Roll No.												

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

TEST - 1

Even Semester: 2018-19 | **Date**: 06 March 2019

Course Code: PET 319 | **Time**: 1 Hour

Course Name: Oil Field Development and Reservoir Management | **Max Marks**: 40

Programme & Sem: B. Tech. (DE) & VI Sem | **Weightage**: 20%

Instructions:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 3 parts.

(iii) Scientific and Non-programmable calculators are permitted.

Part A

Answer **all** the Questions. **Each** question carries **four** marks. (3Qx4M=12)

1. Who is the current Directorate General of DGH? What are the responsibilities of DGH?
2. Mention the salient features of OALP.
3. ***"Cost of appraisal must be less than the improvement in the value of development which it provide"***-Justify the statement with a suitable example.

Part B

Answer **both** the Questions. **Each** question carries **eight** marks. (2Qx8M=16)

4. Differentiate between NELP and HELP.
5. Which are the reforms taken by GoI during the post NELP era?

Part C

Answer the Question. Question carries **twelve** marks. (1Qx12M=12)

6. Explain in detail about the entire life cycle of an Oil field.

Roll No.												

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

TEST - 2

Even Semester: 2018-19 | **Date**: 16 April 2019

Course Code: PET 319 | **Time**: 1 Hour

Course Name: Oil Field Development and Reservoir Management | **Max Marks**: 40

Program & Sem: B.Tech & VI Sem | **Weightage**: 20%

Instructions:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and Non-programmable calculators are permitted.

Part A

Answer **both** the Questions. **Each** Question carries **three** marks. (2Qx3M=06)

1. What is Decision Tree? What is its importance?
2. In the below Fig.1 Well A, B & C are production well. Which one of the following is more preferable with respect its location? Justify your answer.

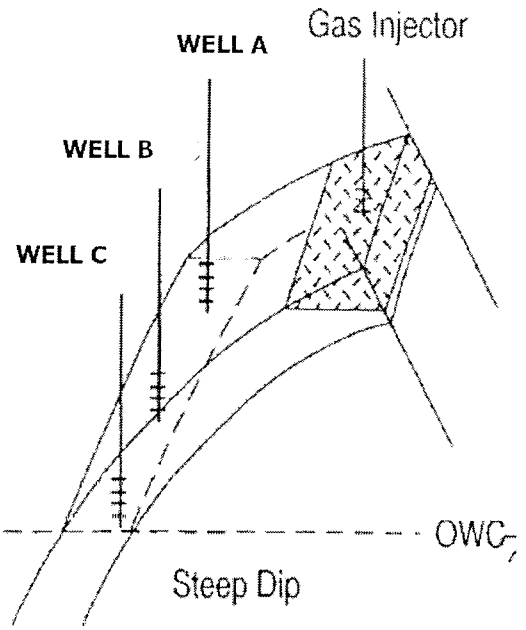


Fig. 1

Part B

Answer **both** the Questions. **Each** Question carries **nine** marks. (2Qx9M=18)

3. How the following parameters influence Oil and Gas field development
   a. Product Market
   b. Transportation
   c. Product Specification
4. What is the influence of mobility ratio on the sweep efficiency of reservoir? How GOC and OWC is changes with production? In case of high water cut reservoir what are the remedial measures we can take to get maximum oil production?

Part C

Answer the Question. The Question carries **sixteen** marks. (1Qx16M=16)

5. Explain the production profile, Reservoir pressure, GOR profile and water cut for the following drive mechanisms
   a. Gas cap drive
   b. Water drive

Roll No												

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

END TERM FINAL EXAMINATION

Even Semester: 2018-19 | **Date**: 25 May 2019

Course Code: PET 319 | **Time**: 3 Hours

Course Name: Oil Field Development and Reservoir Management | **Max Marks**: 80

Program & Sem: B.Tech & VI Sem | **Weightage**: 40%

Instructions:

(i) *Read the question properly and answer accordingly.*

(ii) *Question paper consists of 3 parts.*

(iii) *Scientific and Non-programmable calculators are permitted.*

(iv) *In **Part A**, for MCQ more than one answer may be correct. Student has to answer all correct answer.*

(v) *Student has to answer any three question in **Part B** and any two question in **Part C***

Part A

Answer the Questions. Each sub question carries **two** marks. (10Qx2M=20M)

