Sl. No. : 10000321

GEOUG/17

Register Number | | | | | | | | | |

2017

GEOLOGY

(Degree Standard)

Time Allowed : 3 Hours] **[Maximum Marks : 300**

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. The applicant will be supplied with Question Booklet 10 minutes before commencement of the examination.
2. This Question Booklet contains **200** questions. Prior to attempting to answer the candidates are requested to check whether all the questions are there and ensure there are no blank pages in the question booklet. **In case any defect in the Question Paper is noticed it shall be reported to the Invigilator within first 10 minutes and get it replaced with a complete Question Booklet. If any defect is noticed in the Question Booklet after the commencement of examination it will not be replaced.**
3. Answer **all** questions. All questions carry equal marks.
4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.
5. An answer sheet will be supplied to you, separately by the Invigilator to mark the answers.
6. You will also encode your Register Number, Subject Code, Question Booklet Sl. No. etc. with Blue or Black ink Ball point pen in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per commission's notification.
7. Each question comprises *four* responses (A), (B), (C) and (D). You are to select ONLY ONE correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose ONLY ONE response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
8. In the Answer Sheet there are **four** circles Ⓐ, Ⓑ, Ⓒ and Ⓓ against each question. To answer the questions you are to mark with Ball point pen ONLY ONE circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. *e.g.* If for any item, Ⓑ is the correct answer, you have to mark as follows :

Ⓐ ● Ⓒ Ⓓ

9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the examination. After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.
10. The sheet before the last page of the Question Booklet can be used for Rough Work.
11. Do not tick-mark or mark the answers in the Question Booklet.
12. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

SEAL

SPACE FOR ROUGH WORK

1. The average density of all surface rocks has been estimated at

(A) 1.7 (B) 2.7

(C) 3.7 (D) 4.7

2. The most generally used method for the geographical location of distant epicentres is the

(A) one circle method (B) two circle method

(C) three circle method (D) four circle method

3. The region of most violent earthquakes that lie in circum-pacific belt is

(A) Himalayan region (B) Burma

(C) Northern Africa (D) Indonesian Archipelago

4. In sem-arid regions, capillary action draws lime-bearing waters to the surface, where by evaporation, a lime-rich deposit is formed called

(A) Stalactite (B) Pillars

(C) Kankar (D) Travertine

5. The zone that extends from the low tide mark or line to the edge of the continental shelf is called

(A) Littoral (B) Neritic

(C) Bathyal (D) Abyssal

6. The small, isolated erosional feature made up of essentially horizontal layered rock produced by stream is known as

(A) Mesa (B) Butte

(C) Hoghack (D) Cuesta

7. The impact of wind itself is sufficient to remove large quantities of earthly matter by the process of

(A) Ablation (B) Transportation

(C) Abrasion (D) Deflation

8. Diamond deposits of Panna belong to ———— series.

(A) Bhander series
(B) Rewah series
(C) Kaimur series
(D) Semri series

9. Fossiliferous marine rocks of Umaria belong to

(A) Cenozoic
(B) Mesozoic
(C) Palaeozoic
(D) Proterozoic

10. Agnigundala Cu-Pb-Zn deposits belong to

(A) Papaghni series
(B) Cheyair series
(C) Nallamalai series
(D) Kistna series

11. Talchir boulder beds are of

(A) Marine origin
(B) Lacustrine origin
(C) Marginal-marine origin
(D) Fluvio-glacial origin

12. The Cuddapah basin is formed in the form of

(A) Hairpin shape
(B) Barchans shape
(C) Pedestal shape
(D) Crescent shape

13. Give the Lithology for Niniyur stage

(A) mostly sand and clay
(B) sand stone, clay and shelly limestone
(C) sand and clay with basal limestone
(D) white sandy limestone and sandstone

14. Gondwana deposits are not found in

(A) Ganga basin
(B) Damodar basin
(C) Godavari basin
(D) Mahanadhi basin

15. Choose the odd one among the following

(A) Sriperumbudur beds
(B) Satyavedu beds
(C) Sivaganga beds
(D) Tabbowa beds

16. Find out the mineral deposit which is not generally related to Archean age

(A) Manganese
(B) Gold
(C) Celestite
(D) Copper

17. Geological age of Daonella shale is

(A) Lower Triassic
(B) Middle Triassic
(C) Upper Triassic
(D) Lower Jurassic

18. ———— is entirely devoid of life forms.

