

## Mechanical/Automobile

Q.P. Code : 727203

(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.

1. Write short notes on the following (Any four): 20  
 i) Goldratt's critical chain method  
 ii) Work break down structure  
 iii) Role of Project manager  
 iv) Risk management  
 v) Concurrent Engineering
2. (a) A small project is composed of 8 activities whose time estimates are listed below : 10

Activity	Predecessor	$t_o$	$t_m$	$t_p$
A	-	3	6	9
B	-	5	7	8
C	A	6	9	12
D	A	6	12	15
E	B	9	12	18
F	B	12	18	24
G	C, D, E	6	9	12
H	C	3	6	9

Draw the project network diagram. Find the critical path and expected projected duration.

- i) If the due date is 30 days . What is the probability that the project will be completed within the due date. ii) What is the probability of completing project between 26 to 31 days

- (b) What are the numeric models of project selection? Explain in brief. 05  
 (c) Explain how a project is monitored and controlled for project execution. 05

(TURN OVER)

3. (a) What are four stages of team development and growth? What are advantages of effective team? What are barriers to team effectiveness? 10
- (b) What is a Project Portfolio Process? Explain different steps involved in this. 10
4. (a) What is the internal rate of return of an investment which involves a current outlay of Rs.300,000 and results in an annual cash inflow of Rs.60000 for 7 years? 05
- (b) What are the different ways of Closing a Project? 05
- (c) Explain various project estimation and scheduling techniques. 10
5. (a) Draw an Earned value chart and describe the three variances of it and explain their significance. 05
- (b) How communication is planned and managed in project management. 10
- (c) A consulting project has an actual cost of Rs.45000, Scheduled cost Rs.35000, and value of completed work of Rs.40000. Find the Schedule and Cost Variance Also Find SPI and CPI 05
6. (a) Explain project management template with a sample template sheet. 10
- (b) Compare the top down budgeting and bottoms up budgeting in project planning. 10

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