

**Dr. Babasaheb Ambedkar Open University**  
**Term End Examination January-2026**

**Course** : Diploma Course  
**Subject Code** : DOR-03  
**Subject Name** : PERT & CPM

**Date** : 02/03/2026  
**Time** : 11:30am to 01:45pm  
**Duration** : 02.15 Hours  
**Max. Marks** : 70

- Q-1** Explain significance of using PERT and CPM method and also write down difference between PERT and CPM. **14**

**OR**

Write a short note on Critical Path.

- Q-2** Explain: Project scheduling with uncertain activity times. **14**

**OR**

Write a short note on Resource Smoothing and Resource leveling.

- Q-3** Explain: Forward pass method and Backward pass method **14**

**OR**

Listed in the table are the activities and sequencing necessary for a maintenance job on the heat exchangers in Rajat Ltd.

| Activity | Description                                  | Predecessor Activity |
|----------|----------------------------------------------|----------------------|
| A        | Dismantle pipe connections                   | -                    |
| B        | Dismantle heater, closure and floating front | A                    |
| C        | Remove tube bundle                           | B                    |
| D        | Clean bolts                                  | B                    |
| E        | Clean heater and floating head front         | B                    |
| F        | Clean tube bundle                            | C                    |
| G        | Clean shell                                  | C                    |
| H        | Replace tube bundle                          | F,G                  |
| I        | Prepare shall pressure test                  | D,E,H                |
| J        | Prepare tube pressure test and reassemble    | I                    |

Draw a network diagram for the project.

- Q-4** Explain various types of Floats of an Activity and Event. **14**

**OR**

The following table given data on normal time, and expense and crash time and expense for a project of kupa Ltd.

| Activity | Normal       |              | Crash        |              |
|----------|--------------|--------------|--------------|--------------|
|          | Time (weeks) | Expense(Rs.) | Time (weeks) | Expense(Rs.) |
| 1-2      | 3            | 300          | 2            | 400          |
| 2-3      | 3            | 30           | 3            | 30           |
| 2-4      | 7            | 420          | 5            | 580          |
| 2-5      | 9            | 720          | 7            | 810          |
| 3-5      | 5            | 250          | 4            | 300          |
| 4-5      | 0            | 0            | 0            | 0            |
| 5-6      | 6            | 320          | 4            | 410          |
| 6-7      | 4            | 400          | 3            | 470          |
| 6-8      | 13           | 780          | 10           | 900          |
| 7-8      | 10           | 1000         | 9            | 1200         |

Indirect expense is Rs 50 per week

- Draw the network and identify the critical path with a double line.
- What are the normal project duration and associated expense?
- Find out total float associated with each activity.
- Crash the relevant activities systematically and determine the optimal project completion time and Expense.

**Q-5 Write a Short Notes (Any Two)**

**14**

1. Phases of Project Management
2. Project Crashing
3. Events
4. Activities
5. Errors and Dummies in Network

**OR**

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