

Roll No



**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
END TERM EXAMINATION - FEB 2023**

Semester : Semester I - 2022

Course Code : PET1002

Course Name : Sem I - PET1002 - Introduction To Oil and Gas Industry

Program : B.Tech. Petroleum Engineering

Date : 23-FEB-2023

Time : 1.00PM - 4.00PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE TEN QUESTIONS

10 X 2 = 20M

1. Define Oil window. What is its temperature range?
(CO1) [Knowledge]
2. List of one pros and cons of Bio mass energy.
(CO1) [Knowledge]
3. Name any two top countries with highest solar installed capacity.
(CO1) [Knowledge]
4. Before production can begin, we must devise a development plan. Name the steps involves while deving a development plan.
(CO2) [Knowledge]
5. Define Appraisal and Production phase.
(CO2) [Knowledge]
6. Define KICK and BLOWOUT.
(CO3) [Knowledge]
7. What is the shape of ANNULAR BOP? Clasify RAM BOP.
(CO3) [Knowledge]
8. Mention any two difference between Drill Pipe and Drill Collar.
(CO3) [Knowledge]
9. What is Kill fluid? Why it is used?
(CO3) [Knowledge]

10. What is Ozone layer depletion? The ozone layer or ozone shield is a region of Earth's atmosphere that absorbs most of the Sun's ultraviolet (UV) radiation. Which layer of the atmosphere contains ozone layer?

(CO4) [Knowledge]

PART B

ANSWER ALL THE FOUR QUESTIONS

4 X 10 = 40M

11. Well lifecycles have three primary areas of focus or stages; design and construction, well operation and intervention, and abandonment. ISO 16530 delineates the lifecycles stages into six lifecycle phases, Basis of design, design, construction, operational, intervention, and abandonment. Elaborate these phases with a suitable diagram.

(CO2) [Comprehension]

12. One of the important functions of drilling mud is the control of formation fluid pressure to prevent blowouts. The density of the mud must be raised at times to stabilize fragile formations. Barite contains 58.8 % barium and has a specific gravity of (4.2–4.5). During the conditioning of mud return this Barite along with other solid has been removed and disposed. That means we are losing some valuable assets and wasting money. So as a Mud Engineer it is our responsibility to retain Barite and reuse it. Make a layout of the entire mud conditioning system which can help us to retain Barite and all other important solids and also write the function of each and every component of your mud circulating system.

(CO3) [Comprehension]

13. What is sustainability? How can we make sustainable development a reality? How sustainability can be measured?

(CO4) [Comprehension]

14. Explain the concepts "Environmental Sustainability" and "Sustainable Development of People".

(CO4) [Comprehension]

PART C

ANSWER ALL THE TWO QUESTIONS

2 X 20 = 40M

15. Describe the major outcomes of the 27th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference?

(CO4) [Application]

16. Should the pursuit of carbon credit and clean development mechanisms set up under UNFCCC be maintained even though there has been a massive slide in the value of carbon credit? Discuss with respect to India's energy needs for economic growth.

(CO4) [Application]