

Sl. No. of Question tapes: 2333

Unique Paper code : 2191401

Name of the Paper : Metamorphic Petrology

Name of Course : B.Sc. (Hons) Geology

Semester : IV

Duration : 3 hours

Maximum Marks : 75

F → Y

Instruction to Candidates : Answer any five questions

1. Write notes on the following (7.5 x 2 = 15)
 - a) Sillimanite I and sillimanite II zones
 - b) Paired metamorphic belt
2. Describe textures associated with regional metamorphism and illustrate those using neat sketches. (15)
3. What are metamorphic zones, index minerals, and metamorphic isograds? Discuss continuous and discontinuous reactions in this context. (15)
4. Write notes on the following: (7.5 x 2 = 15)
 - a) Rotation of tie lines
 - b) Compatibility diagrams
5. Define metamorphic facies. Describe Barrovian and Buchan type of metamorphism of mafic rocks in the context of metamorphic facies. (15)
6. Write short notes on any three : (15)
 - a) Granulites and eclogites
 - b) Isolated and closed thermodynamic system
 - c) Lithostatic pressure
 - d) Mylonite
7. Describe types of metamorphism. Indicate the types of metamorphism which are specific to tectonic settings. (15)
8. What are metamorphic hydration and dehydration reactions? What type of rock begins its metamorphic history with dehydration? Write the series of reactions that take place in one such rock type till it gets completely dehydrated. (15)