

National Testing Agency

Question Paper Name :	Crystallography and Mineralogy 29th August 2021 Shift 1
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Crystallography and Mineralogy

Group Number :	1
Group Id :	603489236
Group Maximum Duration :	0
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Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No

Crystallography and Mineralogy-1

Section Id :	603489346
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	603489637
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 60348916682 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 2 Wrong Marks : 0

Minerals which usually crystallizes in the isometric system are :

1. anisotropic
2. isochroic
3. isostatic
4. isotropic

Options :

- 60348962709. 1
- 60348962710. 2
- 60348962711. 3
- 60348962712. 4

Question Number : 2 Question Id : 60348916683 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 2 Wrong Marks : 0

The extinction shown by the minerals parallel to vertical or horizontal cross – wire:

1. straight extinction
2. vertical extinction
3. oblique extinction
4. inclined extinction

Options :

60348962713. 1

60348962714. 2

60348962715. 3

60348962716. 4

Question Number : 3 Question Id : 60348916684 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The extinction shown by the minerals at an angle to vertical or horizontal cross - wire is:

1. straight extinction
2. inclined extinction
3. oblique extinction
4. vertical extinction

Options :

60348962717. 1

60348962718. 2

60348962719. 3

60348962720. 4

Question Number : 4 Question Id : 60348916685 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Twinning formed at the time of growth of the crystal is:

1. Gliding twins
2. Transformation twins
3. Growth twins
4. Synthetic twins

Options :

60348962721. 1

60348962722. 2

60348962723. 3

60348962724. 4

Question Number : 5 Question Id : 60348916686 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Universal stage is used to determine:

1. extinction angle
2. Interference colour
3. Pleochroic scheme
4. 2V

Options :

60348962725. 1

60348962726. 2

60348962727. 3

60348962728. 4

Question Number : 6 Question Id : 60348916687 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Quartz wedge is:

1. optical accessory
2. field accessory
3. eye piece accessory
4. chemical accessory

Options :

60348962729. 1

60348962730. 2

60348962731. 3

60348962732. 4

Question Number : 7 Question Id : 60348916688 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Plagioclase feldspar shows which type of twinning?

1. Cross-hatched
2. Multiple
3. Symmetrical
4. Simple

Options :

60348962733. 1

60348962734. 2

60348962735. 3

60348962736. 4

Question Number : 8 Question Id : 60348916689 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Most abundant mineral of the earth's crust is:

1. Quartz
2. Clays
3. Orthoclase
4. Plagioclase

Options :

60348962737. 1

60348962738. 2

60348962739. 3

60348962740. 4

Question Number : 9 Question Id : 60348916690 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which mineral is NOT in the list of most abundant minerals of the earth's crust?

1. Amphibole
2. Pyroxenes
3. Garnet
4. Mica

Options :

60348962741. 1

60348962742. 2

60348962743. 3

60348962744. 4

Question Number : 10 Question Id : 60348916691 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Beryl is a:

1. Sorosilicate
2. Phyllosilicate
3. Tectosilicate
4. None of these

Options :

60348962745. 1

60348962746. 2

60348962747. 3

60348962748. 4

Question Number : 11 Question Id : 60348916692 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the silica is considered a rock forming mineral?

1. Opal
2. Jasper
3. Quartz
4. Agate

Options :

60348962749. 1

60348962750. 2

60348962751. 3

60348962752. 4

Question Number : 12 Question Id : 60348916693 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which is not a ferromagnesian mineral?

1. Dolomite
2. Biotite
3. Olivine
4. Augite

Options :

60348962753. 1

60348962754. 2

60348962755. 3

60348962756. 4

Question Number : 13 Question Id : 60348916694 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which mineral is out of place considering composition?

1. Spinel
2. Pyrope
3. Magnetite
4. Corundum

Options :

60348962757. 1

60348962758. 2

60348962759. 3

60348962760. 4

Question Number : 14 Question Id : 60348916695 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the sulphide is most likely to occur in coal beds?

1. Chalcopyrite
2. Chalcocite
3. Galena
4. Pyrite

Options :

60348962761. 1

60348962762. 2

60348962763. 3

60348962764. 4

Question Number : 15 Question Id : 60348916696 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

A gemstone can be used in:

1. Jewelry
2. Industries
3. Healing
4. All of these

Options :

60348962765. 1

60348962766. 2

60348962767. 3

60348962768. 4

Question Number : 16 Question Id : 60348916697 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which is the non mineral considered as gemstone?

1. Amber
2. Diamond
3. Emerald
4. Sapphire

Options :

60348962769. 1

60348962770. 2

60348962771. 3

60348962772. 4

Question Number : 17 Question Id : 60348916698 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which amongst the following is mineral group?

