |  |
| 5. | a. | Define failure. | CO2 | 1 |
|  | b. | Distinguish failure and failure rate. | CO2 | 1 |
|  | c. | Distinguish down time and Idle time. | CO2 | 2 |
|  | d. | Differentiate variable and attribute control charts. | CO2 | 2 |
|  | e. | Discuss process capability analysis with neat diagrams and suitable examples. | CO2 | 14 |
| (OR) | | | | |
| 6. | a. | Define Reliability. | CO2 | 1 |
|  | b. | How to measure availability? | CO2 | 1 |
|  | c. | How to achieve reliability improvement? | CO2 | 2 |
|  | d. | Differentiate MTBF and MTTR. | CO2 | 2 |
|  | e. | Find the reliability of the following system  R(B)= 0.82  R(A)= 0.91  R(D)=0.75  R(C)= 0.95 | CO2 | 14 |
| 7. | a. | Define travel chart. | CO3 | 1 |
|  | b. | What are advantages of flow charts? | CO3 | 1 |
|  | c. | Write a note on Group Technology. | CO3 | 2 |
|  | d. | Prescribe suitable layout for ship building. | CO3 | 2 |
|  | e. | Explain the salient features of product and process layout and list their advantages and limitations. | CO3 | 14 |
| (OR) | | | | |
| 8. | a. | SWOT is an acronym for \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | CO3 | 1 |
|  | b. | List any two benefits of CAPP. | CO3 | 1 |
|  | c. | Write a note on leverage of IT in production management. | CO3 | 2 |
|  | d. | Explain the concept of ‘management by objective’. | CO3 | 2 |
|  | e. | Enumerate the role of supply chain management in production industries. | CO3 | 14 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Distinguish strength and opportunity. | CO3 | 1 |
|  | b. | What is derating of performance? | CO3 | 1 |
|  | c. | Define BPR. | CO3 | 2 |
|  | d. | List any two benefits of supply chain management. | CO3 | 2 |
|  | e. | Explain the process of BPR with suitable example. | CO3 | 14 |

ALL THE BEST