

Faculty of Engineering & Technology
Fifth Semester B.E. (Mechanical Engineering) (CGS)

Examination

PROJECT MANAGEMENT

Paper—5 FEME 05

Elective—I

Sections—A & B

Time—Three Hours]

[Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

- (1) Answer **THREE** questions from Section A and **THREE** questions from Section B.
- (2) Assume suitable data wherever necessary.
- (3) Illustrate your answers wherever necessary with the help of neat sketches.

SECTION—A

1. (a) What are project proposals ? How it is prepared ? 6
- (b) Describe 'payback period' and 'net present value' methods used as numeric project selection model. 7

OR

2. (a) What are methods of uncertainty analysis for investment decisions ? Discuss sensitivity analysis. 6
(b) What are causes of project "over-runs" ? How to combat the "over-runs" ? 7
3. (a) Describe 'matrix organisation structure'. Compare it with 'functional project organisation structure'. 7
(b) What are types of conflict ? Discuss cause and effects of each. 6

OR

4. (a) What are sources of conflicts ? Explain conflict resolution model. 6
(b) Discuss steps in planning. Describe contents of master plan. 7
5. (a) Sketch the life-cycle phases and explain task associated with each phase. 8
(b) What are objectives of life-cycle costing ? Describe various elements of life-cycle costing. 6

OR

6. (a) With the help of sketch describe earned value concept. Explain its important terms that are useful to measure overall performance of project. 9
(b) What are cost reduction techniques ? Describe any two. 5

11. (a) Why it is necessary to appraise the project ? Describe project appraisal criteria. 7
(b) What is project cost escalation ? Describe its reasons. 6

OR

12. (a) How the feasibility report for the project is prepared ? 7
(b) Explain how cost-time-value cycle is controlled to manage project resources flow ? 6

SECTION—B

7. (a) A small project consists of seven activities. The time estimates (in week) of different activities are given below :

Activity	Optimistic	Most likely	Pessimistic
1—2	1	1	7
1—3	1	4	7
1—4	2	2	8
2—5	1	1	1
3—5	2	5	14
4—6	2	5	8
5—6	3	6	5

- (i) Find the critical path.
(ii) What is expected project length ?
(iii) What is probability of not completing the project within 18 weeks ?
(iv) What is the probability of completing the project 3 weeks earlier than expected time ?
- (b) Explain the difference between CPM and PERT.

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OR

8. (a) Consider the following data for the activities of a project. Draw the network and find the critical path. Also calculate total duration required to complete the project.

Activity	A	B	C	D	E	F
Immediate predecessor	A	A	B,C	—	E	
Duration (days)	2	3	4	6	2	8

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- (b) Explain :
- (i) Resource levelling and resource smoothing.
- (ii) Three time estimate in PERT. 6
9. (a) What characteristics a good control system should possess ? 7
- (b) What information should be contained in audit report ? 7

OR

10. (a) Describe fundamental purpose of control. Explain post process control. In what type of application it is used ? 7
- (b) What are desirable attributes in project management software ? What errors are encountered in managing PMIS ? 7