

Roll No: -----

**UNIVERSITY OF PETROLEUM
AND ENERGY STUDIES**

End Semester Examination, April, 2017

Program/course: B. Tech(Geo Science Engineering)

Semester – : Semester 8

Subject: Resource Economics and Risk Mgmt. in Exploration

Max. Marks : 100

Code : PEE0403

Duration : 3 Hrs

No. of page/s:2(Two)

**THIS PAPER CONTAINS 3 (THREE) SECTIONS, ALL THE SECTIONS ARE COMPULSARY
ASSUME ANY MISSING DATA**

SECTION A (20 Marks)

**There are Five (05) questions of 04(Four) marks each all the questions are compulsory
Limit your answer to maximum of 60 words**

Question-1

Indicate suitable approach for oil & gas field Development.

Question-2

What are the basic features and issues related to Technological Schemes?

Question -3

Enlist minimum of 10(ten) steps of initial field development plans that requires critical decisions.

Question-4

Discuss the characteristic features of Final development plan.

Question-5

What are the basic uncertainty factors of the Hydrocarbon Fields?

Section-B(40 Marks)

There are Four (04) questions of 10 (Ten) marks each,all the questions are compulsory

Limit your answer to maximum of 200 words

Question-1

Discuss the techno-economics of a well release proposal.

Question-2

What do you understand by Decision Making Environment? Also a judicious approach for decision making in oil industry may also be described.

Question-3

Enlist the methods that are available to help decision- makers to evaluate the uncertainty and reduce the risk.

Question-4

Discuss the role of decision tree in oil industry together with its Basic Features.

Section –C

There are Two questions of 20 (Twenty) marks each, All the questions are compulsory .

Limit your answer to maximum of 500 words.

Question-1

Discuss the various Elements of Hydrocarbon Resource Management and critically analyze the role of economic principles.

Question-2

Discuss the Historical Prospective, Present and Futuristic Scenario of Oil industry in India with special reference to economic growth.

OR

Describe the salient features of Custom Designed Development Plan.

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SECTION A (20 Marks)

**There are Five (05) questions of 04(Four) marks each all the questions are compulsory
Limit your answer to maximum of 60 words**

Question-1

Enlist objectives of decline curve analysis in economic decision process.

Question-2

Differentiate between the two variables used to describe decline analysis of hydrocarbons and link the same with risk analysis.

Question -3

Enlist minimum of 4(four) Factors that need not to be considered separately in decision making process .

Question-4

Discuss the conditions of applicability of decline curve analysis.

Question-5

What is the basic decline relationship and relate the same with resource Management..

Section-B(40 Marks)

There are Four (04) questions of 10 (Ten) marks each,all the questions are compulsory

Limit your answer to maximum of 200 words

Question-1

“The oil industries / organization defines decision making as an essential process that culminates in an allocation of resources to affect some chosen change. Such decisions are very important from their investment point of view.” Make the suitable comments

Question-2

In context with decision tree analysis , define the following terminologies:

- a) Events b) Out- comes c) Nodes

Question-3

Outline the salient features of Decisions Making in the Oil and Gas Industry with special reference to integrated approach.

Question-4

What are essential Elements of Field Planning? Also discuss the Life Cycle of an Oil & Gas Field, especially the economic aspects of various stages.

Section –C

There are Two questions of 20 (Twenty) marks each, All the questions are compulsory .
Limit your answer to maximum of 500 words.

Question-1

Discuss the elements of Virtual Field Development Plans giving the following aspects:

- (a) Problem Identification**
- (b) Geological aspects**
- (c) Reservoir intricacies**
- (d) Performance Monitoring**
- (e) Economic indices.**

Question-2

Discuss the decision making process in Joint Venture approach in Oil industry. Also describe its impact in economic growth.

OR

- A) Define Decision Cycle. What is its duration and activities?**
- B) Discuss RISK Analysis and Uncertainty in resource management.**