

# National Testing Agency

**Question Paper Name:** Metamorphic Petrology  
**Subject Name:** Metamorphic Petrology  
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**Share Answer Key With Delivery Engine:** Yes  
**Actual Answer Key:** Yes

## Metamorphic Petrology

**Group Number :** 1  
**Group Id :** 41652970  
**Group Maximum Duration :** 0  
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**Break time:** 0  
**Group Marks:** 80

## Metamorphic Petrology

**Section Id :** 41652970  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 80  
**Number of Questions to be attempted:** 80  
**Section Marks:** 80  
**Display Number Panel:** Yes  
**Group All Questions:** No

**Sub-Section Number:** 1  
**Sub-Section Id:** 41652971  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 4165295686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

During Concretion Principle

- The growth of large porphyroblasts and crystalline aggregates
- Development of Paleosome
- Development of Neosome
- Development of Leucosome

**Question Number : 2 Question Id : 4165295687 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

During Secretion Principle

- a. Cavities, open cracks, or fissures in the rock are formed by shear and tear
- b. The growth of large porphyroblasts and crystalline aggregates
- c. Alternation of rock take place
- d. None of the above

**Question Number : 3 Question Id : 4165295688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which mineral is commonly present in Pyroxene-granulite facies?

- (a) Hornblende
- (b) Anthophyllite
- (c) Tremolite
- (d) None of the above

**Question Number : 4 Question Id : 4165295689 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction:

Gedrite + quartz = ----- + cordierite + H<sub>2</sub>O

- (a) Hypersthene
- (b) Almandine
- (c) Andalusite
- (d) Diopside

**Question Number : 5 Question Id : 4165295690 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which mineral is commonly present in amphibolite facies?

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

**Question Number : 6 Question Id : 4165295691 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Hypersthene normally appears in the ----- facies.

- (a) Granulite facies
- (b) Kyanite zone
- (c) a & b both
- (d) Amphibolite facies

**Question Number : 7 Question Id : 4165295692 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the temperature range of amphibolite facies?

- (a) 500/550 to 700/750<sup>o</sup>C
- (b) 400/450 to 500/550<sup>o</sup>C
- (c) 700/750 to 900/950<sup>o</sup>C
- (d) 300/350 to 400/450<sup>o</sup>C

**Question Number : 8 Question Id : 4165295693 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is composition of eclogite facies?

- a. Omphacite + pyrope
- b. Pyrope + Quartz
- c. Hornblende + Plagioclase
- d. Diopside + Plagioclase

**Question Number : 9 Question Id : 4165295694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Hornfels are formed at -----.

- a. high T and low P by contact metamorphism
- b. high P and low T by contact metamorphism
- c. high P and high T
- d. Very high P

**Question Number : 10 Question Id : 4165295695 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Ultramafic rocks and Mg-rich sediments after low grade metamorphism produce the following minerals

- (a) Talc
- (b) Serpentine
- (c) Anthophyllite
- (d) All are correct

**Question Number : 11 Question Id : 4165295696 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the parent rock of quartzo-feldspathic composition?

- (a) Sandstones
- (b) Arkose
- (c) Felsic rocks
- (d) All of the above

**Question Number : 12 Question Id : 4165295697 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the composition of Charnockite?

- a. Hypersthene + K-feldspar + Quartz
- b. Hornblende + K-feldspar + Quartz
- c. Sillimanite + K-feldspar + Quartz
- d. Epidote + Plagioclase + Quartz

**Question Number : 13 Question Id : 4165295698 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction:

Tremolite + Calcite + Quartz = ----- + CO<sub>2</sub> + H<sub>2</sub>O

- (a) Pyrophyllite
- (b) Almandine
- (c) Andalusite
- (d) Diopside

**Question Number : 14 Question Id : 4165295699 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Talc = ----- + Quartz + H<sub>2</sub>O

- (a) Pyrophyllite
- (b) Almandine
- (c) Andalusite
- (d) Mg-anthophyllite

**Question Number : 15 Question Id : 4165295700 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Muscovite + Quartz = K-feldspar + ----- + H<sub>2</sub>O

