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**UNIVERSITY OF PETROLEUM & ENERGY STUDIES
DEHRADUN**

End Semester Examination – May, 2018

Program/Course: M. Tech. (PLE) Semester : II
Subject: Project Management & Contract Administration Max. Marks : 100
Code : LSCM 8001 Duration : 3 Hrs.
No. of pages: 02

Note: Use of Calculators & Graph papers is allowed.

SECTION – A

Answer any six (06) questions. Each carries 10 marks.

1. What are the different phases of project life cycle? Explain its features.
2. Describe various types of competencies required by project managers.
3. Give an account of projects in India. What are the causes of their failure?
4. Briefly discuss non-financial aspects covered in business case analysis of a project.
5. What is a contract and mention its various types? Explain any one type of contract.
6. Who are project stakeholders? How project stakeholders are managed?
7. A project with budget of Rs.1 Lakhs. planned to be completed in 10 months. The reported values (in INR) for the project at the end of 4th month are as follows:

Planned Cost	Earned Value	Actual Cost
30000	14000	21000

- (a) Calculate Cost Variance, Schedule Variance, CPI & SPI at the end of 4th week.
- (b) Estimate the expected cost and time of project completion at this efficiency.

SECTION –B

Answer any two (02) questions. Each carries 20 marks.

8. Define project as per PMI and brief PMBOK. What are the various process groups and knowledge areas in context of project management?
9. Mr. Kapoor is building a house in Mussorie. It is a wooden house with a slanted tiled roof. The size of the house is 3000 sq. feet, and will cost Rs. 1000 per sq. foot

(including the plot and the construction).The activities in building the house, the precedence, the durations and the percentage of total cost are given below.

ACTIVITY ID	DESCRIPTION	PRECEDENCE	DURATION (WEEKS)	%AGE OF TOTAL COST
A	Excavation and framing	-	4	24
B	Roof and Fireplace	A	3	8
C	Wiring roughed in	A	1	3
D	Plumbing roughed in	B,C	2	6
E	Siding on	D	2	5
F	Windows, insulation, walls, plaster and garage	E	8	17
G	Furnace	B	1	9
H	Plumbing fixtures installed	D	2	4
J	Exterior paint, light fixtures, hardware installed	F,G,H	6	10
K	Floors laid and finished	H	4	6
L	Carpet and trim installed	K	1	4
M	Interior decoration	J,L	2	4

Draw the network, plan the construction with a Gantt chart, and draw the time-phased cumulative cost curve for this project.

10. Consider the data of a project shown in the following table.

Activity	Immediate predecessor(s)	Time (weeks)		Cost (Rs.)	
		Normal	Crash	Normal	Crash
A	-	8	5	2000	2300
B	-	10	8	4000	4300
C	A	6	5	3000	3125
D	A	9	6	5000	5225
E	B	10	9	2500	2700
F	B	13	13	5000	-
G	E	5	3	1000	1700

If the indirect cost per week is Rs. 300, find the optimal crashed project completion time.
