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C20-PET–305

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BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DPET – THIRD SEMESTER EXAMINATION

PETROLEUM EXPLORATION METHODS

Time : 3 hours] [*Total Marks* : 80

PART—A 3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Explain literature surveys.

2. Explain gravity survey.

3. What is biogenic theory?

4. Write about the rule of thumb depth estimation.

5. Define magnetization.

6. What is gravitational potential?

7. Write about the latitude corrections.

8. What are primary waves?

9. Write about the intercept times.

10. Define critical refraction.

PART—B

8×5=40

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **eight** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Explain about the subsurface prospecting of geological methods.

(OR)

(b) Explain about the carbon cycle.

12. *(a)* Explain about the magnetic method of hydrocarbon exploration.

(OR)

(b) Explain about the high sensitivity magnetometer with its advantages and sketch.

13. *(a)* Explain about the meter calibration and station positioning of gravity survey.

(OR)

(b) Explain the advantages and limitations of a static spring systems.

14. *(a)* Explain about the surface waves and the types of surface waves.

(OR)

(b) Write briefly about the detection of seismic waves.

15. *(a)* Explain about the seismic refraction theory.

(OR)

(b) Explain briefly about the reflection coefficient and acoustic impedance.

PART—C

10×1=10

Instructions : (1) Answer the following question.

(2) Each question carries **ten** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

16. Analyze the situations when the deviations are involved in gravitational field of earth.

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