

Name: Enrolment No:	
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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2023

Course: Project Management & Contract Administration	Semester: III
Program: MBA (ALL)	Time: 03 Hrs.
Course Code: LSCM 8001	Max. Marks: 100

Instructions: Usage of calculator and graph paper allowed.

SECTION A
10Qx2M= 20 Marks

S. No.		Marks	CO
Q 1	<i>Fill in the blanks. Each blank carries 2 marks.</i>		
1.1	A project is a series of _____ directed to accomplishment of a desired objective.	2	CO1
1.2	AACE stands for _____.	2	CO1
1.3	The critical activities in a project network have _____ slack time.	2	CO1
1.4	According to PMBOK, there are total _____ process groups.	2	CO1
1.5	A _____ is an agreement between two or more parties that is binding on all the parties.	2	CO1
1.6	The activities are shown as _____ bars in Gantt chart.	2	CO1
1.7	_____ plays a significant role in developing the initial scope statement and the project charter. (Choose the correct option: Project Sponsor / Project Manager)	2	CO1
1.8	_____ Reserves are not included in the project budget. (Choose the correct option: Management / Contingency)	2	CO1
1.9	If cost of capital = IRR, then Net Present Value = _____.	2	CO1
1.10	The expected project completion time is 27 weeks; the probability of being completed in 26 weeks will be _____ than 0.5.	2	CO1

SECTION B
4Qx5M= 20 Marks

2.1	Demarcate various stages of project life cycle with the help of a labelled diagram.	5	CO2
2.2	Classify various methods of project financial evaluation and their applicability	5	CO2
2.3	Differentiate between direct costs & indirect costs in context of projects.	5	CO2
2.4	Compare and contrast Fixed Price contracts and Cost Reimbursable contracts.	5	CO2

SECTION-C
3Qx10M= 30 Marks

3.1	How can we ensure project quality? Explain the process of project quality management.	10	CO3																					
3.2	Discuss the contribution project management knowledge in the economic development of a country. Giving brief scenario of project status in various sectors throw light on the major causes of project failure in India	10	CO3																					
3.3	The future cash flows of two projects are as given. Determine the payback period and NPV of the following projects and compare them according to each criterion. The cost of capital is 12% per annum. (All figures in in Rs. Crores)	10	CO3																					
	<table border="1"> <thead> <tr> <th>Project</th> <th>Investment</th> <th>Year 1</th> <th>Year 2</th> <th>Year 3</th> <th>Year 4</th> <th>Year 5</th> </tr> </thead> <tbody> <tr> <td>Alpha</td> <td align="center">500</td> <td align="center">200</td> <td align="center">150</td> <td align="center">150</td> <td align="center">150</td> <td align="center">150</td> </tr> <tr> <td>Beta</td> <td align="center">500</td> <td align="center">250</td> <td align="center">250</td> <td align="center">100</td> <td align="center">75</td> <td align="center">50</td> </tr> </tbody> </table>			Project	Investment	Year 1	Year 2	Year 3	Year 4	Year 5	Alpha	500	200	150	150	150	150	Beta	500	250	250	100	75	50
Project	Investment			Year 1	Year 2	Year 3	Year 4	Year 5																
Alpha	500			200	150	150	150	150																
Beta	500	250	250	100	75	50																		

SECTION-D
2Qx15M = 30 Marks

4.1	Consider the data of a project shown in the following table:	15	CO4																																										
	<table border="1"> <thead> <tr> <th>Activity</th> <th>Immediate Predecessors</th> <th>Duration (in Weeks)</th> <th>Budget Cost of Activity (Rs. Lakhs)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td align="center">-</td> <td align="center">8</td> <td align="center">8</td> </tr> <tr> <td>B</td> <td align="center">-</td> <td align="center">2</td> <td align="center">8</td> </tr> <tr> <td>C</td> <td align="center">B</td> <td align="center">5</td> <td align="center">10</td> </tr> <tr> <td>D</td> <td align="center">C</td> <td align="center">6</td> <td align="center">9</td> </tr> <tr> <td>E</td> <td align="center">A</td> <td align="center">4</td> <td align="center">12</td> </tr> <tr> <td>F</td> <td align="center">D,E</td> <td align="center">4</td> <td align="center">6</td> </tr> <tr> <td>G</td> <td align="center">D,E</td> <td align="center">1</td> <td align="center">1</td> </tr> <tr> <td>H</td> <td align="center">F</td> <td align="center">3</td> <td align="center">6</td> </tr> <tr> <td>Project</td> <td></td> <td></td> <td align="center">60</td> </tr> </tbody> </table>			Activity	Immediate Predecessors	Duration (in Weeks)	Budget Cost of Activity (Rs. Lakhs)	A	-	8	8	B	-	2	8	C	B	5	10	D	C	6	9	E	A	4	12	F	D,E	4	6	G	D,E	1	1	H	F	3	6	Project			60		
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A	-			8	8																																								
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E	A	4	12																																										
F	D,E	4	6																																										
G	D,E	1	1																																										
H	F	3	6																																										
Project			60																																										
	(i) Draw the network diagram and find critical path. (ii) Draw the Gantt chart showing cost break-up. (iii) Prepare the cumulative cost curve.																																												
4.2	The progress status report of the same project at the end of given weeks is as follows:	15	CO4																																										
	<table border="1"> <thead> <tr> <th>Activity</th> <th>% Work Completed</th> <th>Actual cost</th> <th>Activity</th> <th>% Work Completed</th> <th>Actual cost</th> </tr> </thead> <tbody> <tr> <td align="center" colspan="3">End of Week 5</td> <td align="center" colspan="3">End of Week 20</td> </tr> <tr> <td align="center">A</td> <td align="center">50</td> <td align="center">5</td> <td align="center">A</td> <td align="center">100</td> <td align="center">10</td> </tr> <tr> <td align="center">B</td> <td align="center">100</td> <td align="center">10</td> <td align="center">B</td> <td align="center">100</td> <td align="center">10</td> </tr> <tr> <td align="center">C</td> <td align="center">20</td> <td align="center">2</td> <td align="center">C</td> <td align="center">100</td> <td align="center">12</td> </tr> <tr> <td align="center">Others</td> <td align="center">0</td> <td align="center">0</td> <td align="center">D</td> <td align="center">100</td> <td align="center">11</td> </tr> <tr> <td align="center" colspan="3">End of Week 10</td> <td align="center">E</td> <td align="center">100</td> <td align="center">15</td> </tr> </tbody> </table>			Activity	% Work Completed	Actual cost	Activity	% Work Completed	Actual cost	End of Week 5			End of Week 20			A	50	5	A	100	10	B	100	10	B	100	10	C	20	2	C	100	12	Others	0	0	D	100	11	End of Week 10			E	100	15
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Others	0	0	D	100	11																																								
End of Week 10			E	100	15																																								

A	100	10
B	100	10
C	100	12
D	20	2
Others	0	0
End of Week 15		
A	100	10
B	100	10
C	100	12
D	100	11
E	100	15
Others	0	0

F	100	8
G	100	2
H	0	0
End of Week 22		
A	100	10
B	100	10
C	100	12
D	100	11
E	100	15
F	100	8
G	100	2
H	100	7

- (i) Compute the Cost Variance at 5th, 10th, 15th, 20th & 22nd week and the Schedule Variance at 5th, 10th, 15th & 20th week.
- (ii) Estimate cost at completion and time to completion on the basis of 5th, 10th, 15th & 20th week status.
- (iii) Comment upon the effectiveness of the project monitoring system based on the changes in the above indicators over time.