

U.S.N.

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations**Programme: B.E.****Branch: Institutional Elective****Course Code: 24ME7OEPRM****Course: Project Management****Semester : VII****Duration: 3 hrs.****Max Marks: 100**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|------------------------------------------------------------------------------------|-----------|-----------|--------------|
| Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice. | | | UNIT - I | CO | PO | Marks |
| | 1 | a) | How can project work be described? | CO1 | PO1 | 10 |
| | | b) | Describe the characteristic features of a project. | CO1 | PO1 | 10 |
| | | | OR | | | |
| | 2 | a) | Describe the various types of projects. | CO1 | PO1 | 10 |
| | | b) | Explain the project roles. | CO1 | PO1 | 10 |
| | | | UNIT - II | | | |
| | 3 | a) | Describe the skills and abilities of a project manager. | CO2 | PO1 | 10 |
| | | b) | Elaborate the authorities required for a project manager. | CO2 | PO1 | 10 |
| | | | OR | | | |
| | 4 | a) | Describe the types of project organizations. | CO2 | PO1 | 10 |
| | | b) | Elaborate the procedures for tendering and selection of contractors. | CO2 | PO1 | 10 |
| | | | UNIT - III | | | |
| | 5 | a) | Define 1) Merge event 2) Burst event 3) Looping 4) Dangling 5) Redundant activity. | CO3 | PO1 | 10 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | b) | A project has the following scheduling. Construct the network, determine the critical path and duration of the project. | | | | | | | | | CO3 | PO6 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | <table><tr><td>Activity</td><td>1-2</td><td>1-3</td><td>1-4</td><td>2-5</td><td>3-6</td><td>3-7</td><td>4-6</td><td>5-8</td><td>6-9</td><td>7-8</td><td>8-9</td></tr><tr><td>Time</td><td>2</td><td>2</td><td>1</td><td>4</td><td>8</td><td>5</td><td>3</td><td>1</td><td>5</td><td>4</td><td>3</td></tr></table> | | | | | | | | | | | Activity | 1-2 | 1-3 | 1-4 | 2-5 | 3-6 | 3-7 | 4-6 | 5-8 | 6-9 | 7-8 | 8-9 | Time | 2 | 2 | 1 | 4 | 8 | 5 | 3 | 1 | 5 | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity | 1-2 | 1-3 | 1-4 | 2-5 | 3-6 | 3-7 | 4-6 | 5-8 | 6-9 | 7-8 | 8-9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time | 2 | 2 | 1 | 4 | 8 | 5 | 3 | 1 | 5 | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | OR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | a) | Differentiate PERT and CPM. | | | | | | | | | CO3 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | b) | The three time estimates of a certain project are given below. | | | | | | | | | CO3 | PO6 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | <table><tr><td>Activity</td><td colspan="2">To</td><td colspan="2">Tm</td><td colspan="2">Tp</td></tr><tr><td>0-1</td><td colspan="2">2</td><td colspan="2">3</td><td colspan="2">4</td></tr><tr><td>1-3</td><td colspan="2">15</td><td colspan="2">16</td><td colspan="2">17</td></tr><tr><td>1-2</td><td colspan="2">3</td><td colspan="2">6</td><td colspan="2">9</td></tr><tr><td>1-4</td><td colspan="2">6</td><td colspan="2">10</td><td colspan="2">14</td></tr><tr><td>2-3</td><td colspan="2">4</td><td colspan="2">8</td><td colspan="2">12</td></tr><tr><td>3-4</td><td colspan="2">3</td><td colspan="2">5</td><td colspan="2">7</td></tr><tr><td>4-5</td><td colspan="2">2</td><td colspan="2">3</td><td colspan="2">4</td></tr></table> | | | | | | | | | | | Activity | To | | Tm | | Tp | | 0-1 | 2 | | 3 | | 4 | | 1-3 | 15 | | 16 | | 17 | | 1-2 | 3 | | 6 | | 9 | | 1-4 | 6 | | 10 | | 14 | | 2-3 | 4 | | 8 | | 12 | | 3-4 | 3 | | 5 | | 7 | | 4-5 | 2 | | 3 | | 4 | | | | |
| Activity | To | | Tm | | Tp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-1 | 2 | | 3 | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-3 | 15 | | 16 | | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-2 | 3 | | 6 | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-4 | 6 | | 10 | | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2-3 | 4 | | 8 | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-4 | 3 | | 5 | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-5 | 2 | | 3 | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1) Draw the network and find the critical path. 2) If the scheduled time for the end event is equal to the earliest expected time of the last event, find the probability of completion of the project work. 3) If the scheduled time is 28 days, find the probability of completion of the project work. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | UNIT - IV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | a) | Elaborate the various types of costs. | | | | | | | | | CO4 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | b) | Describe the project cost estimating issues. | | | | | | | | | CO4 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | OR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | a) | List and describe the methods of estimating costs. | | | | | | | | | CO4 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | b) | How do you determine budget? Describe. | | | | | | | | | CO4 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | UNIT - V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | a) | List and describe the various types of contracts. | | | | | | | | | CO5 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | b) | How do you improve the project supply chains? Explain. | | | | | | | | | CO5 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | OR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | a) | Describe the plan procurement management. | | | | | | | | | CO5 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | b) | How do you conduct procurements? List and describe. | | | | | | | | | CO5 | PO1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
