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

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2020 (ONLINE MODE)

Course: ENERGY SECTOR PROJECT FINANCING — **Semester: Third**
Program: MA-ENERGY ECONOMICS — **Time : 3 hrs**
Course Code: FINC-8007 — **Max. Marks: 100**

Instructions:

1. The student must write his/her name and enrolment no. in the space designated above.
2. The questions have to be answered as per the instructions given in the respective sections.

SECTION –A

1. **Each Question will carry 5 Marks**
2. **Instruction: Select the correct answer(s)**

S. No.		CO
Q1	Which among is not the technique of Capital Budgeting? 1. Payback Period 2. Net Present Value 3. Current Ratio 4. Profitability Index	**CO1**
Q2	If the risk free rate of return equals the 10 per cent; the firm's beta equals 1.50 and the return on the market portfolio equals 12.5 percent. Compute the cost of equity capital: 1. 13.75% 2. 14.75% 3. 15.75% 4. 15.50%	**CO1**

	Sol. Ke = 10% + (1.5 * (12.5% -10%)) = 10 % + 3.75% = 13.75	
Q3	Production Sharing Contract include: 1. Cost Oil and Profit Oil 2. Royalty, VAT, Cost Oil and Profit Oil 3. Profit Oil Only 4. Cost Oil Only	**CO1**
Q4	A company has 10 percent perpetual debt of Rs 1,00,000. The tax rate is 35 per cent. Determiner the cost of capital (before tax as well as after tax) assuming the debt is issued at par. 1. 9% & 7% 2. 10% & 6.5% 3. 7% & 9% 4. 8% & 9%	**CO1**
Q5	Beta measures 1. Unsystematic risk 2. Systematic risk 3. Both 4. None of them	**CO1**
Q6	Suppose that dividend per share ofa firm is expected to be Rs 1 per share next year and is expected to grow at 6 per cent year perpetually. Determine the cost of equity: 1. 10 percent 2. 11 percent 3. 12 percent 4. 13 percent	**CO1**

SECTION – B

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

S. No.		CO
Q1	Contrast the IRR and NPV methods. In which circumstances these methods give contradictory results, and also recommend that which criteria should be used to select the project and why?	**CO2**
Q2	What is the sensitivity approach for dealing with project risk?	**CO2**
Q3	Discuss the non-recourse financing and what is the relevance of this tool in Energy Sector	**CO2**
Q4	M/S Satender limited is considering purchasing a new machinery which will carry out operation which are carried on by labor, they have two options at hand Machine A and Machine B, we have to recommend as to which machinery is better by using Pay back and pay back reciprocal method.	**CO3**

Particulars	Machine A	Machine B
Cost of machine	150,000	250,000
Cost of indirect material	6,000	8,000
Saving in scrap	10,000	15,000

Additional cost of maintenance	19,000	27,000
Savings in wages	90,000	120,000
Life of machinery	5 yrs	6 yrs

Taxation to be regarded as 50% of profits. Ignore depreciation for calculation of tax.

Q5

Q.1 There is a capital constraint of Rs. 10,000 in the initial period. The two projects available for investment are project B and C. The cash flows, NPVs at 10 per cent and profitability index are:

Cash Flow					
	0	1	2	Net Present Values	Profitability Index
Project B	-1	22	-12.1	9	10
Project C	-5	44	-24.2	15	4

Which is the better project?

CO3

SECTION –C

1. Each question will carry 20 marks
2. Instruction: Write Long Answer

Assume that Tyler Co. is involved in Petroleum Operation in Trinidad. Tyler has 49% Working Interest (WI) while Local Oil Company has 51% WI.

Annual Gross production is to be split in the following order:

1. Royalty is 15% of annual gross production and is to be paid in kind.
2. VAT is equal to 5% of annual gross production and is to be paid in kind.
3. Cost Oil is limited to 60% of gross production, with costs to be recovered in the following order:
    i. Operating expenses
    ii. Exploration Cost (Paid entirely by Co.)
    iii. Development Cost (49 % by Co. and 51% by local oil co.)
4. Any excess remaining after cost recovery becomes profit oil:
    i. The government receives 12% of the profit oil.
    ii. the remainder split between the co and local oil company based on their WI

For 2015 assume the following:

- Recoverable Operating cost total $7,000,000
- Exploration cost (unrecovered to date) total 70,000,000.
- Development Cost (unrecovered to date) total 700,000,000.
- Any cost not recovered in the current year may be carried forward to be recovered in future years.
- The gross production for the year is 4,000,000 bbl of oil.
- The agreed up price is $ 70/bbl.

Prepare the Crude Oil Production Sharing to Parties Statement.

CO4