- (a) Sillimanite
- (b) Almandine
- (c) Andalusite
- (d) Mg-anthophyllite

**Question Number : 16 Question Id : 4165295701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Albite = ----- + Quartz

- (a) Jadeite
- (b) Almandine
- (c) Andalusite
- (d) Mg-anthophyllite

**Question Number : 17 Question Id : 4165295702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Omphacite - garnet - kyanite is a typical assemblage of

- (a) Eclogite facies
- (b) Amphibolite facies
- (c) Blue schist facies
- (d) Greenschist facies

**Question Number : 18 Question Id : 4165295703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Amphibolite facies divide in to how many zones/subfacies

- (a) 2 zones
- (b) 3 zones
- (c) 3 zones
- (d) 4 zones

**Question Number : 19 Question Id : 4165295704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Khetri copper belt, Rajasthan India is an example of low pressure metamorphism up to grade of -----?

- (a) Greenschist facies
- (b) Amphibolite facies
- (c) Hornblende-hornfels facies
- (d) Pyroxene-hornfels facies

**Question Number : 20 Question Id : 4165295705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which mineral is commonly present in sanidinite facies?

- (a) Wollastonite
- (b) Larnite
- (c) Sanidine
- (d) All of the above

**Question Number : 21 Question Id : 4165295706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Pyrophyllite = \_\_\_\_\_ + SiO<sub>2</sub> + H<sub>2</sub>O

- a) Muscovite
- b) Kaolinite
- c) Kyanite
- d) Quartz

**Question Number : 22 Question Id : 4165295707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Agents of metamorphism are\_\_\_\_\_.

- a) Chemical Elements
- b) P, T & Fluids
- c) Acids & Bases
- d) CO<sub>2</sub> & N<sub>2</sub>

**Question Number : 23 Question Id : 4165295708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Dominant factor in contact metamorphism is \_\_\_\_\_.

- a) Temperature Only
- b) Pressure Only
- c) Fluids Only
- d) Volatiles Only

**Question Number : 24 Question Id : 4165295709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Mylonites are \_\_\_\_\_ metamorphic rocks.

- a) Thermal
- b) Cataclastic
- c) Regional
- d) Hydrothermal

**Question Number : 25 Question Id : 4165295710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The facies Albite - epidote - hornfels was first introduced by ----- (1958).

- (a) Winter
- (b) Thomas
- (c) Fyfe, Turner and Verhoogon
- (d) Choudhary

**Question Number : 26 Question Id : 4165295711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which mineral is commonly present in albite - epidote- hornfels facies?

- (a) Andalusite
- (b) Kyanite
- (c) Almandine garnet
- (d) Staurolite

Question Number : 27 Question Id : 4165295712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Fe-chlorite + Muscovite + Quartz = \_\_\_\_\_ + Biotite +  $Al_2SiO_5$

- (a) Pyrope
- (b) Almandine
- (c) Grossularite
- (d) Staurolite

Question Number : 28 Question Id : 4165295713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The ACF value of the Almandine ( $Fe_3Al_2Si_3O_{12}$ ) garnet is:

- (a) F=75; A=25 & C=0
- (b) F=0; A=25 & C=75
- (c) F=75; A=0 & C=25
- (d) F=50; A=25 & C=25

Question Number : 29 Question Id : 4165295714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For thermodynamic calculation the temperature measured in \_\_\_\_\_.

- (a) Kelvin ( $K = ^\circ C + 273.15$ )
- (b)  $^\circ$ Centigrade
- (c) Centimeter
- (d) None of the above

Question Number : 30 Question Id : 4165295715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The temperature range during green schist facies is:

- (a) 400/450 to 500/550 $^\circ$ C
- (b) 300 to 400 $^\circ$ C
- (c) 500 to 650 $^\circ$ C
- (d) 200 to 400 $^\circ$ C

Question Number : 31 Question Id : 4165295716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The minerals galucophane and jadeite are indicative of:

- (a) High pressure and low temperature
- (b) Low pressure and high temperature
- (c) High pressure and high temperature
- (d) Low pressure and low temperature

Question Number : 32 Question Id : 4165295717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The ACF value of the Pyrope ( $Mg_3Al_2Si_3O_{12}$ ) garnet is:

- (a) F=75; A=25 & C=0
- (b) F=0; A=25 & C=75
- (c) F=75; A=0 & C=25
- (d) F=50; A=25 & C=25

Question Number : 33 Question Id : 4165295718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is/are characteristic of the process of metamorphism?

