

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**B.Sc. DEGREE EXAMINATION – PHYSICS**

**FIFTH SEMESTER – NOVEMBER 2019**

**17UPH5ES03 – GEO PHYSICS**

Date: 06-11-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**PART A**

ANSWER ALL QUESTIONS

**(10×2=20)**

1. Highlight the programmes implemented by Japan to overcome Tsunami.
2. Name the scales used for measuring Earthquake magnitude.
3. Write the Poisson's equation for Gravitational Potential.
4. How do human activities cause ground water contamination.
5. Draw Horizontal seismograph and mention its parts.
6. Write a short note on major composites of core.
7. What are P-waves?
8. Give an account on the role of control points on RASTER dataset.
9. How Earth acts like a strong magnet ?
10. Give the significance of geological time scale on age determination of Earth.

**PART B**

ANSWER ANY FOUR QUESTIONS

**(4×7.5=30)**

11. Discuss on Earth's interior with neat figure.
12. With neat diagram discuss the rise and fall method to measure the absolute gravity.
13. Briefly describe on heat transport process and internal temperature of earth.
14. Explain the application of GIS in day to day life?
15. In detail explain ionization process and ionospheric layers.
16. With neat figure explain dip slip fault and strike slip fault in earthquake mechanism.

**PART C**

ANSWER ANY FOUR QUESTIONS

**(4×12.5=50)**

17. a) What are the various sources of Ground water contamination? **(6)**  
b) List out potential harmful components of common household products. **(6.5)**
18. a) Define focus and epicentre of an earthquake? **(3)**  
b) Name the two kinds of body waves and explain how they differ? **(9.5)**
19. How do acceleration of gravity measurement is done by Worden gravimeter ?
20. In detail give the physical significance of Vertical Electrical sounding of resistivity analysis?
21. Discuss the procedure to determine the Age of the Earth by Pb-Pb dating.
22. With examples explain the Mercalli scale of Intensity analysis.

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