



| | |
|---------------|--|
| ID NO. | |
|---------------|--|

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Weightage: 40 %

Max Marks: 40

Max Time: 2 hrs.

11 May 2018, Friday

ENDTERM FINAL EXAMINATION MAY 2018

Even Semester 2017-18

Course: **PET 309 Coal Bed Methane**

VI Sem. Petroleum

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

(3 Q x 4 M = 12 Marks)

1. Explain 'Bridge-Plug Method' used for gas production in CBM well.
2. Briefly discuss the 'Desired Features for Well Testing Software'.
3. What is 'Reservoir Simulation'? Explain the benefits of Reservoir Simulation. [1 + 3M]

Part B

(3 Q x 6 M = 18 Marks)

4. Explain with suitable diagram the steps followed to perform Slug Tests in CBM wells.
5. Briefly explain the types of data required for CBM reservoir simulation.
6. Explain 'Zone Isolation Packer Method' with suitable diagram.

Part C

(1 Q x 10 M = 10 Marks)

7. Explain behavior of Idealized Dual Porosity Reservoir with diagram for (a) Wellbore storage period and (b) Infinite acting period. [5 + 5M]



| | |
|--------|--|
| ID NO: | |
|--------|--|

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Weightage: 20%

Max Marks: 20

Max Time: 1 hr.

28 March Wednesday 2018

TEST – 2

SET A

Even Semester 2017-18

Course: **PET 309 Coal Bed Methane**

VI Sem. Petroleum

Instruction:

- (i) Read the questions properly and answer accordingly
 - (ii) Answer all questions
-

Part A

(2 Q x 3 M = 6 Marks)

1. What is Langmuir Isotherm? List the factors that affect Sorption Isotherm. [2 + 1]
2. Define 'Gross Reservoir Thickness'. Discuss the steps followed to estimate 'Gross Reservoir Thickness'. [1 + 2 M]

Part B

(2 Q x 4 M = 8 Marks)

3. Briefly discuss processes used to estimate 'Desorbed Gas' from (a) Pressure Core samples and (b) Conventional Core samples. [2 + 2M]
4. Explain the factors that control 'Gas Flow through the Natural Fracture System'.

Part C

(1 Q x 6 M = 6 Marks)

5. Explain the steps followed to measure 'Sorption Isotherm'.



| | |
|--------|--|
| ID NO: | |
|--------|--|

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Weightage: 20 %

Max Marks: 20

Max Time: 1 hr.

20 Feb Tuesday 2018

TEST – 1

Even Semester 2017-18 Course: **PET 309 Coal Bed Methane**

VI Sem. Petroleum

Instruction:

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

Part A

(2 Q x 3 M = 6 Marks)

1. Discuss origin and formation of coal with suitable figure.
2. Write short note on 'Coal Reservoir Characteristics'.

Part B

(2 Q x 4 M = 8 Marks)

3. Discuss 'Transport Mechanism' of coal with appropriate figure.
4. Define cleat in coal with appropriate figure. Explain influence of rank on cleat. (2 + 2)

Part C

(1 Q x 6 M = 6 Marks)

5. Explain typical coal bed methane production profile with appropriate diagram.