Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

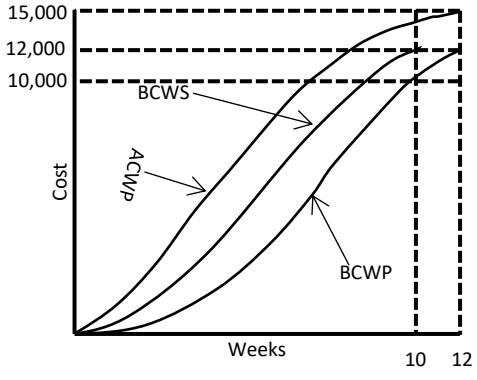
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Term Examination, May 2021

Course: **Project and Contract Management.** **Semester: II**
Program: **MBA. LSCM** **Time: 03 Hours**
Course code: **LSCM 8001** **Max. Marks: 100**

SECTION A(30 Marks)

1. Each Question carries 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

		CO
Q 1	The NPV of a project is Rs 60,000/-. If the present value of all cash inflows is Rs 1,00,000/-, the profitability index will be a. 2 b. 1.5 c. 2.5 d. None of above	**CO 2**
Q 2	A task has been completed 30% against scheduled 50%. The budgeted cost of task is Rs 5000. Amount actually spent is Rs 2000. CPI is a. 0.6 b. 1.0 c. 1.25 d. 0.75	**CO 2**
Q 3	In PERT analysis, the standard deviation of critical activities of a project are 3, 4, 5, 5 and 5 respectively, the standard deviation of project completion will be a. 24 b. 15 c. 10 d. 5.5	**CO 1**
Q 4	When time duration of an activity is deterministic we apply _____ , and when it is probabilistic we apply ---------- in project execution analysis.	**CO 1**
Q 5	If BCWP is less than BCWS a. The project is cost overrun b. The project is cost underrun	**CO 1**

<table>
<tr><td></td><td>c. Project is behind schedule
d. Project is ahead of schedule</td><td></td></tr>
<tr><td>Q 6</td><td>In project cost monitoring, the s-curve depicts the relation between:
a. Schedule completion and time.
b. Cumulative value and time.
c. Schedule completion and value resources.
d. resources and time</td><td>CO 2</td></tr>
<tr><td colspan="3">SECTION B (50 Marks)
1. Each question carries 10 marks
2. Instruction: Write short / brief notes</td></tr>
<tr><td>Q 7</td><td>Discuss the various factors considered in Project Selection process. Illustrate with an example</td><td>CO 4</td></tr>
<tr><td>Q8</td><td>A project requires an initial capital investment of Rs. 20,000,000. The capital requirement is met through a financial institution, which charges 11% annual interest rate. The projected annual cash inflows during the project life are:
<table>
<tr><td>Year</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>Cash Inflow</td><td>30,00,000</td><td>50,00,000</td><td>80,00,000</td><td>50,00,000</td><td>25,00,000</td></tr>
</table>
There is an available opportunity of using intermediate cash inflows into another project, which has an IRR of 15%. The salvage value at the end of project life is Rs. 25, 00,000 that will be available at the end of sixth year only. Calculate the Modified NPV (MNPV) for the project.
Also comment on the financial feasibility of the project</td><td>CO 2</td></tr>
<tr><td>Q9</td><td>What do you understand by Valid Contract? Discuss the tendering process in contracting with suitable example.</td><td>CO 4</td></tr>
<tr><td>Q10</td><td>Consider the above set of S curves for a project. Determine CPI, SPI, and critical ratio at week 10 and at project completion
 
</td><td>CO 3</td></tr>
</table>

Q 11	A road and a bridge is constructed to connect a group of villages to national highway. Earlier the villagers have to cross the river by boat. Discuss the social cost benefit analysis in undertaking this project. Make reasonable assumptions.	**CO 4**

Section C (20 Marks)

1. Each Question carries 20 Marks.
2. Instruction: Attempt only one question.

Q 12

QUESTION A: For the project activities given in the table below

i. Draw the network diagram
ii. Find the critical path and the normal project completion time
iii. What will be the normal project completion cost?
iv. If we want to complete the project in 20 days, what will be the new project completion cost?

Activity	Preceding Activity	Normal Time (Days)	Crash Time (Days)	Normal Cost (Rs. '000)	Crash Cost (Rs. '000)
A	-	11	8	80	105
B	-	7	5	180	250
C	B	9	6	200	320
D	A,C	10	7	350	530

OR

QUESTION B: The data of a project which consists of 7 activities are shown in following table:

Activity	**A**	**B**	**C**	**D**	**E**	**F**	**G**
Duration (in weeks)	5	5	5	6	6	6	6
Manpower Requirement	50	30	20	15	25	25	35
Predecessors	-	-	A	B	C	C	E, F

i.Find the critical path and the corresponding project completion time.
ii.Apply resource-levelling technique and obtain the smoothed manpower requirements of the project, which minimizes the peak manpower requirement.

CO 3