



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PHYSICS

FIFTH SEMESTER – APRIL 2018

PH 5410- GEO PHYSICS

Date: 08-05-2018
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART A

Answer **ALL** Questions

(10x2=20)

1. What are P-Waves?
2. Write down Laplace's and Poisson's equation on gravitational potential.
3. How do you draw Iso seismic line?
4. Neatly draw horizontal seismograph and name the parts.
5. Name the two seismic discontinuity.
6. What are crystal plates?
7. Differentiate inter plate and intra plate earthquakes?
8. Write a short note on geological time scale.
9. Shortly discuss the cause of earth's magnetic field.
10. Define magnetic Renold's number.

PART B

Answer any **FOUR** Questions

(4x7.5=30)

11. Discuss in detail, earthquake magnitude by Richter scale.
12. Explain plate tectonics and zone boundaries.
13. Neatly draw and explain working principle of alkali vapour magnetometer.
14. Write a short note on causes of volcanic earthquakes.
15. Derive seismograph equation for horizontal seismograph.
16. Differentiate absolute and relative gravity measurements with suitable example.

PART C

Answer any **FOUR** Questions

(4x12.5=50)

17. a) Draw travel-time curve for seismic waves.(3)
b) Briefly discuss Dip-slip fault and strike slip fault and differentiate it. (9.5)
18. What is geochronology? With Isochron plot, explain Rb-Sr method of geochronology.
19. Describe in detail the working of proton precession magnetometer.
20. Explain modified Mercalli scale.
21. Explain how do you make gravity analysis by Worden gravimeter.
22. Write short notes on
 - a) Internal structure of earth.
 - b) Temperature and pressure of earth.

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