

**18P443**

(Pages: 2)

Name: .....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2020**

(CUCSS - PG)

(Regular/ Supplementary/Improvement)

**CC15P GEL4 C13 – GEOCHEMISTRY & SEDIMENTOLOGY**

(Applied Geology)

(2015 Admission onwards)

Time: Three Hours

Maximum: 36 Weightage

I. Short Answer Type Questions.

Answer *all* questions. Each question carries 1 weightage.

1. Geochemical classification of elements.
2. Differentiate chondrites and achondrites.
3. Enthalpy and entropy.
4. C -14 dating.
5. XRF
6. Eh - pH.
7. Half life period.
8. Provenance.
9. Chemical weathering.
10. Arkose.
11. Differentiate sphericity and roundness.
12. Solution structures.
13. Argillaceous rocks.
14. Classification of Evaporates.

**(14 x 1 = 14 Weightage)**

II. Short Essay Type questions. Answer any *seven* questions. Each question carries 2 weightage.

15. ICP – AES analytical methods.
16. K-Ar systematics.
17. Laws of thermodynamics.
18. Applications of stable isotopes
19. Sedimentary basins of India.
20. Flame photometer.
21. Textural and mineralogical maturity of clastic rocks
22. Classification of sandstone

23. Udden wentworth scale and its phi scale conversion

24. Brief note different terrestrial environment.

**(7 x 2 = 14 Weightage)**

III. Long essay type questions. Answer any *two* questions. Each question carries 4 weightage.

25. Explain the primary geochemical differentiation of elements during the Earth's formation. Give an account of the geochemical constitution of the earth's crust, mantle and core.

Or

26. Explain in detail about U-Th-Pb isotope systematics. Add a note on Concordia diagram.

27. Write a brief note different types of non clastic rocks? Give special emphasis on occurrence, genesis and classification of Limestone

Or

28. Explain the procedure involved in heavy mineral separation and identification? Give an account on significance of Heavy minerals in sedimentological studies?

**(2 x 4 = 8 Weightage)**

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