

National Testing Agency

Question Paper Name :	Metamorphic Petrology and Thermodynamics 29 Sep 20 Shift 1
Subject Name :	Metamorphic Petrology and Thermodynamics
Creation Date :	2020-09-29 13:08:30
Duration :	180
Number of Questions :	21
Total Marks :	60
Display Marks:	Yes

Metamorphic Petrology and Thermodynamics

Group Number :	1
Group Id :	899514111
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	60
Is this Group for Examiner? :	No

Metamorphic Petrology and Thermodynamics-A

Section Id :	899514139
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10

Section Marks : 10
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 899514171
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 8995149777 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The most common accessory mineral in eclogites is:

- (a) Rutile
- (b) Zoisite
- (c) Ilmenite
- (d) Sphene

Options :

- 89951438458. 1
- 89951438459. 2
- 89951438460. 3
- 89951438461. 4

Question Number : 2 Question Id : 8995149778 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The conversion of eclogites → amphibolites is an example of:

- (a) Progressive regional metamorphism
- (b) Retrogressive metamorphism
- (c) Autometamorphism
- (d) Load metamorphism

Options :

- 89951438462. 1
- 89951438463. 2

89951438464. 3

89951438465. 4

Question Number : 3 Question Id : 8995149779 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In the expression for the Mineralogical Phase Rule $P=C+F-2$, the condition for metamorphism are ideal when:

- (a) $F=0$
- (b) $F=1$
- (c) $F>2$
- (d) None of the above

Options :

89951438466. 1

89951438467. 2

89951438468. 3

89951438469. 4

Question Number : 4 Question Id : 8995149780 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enderbite is a variety of charnockite of

- (a) Acidic composition
- (b) Basic composition
- (c) Ultrabasic composition
- (d) All of the above

Options :

89951438470. 1

89951438471. 2

89951438472. 3

89951438473. 4

Question Number : 5 Question Id : 8995149781 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following rocks are formed under abnormally low geothermal gradients?

- (a) Blue schist facies
- (b) Granulite facies
- (c) Eclogite facies
- (d) Green schist facies

Options :

89951438474. 1

89951438475. 2

89951438476. 3

89951438477. 4

Question Number : 6 Question Id : 8995149782 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Garnet-Sillimanite Gneiss of the Eastern Ghat Province, known as the Khondalites are the characteristic rocks of:

- (a) Amphibolite facies
- (b) Granulite facies
- (c) Eclogite facies
- (d) Greenschist facies

Options :

89951438478. 1

89951438479. 2

89951438480. 3

89951438481. 4

Question Number : 7 Question Id : 8995149783 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Tremolite + Calcite = ----- + Forsterite + CO₂ + H₂O

- (a) Diopside
- (b) Hornblende
- (c) Both (a) & (b)
- (d) All of the above

Options :

89951438482. 1

89951438483. 2

89951438484. 3

89951438485. 4

Question Number : 8 Question Id : 8995149784 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Chloritoid + Quartz →----- + Garnet + Water

- (a) Saturoelite
- (b) Kyanite
- (c) Both (a) & (b)
- (d) None of the above

Options :

89951438486. 1

89951438487. 2

89951438488. 3

89951438489. 4

Question Number : 9 Question Id : 8995149785 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Complete the reaction: ----- + Actinolite + Epidote = Hornblende + H₂O

- (a) Chlorite
- (b) Biotite
- (c) Almandine
- (d) All of the above

Options :

89951438490. 1

89951438491. 2

89951438492. 3

89951438493. 4

Question Number : 10 Question Id : 8995149786 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Serpentine → Olivine + ----- + 9 H₂O

- (a) Talc
- (b) Tremolite
- (c) Anthophyllite
- (d) All of the above

Options :

89951438494. 1

89951438495. 2

89951438496. 3

Metamorphic Petrology and Thermodynamics-B

Section Id :	899514140
Section Number :	2
Section type :	Offline
Mandatory or Optional :	Mandatory
Number of Questions :	7
Number of Questions to be attempted :	5
Section Marks :	20
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	899514172
Question Shuffling Allowed :	No

Question Number : 11 Question Id : 8995149787 Question Type : SUBJECTIVE

Correct Marks : 4

Explain in short the grade of Metamorphism.

Question Number : 12 Question Id : 8995149788 Question Type : SUBJECTIVE

Correct Marks : 4

Write about the significance of net transfer reaction.

Question Number : 13 Question Id : 8995149789 Question Type : SUBJECTIVE

Correct Marks : 4

Write short note on metamorphic facies series.

Question Number : 14 Question Id : 8995149790 Question Type : SUBJECTIVE

Correct Marks : 4

Write short notes on paired metamorphic belts.

Question Number : 15 Question Id : 8995149791 Question Type : SUBJECTIVE

Correct Marks : 4

Draw the CaO-MgO-SiO₂ diagram for albite epidote hornfels facies..

Question Number : 16 Question Id : 8995149792 Question Type : SUBJECTIVE

Correct Marks : 4

Write short note on burial metamorphism.

Question Number : 17 Question Id : 8995149793 Question Type : SUBJECTIVE

Correct Marks : 4

Draw the ACF diagram for Sillimanite – Orthoclase zone of amphibolite facies

Metamorphic Petrology and Thermodynamics-C

Section Id :	899514141
Section Number :	3
Section type :	Offline
Mandatory or Optional :	Mandatory
Number of Questions :	4
Number of Questions to be attempted :	3
Section Marks :	30
Mark As Answered Required? :	Yes

Sub-Section Number : 1
Sub-Section Id : 899514173
Question Shuffling Allowed : No

Question Number : 18 Question Id : 8995149794 Question Type : SUBJECTIVE
Correct Marks : 10

Discuss about the factors controlling metamorphism.

Question Number : 19 Question Id : 8995149795 Question Type : SUBJECTIVE
Correct Marks : 10

Give a detail accounts of Blue schist facies.

Sub-Section Number : 2
Sub-Section Id : 899514174
Question Shuffling Allowed : No

Question Number : 20 Question Id : 8995149796 Question Type : SUBJECTIVE
Correct Marks : 10

Described with green schist facies under the following heads:

- (a) Mineral paragenesis with the suitable diagram
- (b) Important metamorphic reactions
- (c) P-T condition of metamorphism

Question Number : 21 Question Id : 8995149797 Question Type : SUBJECTIVE
Correct Marks : 10

Discuss in details about metasomatism.