

**Mechanical/Automobile**

Q.P.Code: 018194

30/05/2017

(CBGS)  
(3 Hours)

[Total Marks 80]

**N.B.:**

- (1) Question No.1 is compulsory
- (2) Attempt any three questions out of remaining five questions
- (3) Figures to right indicate full marks
- (4) Assume suitable data if necessary.
- (5) Notations carry usual meaning.

Q.1 Write short notes on the following (Any four)

- i) Need of Project Management
- ii) Work break down structure
- iii) Concurrent Engineering
- iv) Risk management
- v) Goldratt's critical chain method

Q.2 (A) Following are the manpower requirements for each activity in a project

Activity	Normal time	Man power Required
0-1	2	4
1-2	3	3
1-3	4	3
2-4	2	5
3-5	4	3
3-6	3	4
4-7	6	3
5-7	6	6
6-8	5	2
7-9	4	2
8-9	4	9

- a) Draw the network diagram of the project activities
- b) Rearrange the activities suitably for reducing the existing total man power requirement.

(B) What is a Project Portfolio Process? Explain different steps involved in this.

Q.3(A) What are four stages of team development and growth? What are advantages of effective team? What are barriers to team effectiveness?

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- (B) What are the numeric models of project selection? Explain in brief. 05
- (C) What are the different ways of Closing a Project? 05

Q.4 (A) Swanson Industries has four potential projects all with an initial cost of 2,000,000. The capital budget for the year will only allow Swanson industries to accept one of the four projects. Given the discount rates and the future cash flows of each project, which project should they accept using NPV method. 10

Cash Flows	Project A	Project B	Project C	Project D
First Year	500000	600000	1000000	300000
Second Year	500000	600000	800000	500000
Third Year	500000	600000	600000	700000
Fourth Year	500000	600000	400000	900000
Fifth Year	500000	600000	200000	1100000
Discount Rate	6%	9%	15%	22%

- (B) Draw an Earned value chart and describe the three variances of it and explain their significance. 10
- Q.5(A) Compare the top down budgeting and bottoms up budgeting in project planning. 05
- (B) How communication is planned and managed in project management. 10
- (C) Explain how a project is monitored and controlled for project execution. 05
- Q.6 (A) Explain project management template with a sample template sheet. 08
- (B) Explain various project estimation and scheduling techniques. 06
- (C) A consulting project has an actual cost of Rs 50000, Scheduled cost Rs 42000, and value of completed work of Rs 46000. 06

Find the Schedule and Cost Variance Also Find SPI and CPI