- (a) Under normal conditions the bulk chemistry of the rocks remain unchanged
- (b) There is no large scale liquid at any given time
- (c) There is no order of crystallization
- (d) All of the above

**Question Number : 34 Question Id : 4165295719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Metamorphism involving substantial addition or removal of materials is generally termed as:

- (a) Contact metamorphism
- (b) Autometamorphism
- (c) Metasomatism
- (d) Regional Metamorphism

**Question Number : 35 Question Id : 4165295720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

When uniform or hydrostatic pressure acts on a body, its:

- (a) Volume decreases
- (b) Specific gravity decreases
- (c) Volume decreases but specific gravity increases
- (d) Volume increases but specific gravity decreases

**Question Number : 36 Question Id : 4165295721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following rocks are completely unfoliated?

- (a) Slate
- (b) Schists
- (c) Phyllite
- (d) Hornfels

**Question Number : 37 Question Id : 4165295722 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the composition of Charnocite?

- (a) Orthopyroxen + K-feldspar + Quartz
- (b) Clinopyroxen + K-feldspar + Quartz
- (c) Hornblende + K-feldspar + Quartz
- (d) Orthopyroxen + Plagioclase + Quartz

**Question Number : 38 Question Id : 4165295723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the composition of Leptinite?

- (a) Garnet + Orthoclase + Plagioclase + Quartz
- (b) Orthopyroxen + K-feldspar + Quartz
- (c) Orthoclase + Plagioclase + Quartz
- (d) Sillimanite + K-feldspar + Quartz

**Question Number : 39 Question Id : 4165295724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Orogenic metamorphism is a:

- (a) Dynamo-thermal metamorphism
- (b) Thermal metamorphism
- (c) Contact metamorphism
- (d) Buchan metamorphism

**Question Number : 40 Question Id : 4165295725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Burial metamorphism is a term coined by:

- (a) Coombs
- (b) Thomas
- (c) Newton
- (d) Sharma

**Question Number : 41 Question Id : 4165295726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Ocean-floor metamorphism was coined by:

- (a) Winkler
- (b) Thompson
- (c) Newton
- (d) Miyashiro et al.

**Question Number : 42 Question Id : 4165295727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Cataclastic metamorphism usually:

- (a) confined to the near vicinity of major faults and thrusts
- (b) characterized by extremely high P/T conditions
- (c) confined to near vicinity of intrusive rock
- (d) All of the above

**Question Number : 43 Question Id : 4165295728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Intermediate P/T Series is recognised by the paragenesis of:

- (a) Kyanite → □ Sillimanite
- (b) Andalusite → □ Kyanite
- (c) Andalusite → □ Sillimanite
- (d) Sillimanite → □ Albite

**Question Number : 44 Question Id : 4165295729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Protolith of pelitic assemblage is:

- (a) Sedimentary
- (b) Basic igneous rock
- (c) Calcareous rock
- (d) Ultramafic

**Question Number : 45 Question Id : 4165295730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Al-rich chlorite + Quartz = Gedrite + ----- + H<sub>2</sub>O

- (a) Cordierite
- (b) Hornblende
- (c) Hypersthene
- (d) Plagioclase

**Question Number : 46 Question Id : 4165295731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Dolomite = Periclase + ----- + CO<sub>2</sub>

- (a) Calcite
- (b) Spinel
- (c) Brucite
- (d) H<sub>2</sub>O

**Question Number : 47 Question Id : 4165295732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Calcite + Quartz = -----+ CO<sub>2</sub>

- (a) Wollastonite
- (b) Dolomite
- (c) H<sub>2</sub>O
- (d) Periclase

**Question Number : 48 Question Id : 4165295733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Mg-anthophyllite + ----- = Enstatite + H<sub>2</sub>O

