

18U524

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Name:

Reg. No.....

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION NOVEMBER 2020

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC15U GL5 B13 - METAMORPHIC GEOLOGY

(Geology - Core Course)

(2015 Admission onwards)

Duration: Three Hours

Maximum: 80 Marks

Draw neat sketches wherever necessary

PART A

Answer *all* questions in one or two words each.

1. Name the metamorphic facies in which glaucophane is a characteristic mineral.
2. What is the most significant factor of metamorphism of sheared zones?
3. What is the characteristic texture shown by schistose rocks?
4. Name the process which is considered to be the beginning metamorphism.
5. Name the characteristic type of garnet seen in eclogite.
6. Khondalites are formed in ----- metamorphic facies.
7. Name the structure ordinarily shown by marble.
8. Name the type of metamorphism caused by an igneous pluton in the country rocks.
9. The assemblage of minerals coexisting in equilibrium for a particular P-T condition during metamorphism is called as -----
10. Who was proposed the metamorphic zones first from the Scottish Highlands?

(10 x 1 = 10 Marks)

Part B (Short answer type questions)

Answer any *ten* questions. Each question carries 2 marks.

11. Anatexis and Palingenesis.
12. Index minerals and isograds.
13. Diaphthoresis.
14. Lepidoblastic & Nematoblastic textures.
15. Geothermo-barometry.
16. UHP & UHT metamorphism.
17. Strain shadow and corona.
18. Metamorphic differentiation.
19. Migmatite.

20. Mineral paragenesis.
21. Amphibolite.
22. Foliations.

(10 x 2 = 20 Marks)

Part C (Paragraph type questions)

Answer any *five* questions. Each question carries 6 marks.

23. Role of lithostatic and deviatoric stresses in metamorphism.
24. Types of foliations in metamorphic rocks.
25. Various types of metasomatism.
26. Influence of water and bulk chemistry of parent rock on P-T limits of metamorphism.
27. Paired metamorphic belts.
28. Metamorphic mineral zones.
29. Relict textures.
30. Use of P-T-t paths in the interpretation of tectonic environments.

(5 x 6 = 30 Marks)

Part D (Essay type questions)

Answer any *two* questions. Each question carries 10 marks.

31. Give an account of the metamorphism of argillaceous, arenaceous and carbonate rocks.
32. Write an essay on different types of metamorphism, and their occurrence along various plate tectonic settings.
33. Give an account of crystalloblastic and cataclastic textures present in metamorphic rocks.
34. Discuss various facies of metamorphism, and their significance in the metamorphic study.

(2 x 10 = 20 Marks)