(A) Azoic
(B) Proterozoic
(C) Palaeozoic
(D) Mesozoic

19. Tirohan breccia of semri series is a

(A) Sandstone
(B) Limestone
(C) Mudstone
(D) Claystone

20. The main source of diamond in Kurnool formation is

(A) Banganapalli sandstone
(B) Auk shales
(C) Pinnacled quartzites
(D) Koilkuntla limestone

21. An increase in the continuing (or) lithostatic pressure causes

(1) a decrease in the volume of rocks
(2) an increase in the density of the rock

(A) Statements (1) and (2) are correct
(B) Statement (1) is correct and statement (2) is incorrect
(C) Statement (1) is incorrect and statements (2) is correct
(D) Statement (1) and (2) are incorrect

22. The deformation involve changes in volume only the strain is called

(A) Distortion
(B) Dilation
(C) Stress
(D) Couple force

23. The tangent of the angle between horizontal and the inclined surface is called

(A) Dip
(B) Apparent dip
(C) Strike
(D) Gradient

24. The strike direction is commonly recorded like ———— using quadrant bearing from the north point.

(A) N 25°E
(B) 1 in 25
(C) 120°
(D) N 25°E – S 25°W

25. In a fold, the downward-facing beds are

(A) Overturned beds
(B) Cross beds
(C) Current beds
(D) Graded beds

26. Oscillation ripple marks can readily be used to identify whether a bed is right-side-up or

(A) Inclined
(B) Right-side-down
(C) Overturned
(D) Right-side-vertical

27. Joints perpendicular to the axes of folds are common in orogenic belts, such joints are called

(A) Extension joints
(B) Compression joints
(C) Slip joints
(D) Conjugate joints

28. In an unconformity, the rocks on opposite sides are not parallel, then it is

(A) Disconformity
(B) Non-conformity
(C) Angular unconformity
(D) Local unconformity

29. Graptolite belongs to the ———— phylum.

(A) Protozoa (B) Mollusca

(C) Hemichordata (D) Brachipoda

30. Globigerina ooze is composed of

(A) Siliceous tests (B) Chitinous tests

(C) Calcareous tests (D) Agglutinated tests

31. Crinoidea belong to

(A) Trilobita (B) Echinodermata

(C) Mollusca (D) Graptolites

32. The pelecypod having two similar teeth and socket is termed as

(A) Taxodont (B) Isodont

(C) Heterodont (D) Cyclodont

33. Brachiopods, whose valves can held together by muscles and mantle are grouped under

(A) Articulata (B) Inarticulata

(C) Palaeotremata (D) Neotremata

34. Which of the following Trilobita is eyeless?

(A) Olenellus (B) Calymene

(C) Harpes (D) Isotelus

35. Graptolites are dominantly present during

(A) Cenozoic (B) Mesozoic

(C) Palaeozoic (D) Proterozoic

36. The two values of Articulata brachiopoda are united with one another along the

(A) Anterior margin
(B) Pedicle opening
(C) Suture lines
(D) Cardinal margin

37. Brachiopods are

(A) Planktons
(B) Nectons
(C) Bottom-dwelling bivalves
(D) Freshwater organisms

38. Which trilobite has two thoracic segments?

(A) Olenellida
(B) Opisthoparia
(C) Proparia
(D) Agnostida

39. A line which connects the eye and Posterior-Anterior margin of Cephalon is

(A) Eye line
(B) Thorax
(C) Facial suture
(D) Glabellar grooves

40. Which one of the fossil groups is in correct grouping of pelecypods?

(A) Spondylus, Arca, Murex, Acanthocera
(B) Arca, Spondylus, Meretrix, Trigonia
(C) Fusus, Acanthoceras, Trigonia, Nantilus
(D) Pecten, Nautilus, Leratite, Paradoxide

41. The forms of normal class of isometric system will have

(A) 9 planes of symmetry
(B) 6 planes of symmetry
(C) 3 planes of symmetry
(D) 1 plane of symmetry