- (a) Forsterite
- (b) CO<sub>2</sub>
- (c) Calcite
- (d) All of the above

**Question Number : 49 Question Id : 4165295734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Metamorphism caused by impact of meteorite known as:

- (a) Regional metamorphism
- (b) Thermal metamorphism
- (c) Shock metamorphism
- (d) Cataclastic metamorphism

**Question Number : 50 Question Id : 4165295735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Biotite + Quartz = ----- + Almandine + Orthopyroxene + K-feldspar + H<sub>2</sub>O

- (a) Cordierite
- (b) Plagioclase
- (c) Staurolite
- (d) Chloritoid

**Question Number : 51 Question Id : 4165295736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Complete the reaction: Hornblende + Quartz = Orthopyroxene + Plagioclase +-----+ H<sub>2</sub>O

- (a) Clinopyroxene
- (b) Garnet
- (c) Chlorite
- (d) All the above

**Question Number : 52 Question Id : 4165295737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Appearance of diamond in Group ---- eclogite

- (a) A
- (b) B
- (c) C
- (d) All of the above

**Question Number : 53 Question Id : 4165295738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

This reaction Tremolite + Calcite + Quartz = Diopside + H<sub>2</sub>O + CO<sub>2</sub> is

- (a) Mixed-volatile reactions
- (b) Volatile reaction
- (c) Exchange reaction
- (d) All of the above

**Question Number : 54 Question Id : 4165295739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Migmatite term was introduced by:

- (a) Sederholm
- (b) Thompson
- (c) Winkler
- (d) All of the above

**Question Number : 55 Question Id : 4165295740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The metamorphic facies that represent a transition between diagenesis and regional metamorphism is:

- (a) Zeolite facies
- (b) Green schist facies
- (c) Sanidinite facies
- (d) Hornblende hornfels facies

**Question Number : 56 Question Id : 4165295741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The mineral assemblage Larnite - Merwinite - Spurrite is typical of:

- (a) Sanidinite facies
- (b) Zeolite facies
- (c) Granulite facies
- (d) Glaucophane schist facies

**Question Number : 57 Question Id : 4165295742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Hydroxyl bearing minerals are essentially absent in the rocks belonging to:

- (a) Granulite facies
- (b) Hornfels facies
- (c) Zeolite facies
- (d) Green schist facies

**Question Number : 58 Question Id : 4165295743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Enderbites are a type of charnockites of:

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

Question Number : 59 Question Id : 4165295744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Gneissic rocks that are metamorphosed of sediments are described as:

- (a) Orthogneiss
- (b) Augen gneiss
- (c) Paragneiss
- (d) None of the above

Question Number : 60 Question Id : 4165295745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which mineral is commonly present in Pyroxene-granulite facies?

- (a) Hornblende
- (b) Anthophyllite
- (c) Tremolite
- (d) None of the above

Question Number : 61 Question Id : 4165295746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Omphacite - garnet - kyanite is a typical assemblage of

- (a) Eclogite facies
- (b) Amphibolite facies
- (c) Blue schist facies
- (d) Greenschist facies

Question Number : 62 Question Id : 4165295747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Talc = ----- + Quartz + H<sub>2</sub>O

- (a) Pyrophyllite
- (b) Almandine
- (c) Andalusite
- (d) Mg-anthophyllite

Question Number : 63 Question Id : 4165295748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Complete the reaction: Pyrophyllite = ----- + SiO<sub>2</sub> + H<sub>2</sub>O

- a) Muscovite
- b) Kaolinite
- c) Kyanite
- d) Quartz

Question Number : 64 Question Id : 4165295749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Wollastonite CaSiO<sub>3</sub> is an example of -----.

- (a) Pyroxenoid
- (b) Pyroxene
- (c) Amphibole
- (d) Nesosilicate

Question Number : 65 Question Id : 4165295750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which mineral is commonly present in albite - epidote- hornfels facies?

- (a) Andalusite
- (b) Kyanite
- (c) Almandine garnet
- (d) Staurolite

**Question Number : 66 Question Id : 4165295751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Phyllosilicates (10 A<sup>0</sup> type) is an example of\_\_\_\_\_.

