

PE-283
(572) M.Sc. GEOLOGY (SECOND SEMESTER)
Examination JUNE 2022
Compulsory/Optional
Group-
Paper-II

Name/Title of Paper- METAMORPHIC PETROLOGY

Time: Three Hours

Maximum Marks-080

Minimum Passing Marks-029

नोट: दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note: Answer From Both the Section as Directed. The Figures in the right-hand margin indicate marks.

Section-A

1- Answer the following questions in very short

1x10=10

- a. Write down the names of metamorphic agents.
- b. Marble is formed from which rock.
- c. What is the colour of biotite schist.
- d. Quartzite is composed of which mineral-
(i) Felspar (ii) Quartz (iii) Calcite (iv) Olivine
- e. Define fabric of metamorphic rocks.
- f. Foliation in a state is called staty-
(i) Schistosity (ii) Foliation (iii) Cleavage (iv) None of the above
- g. Write the full form of AKF.
- h. Name principal minerals of Gondite.
- i. Where does metasomatism occur.
- j. Define Migmatite.

Section-B

2- Answer the following questions

2x5=10

- a- What is Dynamothermal metamorphism?
- b- What are different grades of metamorphism?
- c- Define crystalloblastic series.
- d- Describe Granitization in brief.
- e- Give an Indian occurrence of charnockite rock.

Section-C

Answer the following questions:-

12x5=60

3- Write a note on agents and kinds of metamorphism.

Or

Write notes on following- (i) Structure of metamorphic rocks (ii) Phase rule in metamorphism

4- Write a note on systematic study of Barrovian zones of metamorphism.

Or

Describe the concept of facies and facies series.

5- Explain retrograde metamorphism.

Or

Give a brief note on AKF diagram.

6- Write an essay on metamorphism in relation to magma and orogeny.

Or

Describe principles and types of metasomatism.

7- Write a note on petrogenetic significance and occurrences of charnockite.

Or

Write notes on following- (i) Ocean floor metamorphism (ii) Ultra high pressure metamorphism