STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086
(For the candidates admitted during the academic year 2015-2016)

B.A./ B.Com./ B.C.A./ B.S.W./ B.Sc. DEGREE EXAMINATION APRIL 2018

CODE: 15PH/UI/GP23

COURSE : INDEPENDENT ELECTIVE **MAX. MARKS: 100**

PAPER : GEOPHYSICS **TIME : 3 HRS.**

SECTION A

ANSWER ALL THE QUESTIONS **(10X3=30)**

1. State Bode's law.
2. What is Magnetic declination?
3. Give the statement of the law of universal gravitation?
4. Comment on the Fermat's principle for seismic waves?
5. Give the importance of the Earth's magnetic field?
6. What is a reservoir rock?
7. What are the different layers of the Earth?
8. Give the difference between Body and Surface seismic waves.
9. How is petroleum formed?
10. Comment on the effects of the Earth's rotation.

SECTION B

ANSWER ANY FIVE QUESTIONS **(5X5 = 25)**

1. Give an account of the different types of magnetic properties of materials.
2. Write a brief description of the Characteristics of Planets.
3. Explain the propagation of a seismic wave based on Huygen's principle.
4. How can we understand the Earth's figure and gravity based on Newton's law of gravitation?
5. State and explain the Kepler's laws of planetary motion.
6. How is petroleum formed? Define the terms Source rock, Migration route, Reservoir rock and a trap in Petroleum geology.
7. Discuss the principle and working of a seismometer.

SECTION C

ANSWER ANY THREE **(3X15 = 45)**

1. Explain the different types of Hydrocarbon traps. Briefly describe the Physical characteristics of a Reservoir rock.
2. Give a detailed description of the Earth's surface. Comment on the origin of our Solar system.
3. Write a note on the principle and working of the different types of Magnetometers.
4. Explain in detail the Elastic theory of Seismic waves.

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