

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code:3171506****Date:17-05-2024****Subject Name:Project Management****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.
5. Abbreviations have usual meaning.

- Q.1** (a) Enlist the characteristics of effective team members in a project. **03**
(b) Brief about the two types of project life cycles. **04**
(c) Discuss the various responsibilities of the PM to the project: **07**

- Q.2** (a) Use the characteristics of a project to differentiate it from a nonproject. **03**
(b) Explain the earned value analysis using a diagram. **04**
(c) Discuss the steps involved in the “Project Portfolio Process”. **07**

OR

- (c) Provide brief idea of project selection methods. **07**
- Q.3** (a) Show the format of a WBS as an output of Microsoft Project software. **03**
(b) Explain the purpose of the RACI matrix. **04**
(c) Write a short note on Project planning using Mind mapping. Use following points: purpose, methodology, benefit. **07**

OR

- Q.3** (a) Differentiate between the Project Plan, and the Work Breakdown Structure. **03**
(b) Which different formats are used to collect data through the monitoring system? **04**
(c) Preparation of five subjects in a semester of an engineering program can be taken as a project. Develop a WBS (Gozinto tree) with at least three levels for this project. (State clearly the title of your project) **07**

- Q.4** (a) Distinguish among highly probable risks, extremely serious risks, and highly vulnerable areas in risk identification. **03**
(b) Given a set of projects to terminate, how would you decide which projects should be continued and which should be dropped? **04**
(c) Explain the causes for change in budget estimates previously done. How are these changes handled? **07**

OR

- Q.4** (a) What do you understand by *Risk Priority Number (RPN)* with regard to Failure Mode and Effect Analysis? **03**
(b) Brief about the information required in a project audit report. **04**
(c) Write a note on: Methods of budgeting. **07**

- Q.5** (a) Provide meaning of the following rules for assigning preference to some activities over others when allocating scarce resources: minimum slack first, most critical followers, most successors. **03**
(b) Explain any one in brief: Resource loading, Resource leveling. **04**
(c) Information on the activities required for a project is as given: **07**

Activity	Activities Node	Duration
<i>A</i>	1—2	2 days
<i>B</i>	1—3	7
<i>C</i>	1—4	8
<i>D</i>	2—5	3
<i>E</i>	3—5	6
<i>F</i>	3—6	10
<i>G</i>	3—7	4
<i>H</i>	4—6	6
<i>I</i>	5—7	2
<i>J</i>	6—8	5
<i>K</i>	7—8	6

(i) Construct the network diagram (activity on arrow), (ii) show each activity's ES, EF, LS, LF in the diagram, (iii) Which path is the critical path? How long will it take to complete the project?

OR

- Q.5** (a) What is meant by the term “student syndrome”? **03**
(b) Explain how the type of project life cycle (“S”-type or “J”-type) might affect allocation of scarce resources to a project. **04**
(c) Given the following project: **07**

Activity	Duration, Days (Normal, Crash)	Cost, Rs. (Normal, Crash)
1—2	6, 4	600, 1000
1—3	4, 2	600, 1400
2—4	5, 3	500, 1500
2—5	3, 1	450, 650
3—4	6, 4	900, 2000
4—6	8, 4	800, 3000
5—6	4, 2	400, 1000
6—7	3, 2	450, 800

The contract includes a penalty clause of Rs. 200 per day in excess of 19 days. The overhead cost is Rs. 400 per day.

Would the project be benefited in terms of total cost, if it is crashed by 1 day? If yes, calculate the benefit.