1. Feldspar
2. Garnet
3. Tourmaline
4. All of these

Options :

60348962773. 1

60348962774. 2

60348962775. 3

60348962776. 4

Question Number : 18 Question Id : 60348916699 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Gemstone species have:

1. Their own physical properties
2. Their own individual chemical composition and characteristics
3. Their own geological origin
4. All of these

Options :

60348962777. 1

60348962778. 2

60348962779. 3

60348962780. 4

Question Number : 19 Question Id : 60348916700 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Most of our important gem minerals originated in:

1. Sedimentary rocks
2. Igneous rocks
3. Rivers
4. Metamorphic rocks

Options :

60348962781. 1

60348962782. 2

60348962783. 3

60348962784. 4

Question Number : 20 Question Id : 60348916701 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

In fractional crystallization which one of the following is the first to solidify?

1. Feldspars
2. Quartz
3. Pegmatites
4. Geodes

Options :

60348962785. 1

60348962786. 2

60348962787. 3

60348962788. 4

Question Number : 21 Question Id : 60348916702 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

A plane of symmetry is always:

1. Parallel to a possible edge of the crystal
2. Parallel to a possible face of the crystal
3. Perpendicular to a possible face of the crystal
4. None of these

Options :

60348962789. 1

60348962790. 2

60348962791. 3

60348962792. 4

Question Number : 22 Question Id : 60348916703 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the following systems has all closed forms?

1. Triclinic
2. Monoclinic
3. Trigonal
4. Cubic

Options :

60348962793. 1

60348962794. 2

60348962795. 3

60348962796. 4

Question Number : 23 Question Id : 60348916704 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Domes may be considered as:

1. Vertical prisms
2. Non-vertical prisms
3. Vertical pyramids
4. Non vertical pyramids

Options :

60348962797. 1

60348962798. 2

60348962799. 3

60348962800. 4

Question Number : 24 Question Id : 60348916705 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Trapezohedron ia a form that occurs in:

1. Hexagonal system
2. Trigonal system
3. Tetragonal system
4. All of these

Options :

60348962801. 1

60348962802. 2

60348962803. 3

60348962804. 4

Question Number : 25 Question Id : 60348916706 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the following crystal systems has one asymmetric class?

1. Isometric
2. Trigonal
3. Monoclinic
4. Triclinic

Options :

60348962805. 1

60348962806. 2

60348962807. 3

60348962808. 4

Question Number : 26 Question Id : 60348916707 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

All forms are general forms in:

1. Cubic system
2. Hexagonal system
3. Monoclinic system
4. Triclinic system

Options :

60348962809. 1

60348962810. 2

60348962811. 3

60348962812. 4

Question Number : 27 Question Id : 60348916708 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

In triclinic system all the forms have:

1. 2 faces
2. 4 faces
3. 6 faces
4. Some forms have 2 faces and others have 4 or 6 faces

Options :

60348962813. 1

60348962814. 2

60348962815. 3

60348962816. 4

Question Number : 28 Question Id : 60348916709 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The prismatic, domatic and sphenoidal classes are characteristic of:

1. Trigonal system
2. Triclinic system
3. Monoclinic system
4. Orthohombic system

Options :

60348962817. 1

60348962818. 2

60348962819. 3

60348962820. 4

Question Number : 29 Question Id : 60348916710 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the following crystals does not have a centre of symmetry?

1. Tetrahedrite
2. Tourmaline
3. Quartz
4. All of these

Options :

60348962821. 1

60348962822. 2

60348962823. 3

60348962824. 4

Question Number : 30 Question Id : 60348916711 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The interfacial angles depends upon:

1. Size of the crystal faces
2. Shape of the crystal faces
3. Form of the crystals
4. None of these

Options :

60348962825. 1

60348962826. 2

60348962827. 3

60348962828. 4

Question Number : 31 Question Id : 60348916712 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

It is estimated that 50% of the known crystals belong to:

1. Isometric system
2. Orthorhombic system
3. Monoclinic system
4. Triclinic system

Options :

60348962829. 1

60348962830. 2

60348962831. 3

60348962832. 4

Question Number : 32 Question Id : 60348916713 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The normal class of monoclinic system is of:

1. Beryle type
2. Barite type
3. Gypsum type
4. Galena type

Options :

60348962833. 1

60348962834. 2

60348962835. 3

60348962836. 4

Question Number : 33 Question Id : 60348916714 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The mineral which is named after its cruciform twin is

1. Spinel
2. Plagioclase feldspar
3. Staurolite
4. Calcite

Options :

60348962837. 1

60348962838. 2

60348962839. 3

60348962840. 4

Question Number : 34 Question Id : 60348916715 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

In hexagonal system the twins are formed according to:

1. Doulphine law
2. Carlsbad law
3. Pericline law
4. Manebatch law

Options :

