Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM & ENERGY STUDIES

End Semester Examination – Dec 2023

Program: MBA Oil & GAS **Semester: I**

Course: Fundamentals of Petroleum Exploration **Max. Marks: 100**

Course Code: OGOG 7009 **Duration : 3 Hours**

SECTION- A

Each Question will carry 2 Marks

S.No.	Question	
Q.1	Expand the full form of the followings with one line description. 1. OALP 2. BPRL	**CO1**
Q.2	Fill in the blanks 1. The world first oil well was drilled in.....year and the first oil well in India was drilled in.....year in the state of..... 2. One liter of gas hydrate is equal to.....liters of Methane gas	**CO1**
Q.3	Write the chemical formula of Paraffins.	**CO1**
Q.4	Draw the symbol for each of the following rock type, 1. Siltstone 2. Gypsum-anhydrite	**CO1**
Q.5	Draw the well symbol for each of the following, 1. Injection well 2. Dry wellwith oil shows	**CO1**
Q.6	Define Play based exploration.	**CO1**
Q.7	Name the upstream hydrocarbon regulator for the following countries, 1. Brazil 2. Columbia	**CO1**

Q.8	In which country are the following Oil & Gas fields located ? 1. Ghawar 2. South Kadi	**CO1**
Q.9	Deep water areas are characterized by water depth more than.....mts	**CO1**
Q.10	Define Unconventional Petroleum Resources.....	**CO1**

SECTION- B

Each Question will carry 5 Marks

Q.1	Describe the Geological Time Scale and assign the ages to following geological Eras, 1. Paleozoic 2. Cenozoic	**CO2**
Q.2	Describe Catergory – I sedimentary basins and give examples of 3 bsains in India.	**CO2**
Q.3	What is *farm in –farm out* process in acquisition of mineral rights?	**CO2**
Q.4	Describe crude oil classification types and API gravity. Give the examples of light and heavy crude oil from Indian fileds.	**CO2**

SECTION- C

Each Question will carry 10 Marks

Q.1	Describe the geoscientific methods (Geophysical, geological and geochemical) hydrocarbon exploration. What is the most preferred method for mapping subsurface salt related play?	**CO3**
Q.2	Define Joint operating agreements (JOA) in hydrocarbons contracts. What are the key elements to be considered in framing such agreements	**CO3**
Q.3	Define Concessions and Contracts in Petroleum exploration. Also, describe NELP, HELP and DFS licensing policies.	**CO3**

SECTION- D

Each Question will carry 15 Marks

Q.1	Describe the profitability indicators of oil & gas projects. Explain the concept of Discounting. Complete the following discounted cash flow table. Calculate the cumulative cash flow and profitability indicator such as NPV & P/I Ratio. **Year** **Net Cash ($MM)** **Cumulative Cash Flow ($MM)** **Discounted Cash Flow at rate.... 5% 10% 20%** 1995 -400 -400 -400 -400 -400 1996 -60 -460 -438 -418 -383 1997 35 1998 100 1999 130 2000 150 2001 160 2002 140 2003 110 2004 80 2005 50 Totals **495** **NPV** ------ ------ ------- ------- **P/I Ratio** ----- - ---- ------ ------	**CO4**
Q.2	Select one of the Indian or global petroleum producing basin and analyze in terms of petroleum system, remaining reserves and challenges for future production.	**CO4**