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

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester and Supplementary Examination, May 2021 (ONLINE MODE)

Course: ECONOMICS & LIFE CYCLE CONCEPTS **Semester: EIGHT**
Program: BTECH-ADE **Time : 3 hrs**
Course Code: MEAD – 4006P **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	Prime Cost includes 1. Direct Material Cost + Direct Labor Cost + Direct Expenses 2. Direct Material Cost + Direct Labor Cost 3. Direct Material Cost + Direct Expenses 4. Direct Labor Cost + Direct Expenses	**CO1**
Q2	Which of the following is not the characteristics of derived demand 1. Recurring Nature 2. Exhaustive in nature 3. Similar to direct demand 4. All of the above	**CO1**
Q3	A person deposits a sum of Rs. 20,000 at the rate of 18% compounded annually for 10 years. Find out maturity value after 10 years (If F/P, 18%, 10) = 5.234	**CO1**

	1. Rs 1,04,680 2. Rs 1,05, 680 3. Rs 1,06, 680 4. Rs 1,07, 680	
Q4	If SPV's efficiency can be increased 1% from the existing efficiency, it will improve electricity generation from solar panels as a result, which of the following parameters will be affected: 1. Revenue will increase 2. BEP will decrease 3. ROI will increase 4. All of the Above	**CO1**
Q5	The total cost which is the sum of the preventive and break down maintenance cost; varies with an increase in the level of maintenance: 1. Initially decreases 2. Initially increases 3. Remains Constant 4. None of them	**CO1**
Q6	A Company has purchased an equipment whose first cost is Rs. 1, 00,000 with an estimated salvage value of the equipment, at the end of its lifetime is Rs. 20,000. Determine the depreciation charge using straight line method 1. 11,000 2. 10,000 3. 10,500 4. 11,500	**CO1**

SECTION – B

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

S. No.		**CO**
Q1	Illustrate the effect of Price on demand and supply; illustrate with the help of a diagram.	**CO2**
Q2	Discuss the impact of inflation on investment decision.	**CO2**
Q3	Define Break-Even Point. Draw a Break-Even Chart and its components.	**CO2**
Q4	Explain the steps in the process planning. Or In the design of buildings to be constructed in Alpha State, the designer is considering the type of window frame to specify. Either steel or aluminium window frames will satisfy the design criteria. Because of the remote location of the building site and lack of building material in Alpha state, the window frames will be purchased in Beta State and transported for a distance of 2,500 km to the site. The price of window frames of the type required is Rs. 1,000 each for steel frames and Rs. 1500 each for aluminium frames. The weight of steel window frames is 75 kg. each and that of aluminium window frame is 28 kg each. The shipping rate is Re. per kg 100 km. which design should be specified and what is the economic advantage of the selection?	**CO3**
Q5	(A) Consider question 6, section A, and demonstrate the calculations of the declining balance method of depreciation by assuming 0.2 for K (a fixed percentage). (B) A Company is trying to diversify its business in a new product line. The life of the project is 10 years with no salvage value at the end of its life. The initial outlay of the	**CO4**

project is Rs. 20, 00,000. The annual net profit is Rs. 3, 50,000. Find the rate of return for the new business.
Table Value (P/A, 10%, 10) = 6.1446
(P/A, 12%,10) = 5.6502

SECTION –C

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

(A) What are the approaches available for make or buy decisions? Explain any one of them with a suitable example.
(B) There are three alternatives available to meet the demand of a particular product. They are as follows:

(a) Manufacturing the product by using process A
(b) Manufacturing the product by using process B
(c) Buying the product

Cost Elements	Manufacturing the product by using process A	Manufacturing the product by using process B	Buy
Fixed Cost/year (Rs.)	5,00,000	6,00,000	
Variable/unit (Rs.)	175	150	
Purchase price/unit (Rs.)			125

The annual demand of the product is 8,000 units. Should the company make the product using process A or process B or buy it?

CO5