Seat No. | | | | | | |

मंगल - 006

Construction & Project Management

P. Pages : 2

Time : Three Hours **Max. Marks : 100**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any five** questions.
5. Assume suitable data if required.
6. Figures to right indicate full marks.
7. Use of pocket calculator is allowed.
8. Use of probability table is allowed.

1. a) Explain Fayol's 14 principles of management with examples from a construction project. **14**

b) When CPM is used and when PERT is used ? Explain. **6**

2. Determine the project duration, total float and free floats based on the following data. **20**

Activity (Dur)	Depends on	Activity (Dur)	Depends on
A (5)	--	L (6)	F and K
B (8)	--	M (4)	A, G, H
C (16)	--	N (5)	A, G, H
E (9)	B	P (8)	C
F (10)	A	R (9)	F and K
G (3)	B	S (6)	R, L, M
H (5)	E	T (4)	N and P
K (7)	A and G	W (12)	F and K

Duration is in days for each activity.

3. Explain roles and responsibilities of **20**

i) Site Engineer

ii) Project Manager

iii) General Manager

iv) Board of Directors

for a contracting construction company working on a road project.

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4. a) Explain NPV as an investment appraisal criteria and discuss its advantages, limitations. **10**

b) Explain any 5 types of construction defects with examples. **10**

5. Determine the project mean duration, the probability of completing the project in 42 days or less and show all the slack values for the following data. **20**

Activity	Duration (days)			Depends on
	Optimistic	Most likely	Pessimistic	
A	3	5	8	--
B	5	6	10	A
C	2	4	5	A
E	2	5	6	B, C
F	6	10	12	C
G	4	6	8	B
H	3	6	10	E, F
K	7	9	11	F, G
L	4	5	8	H, K

6. Discuss with examples :

i) Management by Objectives **5**

ii) 360° Appraisal System. **5**

iii) Rankine system of job evaluation. **5**

iv) Factor comparision method. **5**

7. a) Differentiate between quality control, quality assurance and total quality management with examples. **10**

b) Explain how to determine **10**

i) Weighted mean

ii) Standard deviation

iii) Variance

iv) C.V.

v) Range, in case of test samples.

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