60348962841. 1

60348962842. 2

60348962843. 3

60348962844. 4

Question Number : 35 Question Id : 60348916716 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Tartan twinning is found in the mineral

1. Gypsum
2. Rutile
3. Cassiterite
4. None of these

Options :

60348962845. 1

60348962846. 2

60348962847. 3

60348962848. 4

Question Number : 36 Question Id : 60348916717 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The highest grade of symmetry in the isometric system found in:

1. Normal class
2. Plagioclase class
3. Tetrahedral class
4. Pyritohedral class

Options :

60348962849. 1

60348962850. 2

60348962851. 3

60348962852. 4

Question Number : 37 Question Id : 60348916718 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Stereogram of a crystal, depicts primarily

1. The distribution of faces in zones
2. A symmetry in the distribution of faces
3. The interfacial angles projected on the stereogram in the form of straight lines and arcs
4. All of these

Options :

60348962853. 1

60348962854. 2

60348962855. 3

60348962856. 4

Question Number : 38 Question Id : 60348916719 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Indicatrix of a Tetragonal crystal is a

1. Sphene
2. Cube
3. Symmetrical ellipsoid
4. Asymmetrical ellipsoid

Options :

60348962857. 1

60348962858. 2

60348962859. 3

60348962860. 4

Question Number : 39 Question Id : 60348916720 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Bragg's equation is given by

1. $2n\lambda = d \sin \theta$
2. $\lambda = 2n d \sin \theta$
3. $n\lambda = d \sin 2\theta$
4. $n\lambda = 2d \sin \theta$

Options :

60348962861. 1

60348962862. 2

60348962863. 3

60348962864. 4

Question Number : 40 Question Id : 60348916721 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

The Bravis lattice of sodium chloride (NaCl) structure is

1. Base centered cube
2. Face centered cube
3. Simple cube
4. Body centered cube

Options :

60348962865. 1

60348962866. 2

60348962867. 3

60348962868. 4

Question Number : 41 Question Id : 60348916722 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

When a mineral breaks with curved concavities, more or less deep the term is known as:

1. Conchoidal
2. Even
3. Uneven
4. Hackly

Options :

60348962869. 1

60348962870. 2

60348962871. 3

60348962872. 4

**Question Number : 42 Question Id : 60348916723 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 2 Wrong Marks : 0

Wollastonite CaSiO_3 is an example of :

1. Pyroxenoid
2. Pyroxene
3. Amphibole
4. Nesosilicate

Options :

60348962873. 1

60348962874. 2

60348962875. 3

60348962876. 4

**Question Number : 43 Question Id : 60348916724 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 2 Wrong Marks : 0

Olivine and silica react and change into:

1. Hypersthene
2. Diopside
3. Epidote
4. None of these

Options :

60348962877. 1

60348962878. 2

60348962879. 3

60348962880. 4

Question Number : 44 Question Id : 60348916725 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Phyllosilicate (10 A⁰ type) is an example of

1. Chlorite type
2. Mica type
3. Kaolinite type
4. None of these

Options :

60348962881. 1

60348962882. 2

60348962883. 3

60348962884. 4

Question Number : 45 Question Id : 60348916726 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

What is the composition of hypersthene?

1. $\text{FeMgSi}_2\text{O}_6$
2. $\text{Mg}_2\text{Si}_2\text{O}_6$
3. $\text{CaMgSi}_2\text{O}_6$
4. $\text{CaFeSi}_2\text{O}_6$

Options :

60348962885. 1

60348962886. 2

60348962887. 3

60348962888. 4

Question Number : 46 Question Id : 60348916727 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Minerals that have a constant and characteristic color are generally termed

1. Monochromatic
2. Idiochromatic
3. Achromatic
4. None of the above

Options :

60348962889. 1

60348962890. 2

60348962891. 3

60348962892. 4

Question Number : 47 Question Id : 60348916728 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Quality of gemstone is evaluated by it's

1. Color
2. Cut
3. Clarity
4. All of these

Options :

60348962893. 1

60348962894. 2

60348962895. 3

60348962896. 4

Question Number : 48 Question Id : 60348916729 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which one is not a rock forming mineral?

1. Felspar
2. Native gold
3. Quartz
4. Mica

Options :

60348962897. 1

60348962898. 2

60348962899. 3

60348962900. 4

Question Number : 49 Question Id : 60348916730 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Identification of gemstone by spectroscopy is based on:

1. Absorption of light
2. Critical angle
3. Relative density
4. None of these

Options :

60348962901. 1

60348962902. 2

60348962903. 3

60348962904. 4

Question Number : 50 Question Id : 60348916731 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 2 Wrong Marks : 0

Which of the commercially important gemstone deposits are mined in India?

1. Sapphire
2. Topaz
3. Amethyst
4. Emerald

Options :

60348962905. 1

60348962906. 2

60348962907. 3

60348962908. 4