42. In normal class of Tetragonal system, the four fold axis of symmetry is

(A) Horizontal
(B) Inclined
(C) Diagonal
(D) Vertical

43. Match the following :

(a)	Steno	1.	32 classes
(b)	Rome del'isle	2.	14 lattices
(c)	Bravais	3.	interfacial angle
(d)	Hessel	4.	contact goniometer

	(a)	(b)	(c)	(d)
(A)	3	4	2	1
(B)	4	1	2	3
(C)	1	2	3	4
(D)	2	3	4	1

44. In orthorhombic system, the prismatic faces intersecting the macro-axis and parallel to the other two axes are named as,

(A) Brachy pinacoid
(B) Macro pinacoid
(C) Basal pinacoid
(D) a-pinacoid

45. The forms that come under normal class of Hexagonal system will have six fold axis of symmetry, which will be

(A) one vertical axis
(B) one horizontal axis
(C) six vertical axes
(D) six horizontal axes

46. Two-circle goniometer is a

(A) Contact-goniometer
(B) Vertical reflecting goniometer
(C) Horizontal reflecting goniometer
(D) Theodolite goniometer

47. The shapes of the faces of the ditetragonal pyramids of the crystals belong to Tetragonal system is

(A) Equalateral triangle
(B) Isosceles triangle
(C) Trapezium
(D) Scalene triangle

48. How many fundamental forms are present in the normal class of the hexagonal division of the hexagonal system?

(A) 6
(B) 7
(C) 8
(D) 10

49. The plane by which the reversed twin crystals are united is known as

(A) Twinning plane
(B) Plane of symmetry
(C) Composition plane
(D) Penetration plane

50. Match the following :

In a crystal belonging to the normal class of tetragonal system.

(a)	Prism of 2nd order	1.	hol
(b)	Pyramid of 1st order	2.	hko
(c)	Pyramid of 2nd order	3.	100
(d)	Ditetragonal prism	4.	hhl

	(a)	(b)	(c)	(d)
(A)	3	1	4	2
(B)	3	4	1	2
(C)	4	1	2	3
(D)	4	2	1	3

51. Find out the

Amphibole mineral

(A) Augite

(B) Tremolite

(C) Hypersthene

(D) Albite

52. Which of the following is a lithium bearing tourmaline?

(A) Dravite

(B) Buergerite

(C) Elbaite

(D) Urite

53. Which of the following is a lithium bearing mica?

(A) Muscovite

(B) Biolite

(C) Lepidolite

(D) Phlogopite

54. Natural hydrated silica is called

(A) Quartz

(B) Opal

(C) Jasper

(D) Chalcedony

55. The refractive index of an extra-ordinary ray in calcite is

(A) 1.658

(B) 1.537

(C) 1.516

(D) 1.615

56. A device which helps bring the image of an interference figure into the focal plane of the ocular is called

(A) Berek compensator

(B) Filar micrometer

(C) Iris diaphragm

(D) Amici Bertrand lens

57. Match the following

	Column A		Column B
(a)	Dolomite	1.	Green color
(b)	Tourmaline	2.	Gem variety
(c)	Chlorite	3.	Double carbonate
(d)	Zircon	4.	Pleochroic

	(a)	(b)	(c)	(d)
(A)	3	4	1	2
(B)	3	1	4	2
(C)	3	1	2	4
(D)	4	1	3	2

58. HORNBLENDE, is,

I. A single chain silicate

II. A Aluminous amphibole

(A) Statement I and II are correct

(B) Statement I and II are incorrect

(C) Statement I is correct; II is incorrect

(D) Statement I is incorrect; II is correct

59. The optical accessary used in the Petrological microscope for the determination of the interference colors is,

(A) Mica plate (B) Gypsum plate

(C) Bertrand lens (D) Quartz wedge

60. In the Petrological microscope, polarization by the Nicol prism is accomplished,

(A) by reflection (B) by refraction

(C) by absorption (D) by double refraction

61. ———————— rock is characterized by the typical absense of felspars and dominance of olivine and pyroxenes.

