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

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Course: Petroleum Engineering Economics **Semester: VIII**
Program B. Tech: APE (Gas) **Time: 03 hrs**
Course Code: CHGS 3015 **Max. Marks: 100**

SECTION A

1. **All questions are compulsory**
2. **Each question carries 5 marks**
3. **Assume suitable and necessary data if required and Justify**

Q 1	Income statement also known as a. Profit & Loss statement b. Earnings statement c. Balance sheet d. Operations statement	**5**	**CO1**
Q 2	Current Assets on the Assets side of balance sheet includes a. Cash in hand b. Stock c. Sundry Debtors d. All the above	**5**	**CO1**
Q 3	An asset has an initial value of ₹10,000, service life of 10 years and salvage value of ₹2,000. What is the annual depreciation cost (use straight-line depreciation) a. ₹1,000 b. ₹1,200 c. ₹200 d. ₹ 800	**5**	**CO2**
Q 4	If the cost of a shell and tube heat exchanger of A m^2 is $ x, then the cost of two numbers of shell and tube heat exchangers of A/2 m^2 each will be about a. $ 3x/4 b. $ x c. $ 4x/3	**5**	**CO2**

	d. $ 5x/3		
Q 5	An oil company expects a cash flow of $800,000 by the end of 10 years and 10% is the current interest rate on money. The NPV of this project is a. $ 208,000 b. $ 308,000 c. $ 408,000 d. $ 108,000	**5**	**CO3**
Q 6	The purchase order lead time is multiplied to the number of units sold per unit of time to get a. Reorder Point b. Carrying Cost c. EOQ d. Ordering Cost	**5**	**CO4**
	SECTION B **1. All questions are compulsory** **2. Each question carries 10 marks** **3. Assume suitable and necessary data if required and justify**		
Q 7	Distinguish between technical efficiency and economic efficiency with suitable examples	**10**	**CO1**
Q 8	Discuss the uses and limitations of financial ratios	**10**	**CO2**
Q 9	A process plant making 5000 kg/day of a product selling for $1.75 per kg has annual variable production costs of $2 million at 100 percent capacity and other fixed costs of $700,000. What is the fixed cost per kilogram at the break-even point? If the selling price of the product is increased by 10 percent, what is the dollar increase in net profit at full capacity if the income tax rate is 35 percent of gross earnings?	**10**	**CO3**
Q 10	Four different heat exchangers have been designed. The savings and costs associated with each are given below. The minimum acceptable annual rate of return (ROI) by management is 10% .Which design is to be recommended?	**10**	**CO3**

	HEx-1	HEx-2	HEx-3	HEx-4
Capital Investment($)	10,000	16,000	20,000	26,000
life time	5	5	5	5
Avg. Depreciation	2000	3200	4000	5200
Avg.Operational Cost	100	100	100	100
Revenue ($/Yr)	4100	6000	6900	8850

Q 11	Discuss in detail the causes and consequences of Bullwhip Effect. Explain the strategies to combat this effect	**10**	**CO4**

SECTION C

1. **Answer any one Question**
2. **Each Question carries 20 Marks.**
3. **Assume Suitable and necessary data if required and Justify**

Q 12

What does Gross Refinery Margin (GRM) mean? Discuss the factors that determine the profitability of a refinery. **10**

Explain in detail the Government policy on petroleum product pricing **10**

OR

What are the main functions of inventory? List and explain different types of costs in inventory system **10**

A company lacks sufficient personnel in its inventory supply section to closely control each item stocked. The sample from the inventory records is as below. Develop an ABC classification for these 10 items **10**

CO4

Item	Avg.Montly Demand	Price Per Unit($)
1	700	6
2	200	4
3	2000	12
4	1100	20
5	4000	21
6	100	10
7	3000	2
8	2500	1
9	500	10
10	1000	2

END