

Fifth Semester B. E. (Mechanical Engineering) (CGS) Examination

PROJECT MANAGEMENT

Paper – 5 FEME 05

(USC – 10848)

P. Pages : 4

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) Separate answer book must be used for each section in the subject Geology. Engineering material of Civil branch and separate answer book must be used for Section A and B in pharmacy and Cosmetic Tech.
- (2) Answer **Three** questions from Section A and **Three** questions from Section B.
- (3) Assume suitable data wherever necessary.
- (4) Diagrams and chemicals equations should be given wherever necessary.
- (5) Illustrate your answer wherever necessary with the help of neat sketches.

SECTION A

1. (a) Discuss Souder's criteria for choosing a project selection model. 5
- (b) Describe internal and external constraints in project management. How to combat the project 'over-run' ? Discuss. 8

OR

2. (a) What is project ? Describe characteristics of project. What are criteria to decide when to use project management technique ? 6
 - (b) Enlist various numeric project selection models. Explain any two with suitable example. State its merit over non numeric models. 7
- ..
3. (a) Compare functional and divisional organisation structure. Discuss merits and demerits of each. 6
 - (b) What is project planning ? What are steps involved in it. Describe contents of master plan ? 7

4. (a) Why shrewd managers not eliminate conflict fully but confines it on specific area warding off its ill effect on project ? 5
- (b) Explain work break down structures. Discuss with suitable example, how codification of tasks are useful for project planning. 8
5. (a) Describe top-down budgeting and bottom up budgeting with merits and demerits of each. 6
- (b) With sketch explain Earned Value Concept. Explain important terms that are useful to measure overall performance of the project. 8

OR

6. (a) What are methods of applying uncertainty analysis for investment decisions. Explain sensitivity analysis. 6
- (b) Describe project life cycle phases with neat sketch. Discuss tasks associated with each phase. 8

SECTION B

7. (a) Project consisting of following activities with their time estimates in weeks are as below :—

Activity	1 - 2	1 - 3	1 - 4	2 - 5	3 - 5	4 - 6	5 - 6
Optimistic	1	1	2	1	2	2	3
Most likely	1	4	2	1	5	5	6
Pessimistic	7	7	8	1	14	8	15

- (i) Find critical path
- (ii) What is expected project length
- (iii) Calculate total float, free float, independent float and interfering float for each activity. 9
- (b) Differentiate in resource levelling and resource smoothing. 5

OR

8. (a) A project consist of following activities, Time estimates in weeks for each activity is given :—

Activity	1 – 2	1– 3	1 – 4	2 – 5	3 – 5	4 – 6	5 – 6
Optimistic time	1	1	2	1	2	2	3
Most likely time	1	4	2	1	5	5	6
Pessimistic time	7	7	8	1	14	8	15

- (i) Find critical path
(ii) What is expected project duration and variance for each activity ?
(iii) What is the probability of not completing the project within 18 weeks ?
(iv) What is the probability of completing the project 3 weeks earlier than expected time ?

Given that

Z	0	1	2	3	4	5
0.3	0.157	0.142		0.1293		0.1127
1	0.341		0.321			0.3136
1.5	0.423			0.4496		0.4237

10

- (b) What do you mean by dummy activities ? Explain with suitable example. 4
9. (a) Describe fundamental purpose of control. 5
(b) With the help of block diagram. Explain three types of cybernatic control system with specific use of each. 8

OR

10. (a) What are desirable attributes in project management software. What errors are encountered in managing PMIS software ? 6

(b) What are criteria a for effective project control. 7

11. (a) Discuss the methodology of appraisal of project proposal in detail. 7

(b) What is cost escalations ? What are the factors are responsible for project cost escatations. 6

OR

12. (a) What is project audit ? Why is it done ? What are its benefits ? 7

(b) What are project proposals ? How it is prepared ? 6



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