

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**End Semester Examination – Dec- 2022**

**Program: MBA Oil & GAS**  
**Course: Fundamentals of Petroleum Exploration**  
**Course Code: OGOG 7009**

**Semester: I**  
**Max. Marks: 100**  
**Duration : 3 Hours**

**SECTION- A**  
**Each Question will carry 2 Marks**

S.No.	Question	
Q.1	Write the full form of the followings, 1. EAGE 2. LWD 3. EMV 4. MEFS	<b>CO1</b>
Q.2	Define a nautical mile.	<b>CO1</b>
Q.3	Continental shelf for mineral reexploration is characterized by sea water depth range up to..... mts	<b>CO1</b>
Q.4	Draw the symbol for each of the following rock type, 1. Siltstone 2. Dolomite 3. Volcanic 4. Coal	<b>CO1</b>
Q.5	Draw the well symbol for each of the following, 1. Injection well 2. Dry well with Oil & Gas shows	<b>CO1</b>
Q.6	Write the unit of the following properties, 1. Magnetic Intensity 2. Bouguer Grvaity	<b>CO1</b>
Q.7	Name the hydrocarbon regulator for the following countries, 1. Venezuela 2. Argentina	<b>CO1</b>

Q.8	In which basins are the following Oil & Gas fields located ? 1. Ravva 2. South Kadi 3. Digboi 4. Bassein	CO1
Q.9	Acoustic Impedance is the product of .....	CO1
Q.10	Define STOIP and GIIP in hydrocarbons volume assessment	CO1

**SECTION- B**

**Each Question will carry 5 Marks**

Q.1	Define the Category- I sedimentary basins in India and name the basins with one oil or gas field in each.	CO2
Q.2	Describe the Geological Time Scale and assign the ages to following geological eras, 1. Cenozoic 2. Mesozoic	CO2
Q.3	Describe the petroleum licensing awards. Describe PSC contracts..	CO2
Q.4	Describe the full life cycle of an oil / gas project.	CO2

**SECTION- C**

**Each Question will carry 10 Marks**

Q.1	Describe 2D and 3D Seismic exploration methods. How Time lapse Seismic (4D) is being used by Industry for monitoring filed production?	CO3
Q.2	Describe the Production Sharing Contract (PSC) and draw an example of the Model PSC contract for Indonesia.	CO3
Q.3	<b>Attempt any one of the two</b> A. Describe the classification of Resource and Reserves of petroleum as per the WPC/SPE/AAPG. Define the deterministic and probabilistic distribution used in their classification.  B. Describe the API classification of petroleum fluids the equation. Describe the API ranges for different crude oil types and for liquid condensates	CO3

**SECTION- D**

**Each Question will carry 15 Marks**

Q.1	Explain the concept of Discounting to calculate the present value of future money. Complete the following discounted cash flow table. Calculate the cumulative cash flow and profitability indicator such as NPV & P/I Ratio.						CO4	
	<b>Year</b>	<b>Net Cash (\$MM)</b>	<b>Cumulative Cash Flow (\$MM)</b>	<b>Discounted Cash Flow at rate...</b>				
				<b>5%</b>	<b>10%</b>	<b>25%</b>		
	1995	-200	-200	-200	-200	-200		
	1996	-80	-280	-267	-254	-224		
	1997	35						
	1998	100						
	1999	130						
	2000	150						
	2001	160						
	2002	140						
	2003	110						
	2004	80						
	2005	50						
Totals	<b>675</b>							
	<b>NPV</b>	-----	-----	-----	-----			
	<b>P/I Ratio</b>	-----	-----	-----	-----			
Q.2	<b>Attempt any one of the followings:</b>						CO4	
	<p>A. Describe the different Economic indicators for evaluating Oil &amp; Gas projects. Describe the EMV and the Decision tree analysis</p> <p>B. Describe the NELP and HELP petroleum licensing policy and their main differences. What is the intent of NDR in promoting the bid rounds. Also explain the DSF policy.</p>							