- (a) Chlorite type
- (b) Mica type
- (c) Kaolinite type
- (d) None of the above

**Question Number : 67 Question Id : 4165295752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

What is the composition of hypersthene?

- (a)  $\text{FeMgSi}_2\text{O}_6$
- (b)  $\text{Mg}_2\text{Si}_2\text{O}_6$
- (c)  $\text{CaMgSi}_2\text{O}_6$
- (d)  $\text{CaFeSi}_2\text{O}_6$

**Question Number : 68 Question Id : 4165295753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The reaction "Anorthite = Grossular + Kyanite + Quartz" is a

- (a) Net transfer reaction
- (b) Exchange reaction
- (c) a & b both
- (d) None of the above

**Question Number : 69 Question Id : 4165295754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The Tremolite + Calcite + Quartz = Diopside + H<sub>2</sub>O + CO<sub>2</sub> is a

- (a) Net transfer reaction
- (b) Exchange reaction
- (c) Mixed volatile reactions
- (d) All of the above

**Question Number : 70 Question Id : 4165295755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The reaction "Fe (in garnet) + Mg (in biotite) = Mg (in garnet) + Fe (in biotite)" is a

- (a) Net transfer reaction
- (b) Exchange reaction
- (c) a & b both
- (d) None of the above

**Question Number : 71 Question Id : 4165295756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Choose the correct sequence of deformation and metamorphism:

- (a) Shale → □ Slate → □ Phyllite → □ Schist → □ Gneiss
- (b) Shale → □ □ Slate → □ □ Phyllite → □ Gneiss → □ □ Schist
- (c) Shale → □ □ Phyllite → □ □ Schist → □ □ Gneiss → □ □ Slate
- (d) Slate → □ □ Phyllite → □ □ Schist → □ □ Gneiss → □ □ Shale

**Question Number : 72 Question Id : 4165295757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

A migmatite is a mixed rock in which:

- (a) An older metamorphic rock is mixed with younger granitic material
- (b) An older granitic rock is mixed with newly metamorphosed sediments
- (c) Fragments of igneous, sedimentary and metamorphic rocks are mixed together
- (d) All of the above

**Question Number : 73 Question Id : 4165295758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Metamorphic facies are define by:

- (a) The condition of temperature and pressure
- (b) A single dominant rock type
- (c) Critical mineral assemblages
- (d) Peculiar textures and structures of the rock types

**Question Number : 74 Question Id : 4165295759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following metamorphic facies is characterized by maximum temperatures and minimum pressure?

- (a) Blueschist facies
- (b) Sanidinite facies
- (c) Hornblende hornfels facies
- (d) Greenschist facies

**Question Number : 75 Question Id : 4165295760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The protolith of Ultramafic metamorphic rock is

- (a) Lherzolite
- (b) Calcareous rock
- (c) Granite
- (d) Gabbro

**Question Number : 76 Question Id : 4165295761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The term migmatite was introduced by -----.

- (a) Sederholm
- (b) J.D. Winter
- (c) Tuttle and Bowen
- (d) Best

**Question Number : 77 Question Id : 4165295762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

If the dark coloured portion has the appearance of breccia embedded within the leucosome this migmatite is called -----.

- (a) Neosome
- (b) Melanosome
- (c) Nebulite
- (d) Agmatite

**Question Number : 78 Question Id : 4165295763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

On melting the paleosome changes its composition which is now observed as restite (unmelted component) and is designated as -----

- (a) Melanosome
- (b) Neosome
- (c) Leucosome
- (d) Paleosome

**Question Number : 79 Question Id : 4165295764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The reaction "Muscovite + Quartz = K-feldspar + Sillimanite + H<sub>2</sub>O" is a

- (a) Net transfer reaction
- (b) Exchange reaction
- (c) Dehydration reaction
- (d) All of the above

**Question Number : 80 Question Id : 4165295765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Ultramafic rocks and Mg-rich sediments after low grade metamorphism produce the following minerals

- (a) Talc
- (b) Serpentine
- (c) Anthophyllite
- (d) All are correct