1. Do as directed

A. Number of Deep water wells awarded under NELP-IX is

i. 1 iii. 5

ii. 3 iv. 7

B. Which of the following is/are **not** a failure of NELP

i. Investors have to wait for the next round of exploration to participate

ii. Investors can choose whatever they want

iii. Collecting accurate data over capacity of oil fields is a challenging task

iv. Faulty production sharing contracts

C. Duration of exploration contract under OAPL is

i. <8 Year iii. 20-30 years

ii. 8-10 years iv. 12 years

D. Best time to implemented tertiary recovery technique is

i. Starting of buildup phase iii. Beginning of decline period

ii. During plateau period iv. Before abandonment

E. Which of the following is not a part of Fiscal system?
   i. Tax payers
   ii. Production sharing agreements
   iii. Service providers
   iv. Bidders

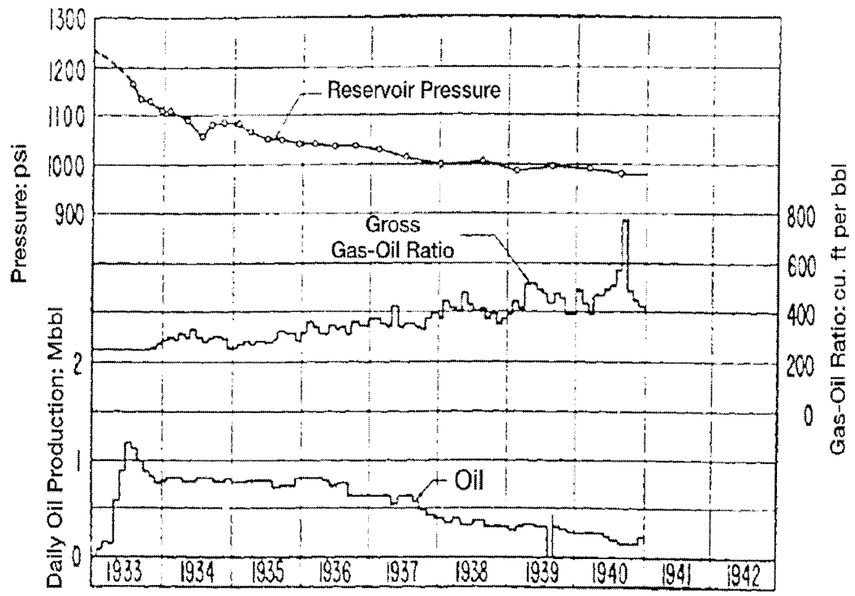
F. Which of the following is/are not a Secondary recovery
   i. Water injection
   iii. MEOR
   ii. ESP
   iv. Infill drilling

G. Ultimate recovery for a well having IOIP is 200MMSTB and RF=2% is_____STB

H. Opportunities that can increase the economic value of the reservoir will be an outgrowth of:
   i. Initial development plan
   iii. Development and updating of the depletion plan
   ii. Surveillance activities
   iv. All of the above

I.
Assertion (A): Reservoir management is a static process
Reason (R): All the functional groups under reservoir management work individually
   i. Both A and R are true. R is the correct explanation of A.
   ii. Both A and R are true but R is not the correct explanation of A.
   iii. A is true but R is false.
   iv. A is false but R is true.
   v. Both A and R are false

J. Identify the reservoir based on the following diagram.



Part B

Answer **any three** Questions. **Each** question carries **ten** marks. (3Qx10M=30M)

2. Explain decision tree with a suitable example.

3. Write a note on Water flooding surveillance technologies.

4. *"A successful Reservoir management require synergy and team effort"*, justify the statement with suitable examples.

5. Discuss one ideal model of Reservoir management which leads to achieve its goals.

Part C

Answer **any two** Questions. **Each** question carries **fifteen** marks. (2Qx15M=30M)

6. Discuss in detail about the life cycle of a well with suitable diagram.

7. Write about the scope and objective of Reservoir Management. When should Reservoir Management start? What, how and when to collect the data required for Reservoir Management? What kind of questions should be asked if we want to ensure the right answer in the process of reservoir management?

8. What is field appraisal? Discuss its role in field development. Which are the different sources of uncertainty during field development? What are different appraisal tools?