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PRESIDENCY UNIVERSITY BENGALURU

**SET-A**

SCHOOL OF ENGINEERING

**END TERM EXAMINATION –MAY/ JUNE 2024**

**Semester :** Semester VI - 2021

**Course Code :** PET2018

**Date :** June 10, 2024

**Time :** 1:00 PM - 4:00 PM

**Course Name :**  Integrated Field Development and Planning **Max Marks :** 100

**Program :** B. Tech. **Weightage :** 50%

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

**PART A**

**ANSWER ANY FIVE QUESTIONS 5QX2M=10**

* 1. Name typical phases of project.
  2. Name the types of maintenance strategies.
  3. Describe decommissioning in oil and gas field.
  4. Describe the work of Petrotechnical Open Software Corporation (POSC).

(CO3) [Knowledge] (CO3) [Knowledge] (CO3) [Knowledge] (CO4) [Knowledge]

* 1. State any four ways for Data processing of acquired data while performing reservoir management.

(CO4) [Knowledge]

* 1. Define Reservoir Management.
  2. Define cusping and propose one measure to control coning in a well.

(CO1) [Knowledge] (CO2) [Knowledge]

**PART B**

**ANSWER ANY FIVE QUESTIONS 5QX10M=50**

* 1. The system needs to be managed during the production period to maximize the system’s capacity or possible throughput and availability or the fraction of time for which the system is available. Discuss the constraints that influence the productions.

(CO3) [Comprehension]

**9.** Legislation plays a crucial role in decommissioning operations in the oil and gas industry, ensuring that the process is conducted safely, efficiently, and with minimal environmental impact. Discuss the legislations by different agencies for decommissioning operations.

(CO3) [Comprehension]

1. . As a reservoir management personnel, you've been assign a job to decommission a well. Explain strategies to delay this process.

(CO3) [Comprehension]

1. Availability of equipment means uninterrupted production, maximizing output and efficiency. Discuss in brief the factors that reduce total availability of the equipment.

(CO3) [Comprehension]

1. Explain “What kinds of questions should be asked if we want to ensure right answer in the process of reservoir management”.

(CO4) [Comprehension]

1. Estimate the concentration of the pollutant in percentage & parts per million (w/w) if it has been measured at 450 mg per 150 kg of sample.

(CO4) [Comprehension]

1. Reservoir characterization aims at the detailed description of the reservoir which can be achieved by data gathering and validation. Explain efficient data flow diagram.

(CO4) [Comprehension]

**PART C**

**ANSWER ANY TWO QUESTIONS 2QX20M=40**

1. “Environmental standards have become a critical part of any business.” Elucidate the various contemporary environmental concerns caused by the oil & gas industries.

(CO3) [Application]

1. Effective decommissioning methods are crucial for the oil and gas industry to ensure environmental protection, safety, regulatory compliance, cost management, and corporate responsibility. By addressing the technical and logistical challenges of decommissioning, companies can mitigate risks, recover resources, and contribute to sustainable development. Being a reservoir manager elucidate the basic categories of decommissioning.

(CO3) [Application]

1. As a petroleum engineer, you have decided to manage a reservoir in your allocated field. Unfortunately, you realize your reservoir management plan fails for various reasons. Elucidate the probable reasons for the failure of reservoir management.

(CO4) [Application]