

<b>Name:</b>	 <b>UPES</b> UNIVERSITY WITH A PURPOSE
<b>Enrolment No:</b>	

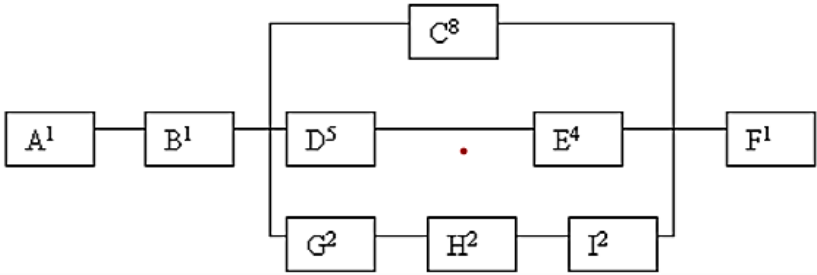
**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2019**

**Course: Financing Infrastructure Projects**  
**Program: MBA (General Finance)**  
**Course code: FINC 8012**  
**Instructions: Attempt all the questions**

**Semester: III**  
**Time: 3 Hours**  
**Max. Marks: 100**

**SECTION A**

**(10 \* 2 Marks Each - 20 Marks)**

1.	<b>Choose the best answers</b>	
a)	The span of time within which the investment made for the project will be recovered by the net returns of the project is known as a) Period of return   b) Payback period   c) Return on investment   d) Span of return	<b>CO2</b>
b)	Stock selling price is \$45, an expected dividend is \$10 and an expected growth rate is 8% then cost of equity would be? a) 55   b) 53   c) 3.6   d) 0.302	<b>CO4</b>
c)	Project Management will also be involved in making choices that require balancing in Goals of the project as well as? a) Goals of the resources   b) Goals of the firm   c) Goals of the team   d) Both A and B	<b>CO1</b>
d)	Identify the financial instruments which is not belongs to money market. a) Treasury Bills   b) Certificate of deposit   c) Commercial paper   d) Bonds	<b>CO2</b>
e)	which is a long-term risk finance in high technology projects that involve risk but at same time has strong potential for growth. a) Hedge fund   b) Leasing   c) Venture Capital   d) Debenture	<b>CO4</b>
f)	 <p>What is the critical path through the network above?  a) ABDEF   b) ABGHIF &amp; ABDEF   c) ABCF   d) ABGHIF</p>	<b>CO3</b>
g)	National Aluminum company Ltd. (NALCO) is an example for ----- diversification company?	<b>CO1</b>

	a) Mergers and acquisitions b) Utilities for Captive use c) Forward integration d) Concentric diversification	
h)	In cash flow estimation, depreciation shelters company's income from  a) Expansion b) Salvages c) Taxation d) Discounts	<b>CO2</b>
i)	With limited finance and a number of project proposals at hand, select that package of projects which has  a) The maximum net present value b) Internal rate of return is less than cost of capital  c) Profitability index is greater than unity d) Modified rate of return	<b>CO2</b>
j)	Project Management is ideally suited for a business environment requiring all of the following except?  a) Flexibility b) Innovation c) Speed d) Repetition	<b>CO1</b>

**SECTION B**

**(4\* 5 Marks Each -20 Marks)**

2.	<p>Compute Weighted Average Cost of Capital (WACC) for the following capital Structure of XYZ Ltd.:</p> <table border="1"> <thead> <tr> <th>Source of finance</th> <th>Amount (Rs.)</th> <th>Specific cost (after tax)</th> </tr> </thead> <tbody> <tr> <td>Equity share capital</td> <td>14,00,000</td> <td>9</td> </tr> <tr> <td>10% Preference share capital</td> <td>8,00,000</td> <td>12</td> </tr> <tr> <td>8% Debentures</td> <td>9,00,000</td> <td>16</td> </tr> </tbody> </table> <p>Assuming that in order to finance an expansion plan, the company intends to borrow a fund of Rs 10,00,000 bearing 14% interest after tax, what will be the revised WACC cost of capital?</p>	Source of finance	Amount (Rs.)	Specific cost (after tax)	Equity share capital	14,00,000	9	10% Preference share capital	8,00,000	12	8% Debentures	9,00,000	16	<b>CO3</b>
Source of finance	Amount (Rs.)	Specific cost (after tax)												
Equity share capital	14,00,000	9												
10% Preference share capital	8,00,000	12												
8% Debentures	9,00,000	16												
3.	Give some reason how infrastructure projects are differed from other projects?	<b>CO1</b>												
4.	List the various functional structure of National Investment and Infrastructure Fund.	<b>CO2</b>												
5.	Ram builders purchased an equipment for construction costing Rs 8,00,000 on hire purchase basis payable in 5 equal year end instalments of Rs 2,75,000 each. Split of the instalments into interest and principal repayments.	<b>CO4</b>												

**SECTION-C**

**(3\* 10 Marks Each- 30 Marks)**

6. ABC Ltd. Is planning to invest in project costing \$ 1,500 million. The following are the expected cash flows along with probabilities for 3 periods

Period 1		Period 2		Period 3	
Cash flow (\$)	Probability	Cash flow (\$)	Probability	Cash flow (\$)	Probability
1,500	0.1	2,200	0.3	1,500	0.15
1,000	0.2	2,300	0.3	2,500	0.35
2,000	0.3	1,200	0.2	2,500	0.35
2,200	0.4	2,100	0.2	200	0.15

**CO1**

Rank the projects based on Risk and Return using co-efficient of variation

7. Briefly discuss the risk management process and strategies for risk mitigation?

**CO4**

8. Compare 3 mutual exclusive projects of the company which has the investable funds of Rs 10,00,000 suggest which project should select for investment using RADR.

Cash flows associated with the projects are follows:

Years	Project A	Project B	Project C
0	(5,00,000)	(5,00,000)	(5,00,000)
1	3,75,000	40,000	1,30,000
2	1,25,000	60,000	1,90,000
3	95,000	1,30,000	2,20,000
4	2,25,000	1,50,000	30,000
5	-	1,90,000	10,000

**CO2**

Payback period	RADR
Upto 2 years	8%
2-4 years	10%
Above 4 years	15%

**SECTION-D**

**(30 Marks)**

9. Dam constructing project has a list of tasks to be performed whose time estimates are given in the Table as follows.

**CO3**

Activity i j	Activity Name	T <sub>0</sub>	t <sub>m</sub> (in days)	t <sub>p</sub>
1-2	A	4	6	8
1-3	B	2	3	10
1-4	C	6	8	16
2-4	D	1	2	3
3-4	E	6	7	8
3-5	F	6	7	14
4-6	G	3	5	7
4-7	H	4	11	12
5-7	I	2	4	6
6-7	J	2	9	10

- Draw the project network and find the duration, mean, and variance.
- Find the critical path.
- Find the probability that the project will be complete in 19 days. If the probability is less than 20%, find the probability of completing it in 24 days.

### Present values table

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386

