**18MED32**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **November, 2022** | **Mechanical Engineering** | | |
| **Seventh Semester** | **Project Management** | | |
| **Time:** Three Hours | | **Maximum:**50 Marks | |
| *Answer Question No.1 compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer ONE question from each unit.* | | | (4X10=40 Marks) |
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| 1. | | a) | Define a Project? | | CO1,L2 |  | |
|  | | b) | What are the contents of a project plan? | | CO1,L1 |  | |
|  | | c) | What is network analysis used for? | | CO1,L3 |  | |
|  | | d) | What is float and slack in project management? | | CO2,L2 |  | |
|  | | e) | What is risk in project management? | | CO2,L2 |  | |
|  | | f) | State the main reason for reducing the project duration? | | CO2,L2 |  | |
|  | | g) | List the Leadership styles in project management | | CO2,L3 |  | |
|  | | h) | How critical path is determined in network analysis? | | CO3,L1 |  | |
|  | | i) | What makes a good team in project management? | | CO3,L2 |  | |
|  | | j) | List the elements of a maturity model? | | CO3,L2 |  | |
| **Unit -I** | | | | | | | |
| 2. | |  | What are the different phases of the project of project life cycle? Explain with diagram. | | CO1,L2 | 10M | |
| **(OR)** | | | | | | | |
| 3. | | a) | What are the six elements of a typical scope statement? | | CO1,L1 | 5M | |
|  | | b) | Briefly discuss about Work break structure. | | CO1,L2 | 5M | |
| **Unit -II** | | | | | | | |
| 4. | |  | Consider a PERT project for which the following activities and the time estimates (optimistic, pessimistic and most likely times) have been obtained. Draw the network and determine the:  (i) Expected project duration, its variance and standard deviation.  (ii) Probability that the project is completed (a) as per schedule (b) 2 days earlier than expected.   |  |  | | --- | --- | | Activity | (a ,b, m) | | 1,2 | 5,8,6 | | 1,4 | 1,4,3 | | 1,5 | 2,5,4 | | 2,3 | 4,6,5 | | 2,5 | 7,10,8 | | 2,6 | 8,13,9 | | 3,4 | 5,10,9 | | 3,6 | 3,5,4 | | 4,6 | 4,10,8 | | 4,7 | 5,8,6 | | 5,6 | 9,15,10 | | 5,7 | 4,8,6 | | 6,7 | 3,5,8 | | | CO2,L2 | 10M | |
| **(OR)**  **P.T.O**  **18MED32** | | | | | | | |
| 5 |  | | | Find a small project of 12 activities, the details of which are given below. Draw the network and find earliest occurrence time, latest occurrence time, critical activities and project completion time. 10M     |  |  |  | | --- | --- | --- | | Activity | Dependence | Duration (Days) | | A | -- | 9 | | B | -- | 4 | | C | -- | 7 | | D | B, C | 8 | | E | A | 7 | | F | C | 5 | | G | E | 10 | | H | E | 8 | | I | D, F, H | 6 | | J | E | 9 | | K | I, J | 10 | | L | G | 2 | | | | |
| **Unit -III** | | | | | | | |
| 6. | | a) | Why are accurate estimates critical to effective project management? | | CO3,L4 | | 5M |
|  | | b) | What are the major types of costs? Which costs are controllable by the project manager? | | CO3,L2 | | 5M |
| **(OR)** | | | | | | | |
| 7. | |  | Describe measures for evaluating project performance with examples | | CO3,L3 | | 10M |
| **Unit -IV** | | | | | | | |
| 8. | |  | Di Why is it important to assess the culture of an organization before deciding what project management structure should be used to complete a project? | | CO4,L2 | | 10M |
|  | |  |  | |  | |  |
| **(OR)** | | | | | | | |
| 9. | |  | Explain the Project Management Maturity model with neat sketch in detail. | | CO4,L21 | | 10M |

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