17P364 (Pages: 2) Name……..

Reg. No……..

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(Regular/Supplementary/Improvement)

(CUCSS - PG)

CC15P GEL3 C10 - IGNEOUS AND METAMORPHIC PETROLOGY

(Applied Geology)

(2015 Admission onwards)

Time : Three Hours Maximum : 36 Weightage

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

1. Protolith.
2. Pegmatites.
3. AFM diagram.
4. Incongruent melting.
5. Peridotite.
6. Khondalite.
7. Factors of metamorphism.
8. Forsterite-fayalite phase diagram.
9. Metamorphic grade.
10. Eutectic crystallization.
11. Metasomatism.
12. Pyroxenite.
13. Index minerals.
14. Incipient charnockite.

(14 x 1 = 14 Weightage)

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

15. Bowen's reaction principle and reaction series.
16. Metamorphic facies and facies series.
17. Intrusive and extrusive igneous textures.
18. Application of phase rule in igneous petrology.
19. Igneous process and diversity in igneous rocks.
20. Metamorphic textures and structures.
21. Paired metamorphic belts.
22. Marble and calc-silicates.
23. Classification of igneous rocks with examples.

24. Ultrahigh pressure metamorphism and Eclogite.

(7 x 2 = 14 Weightage)

III. Answer any ***two*** questions. Each question carries 1 weightage.

25. Describe forsterite-diopside-silica system and its petrogenetic significance.

OR

26. Write an essay on isotopes and its applications in igneous petrology.

27. Write an essay on metamorphism of argillaceous rocks.

OR

28. Describe mineral paragenesis, index minerals and procedures of plotting in ACF and AKF diagrams.

(2 x 4 = 8 Weightage)

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