(A) Gabbro
(B) Essexite
(C) Dunite
(D) Norite

62. The colour index of hypermelanic rocks are

(A) above 70
(B) above 80
(C) above 90
(D) 75

63. Biotite – granite exhibits ———————— texture.

(A) Merocrystalline
(B) Holocrystalline
(C) Holohyaline
(D) Panidiomorphic

64. ———————— and ———————— are alkali syenites.

(A) Theralite and teschenite
(B) Shonkinite and monzonite
(C) Shonkinite and pulaskite
(D) Theralite and canadite

65. The average silica per-centage present in over saturated rocks

(A) < 66%
(B) > 66%
(C) < 60%
(D) 48 – 65%

66. The volcanic equivalent of granodiorite is

(A) Rhyolite
(B) Dacite
(C) Trachyte
(D) Andesite

67. _____ are igneous masses which seal by the vents of ancient volcanoes

(A) caldera
(B) volcanic necks
(C) volcanic plugs
(D) cone sheets

68. The vesicles / cavities in a block lava are

(A) smaller and regular
(B) larger and irregular
(C) smaller and irregular
(D) larger and regular

69. The dimension of sills are

(A) stress
(B) inversely proportional to the viscosity of magma
(C) directly proportional to the viscosity of magma
(D) attitude of the formation

70. The conglomerate with more complex in lithological composition is known as

(A) Oligomictic conglomerate
(B) Basal conglomerate
(C) Polymictic conglomerate
(D) Glacial conglomerate

71. Oncolites are

(A) Calcareous accretionary bodies
(B) Mechanically accreted primary structures
(C) Voidal iron-oxide bodies
(D) Structureless nodules

72. ———————— is a reddish , porous, concretionary material which covers vast areas in tropical and sub-tropical lands

(A) Regolith

(B) Terra Rossa

(C) Laterite

(D) Scree

73. The sedimentary beds with oblique lines of stratification are seen in

(A) Cross bedding

(B) Current bedding

(C) Oblique bedding

(D) False bedding

74. The grain size of fine sand is ranging from

(A) 1 mm to 0.5 mm

(B) 0.5 mm to 0.25 mm

(C) 0.25 mm to 0.1 mm

(D) 0.10 mm to 0.01 mm

75. The Ketazone is the high temperature of ———————— and great depth type of metamorphic zone.

(A) less than 300° C

(B) 200° – 400° C

(C) 500° – 800° C

(D) 300° – 500° C

76. Metamorphic changes take place within ———— range of temperature.

(A) 300° C – 500° C

(B) 250° C – 650° C

(C) 350° C – 850° C

(D) Below 250° C

77. Find out the rock which is present in ancient oceanic lithosphere.

(A) Ophiolite

(B) Amphibolite

(C) Green schist

(D) Blue schist

78. ———— facies is a type of low-grade metamorphism.

(A) Amphibolite

(B) Green-schist

(C) Eclogite

(D) Granulite

79. Granulose structure is due to the predominance of ———— minerals.

(A) flak

(B) equidimentional

(C) cleavable

(D) lamellar

80. In metamorphism, hydrostatic pressure leads to change in

(A) Shape

(B) Volume

(C) Both shape and volume

(D) Size

81. The symbol of a given crystal form is the indices of the face of that form which has the simplest relations to the

(A) Crystallographic axes

(B) Crystallographic planes

(C) Centre of symmetry

(D) Diagonal axes of symmetry

82. Quartzite and sand stones can be recognised in the aerial photos by means of their ———— tone.

(A) light grey
(B) white
(C) medium grey
(D) dark grey

83. A well that is far from known oil or gas production in order to secure a complete record of the formation is

(A) dry well
(B) shaft
(C) wildcat well
(D) core well

84. Dams aligned along axial regions of the folds would be resting on most ———— rocks in terms of strength.

(A) unsound
(B) sound
(C) most sound
(D) moderate sound

85. The Salal Dam in Jammu is the best example for

(A) microjoints
(B) parallel bedding
(C) down stream dipping
(D) folded formation

86. Open-cut strip mining requires removing a series of horizontal slices called

(A) Flipped over
(B) Berms
(C) Batters
(D) Flitches

87. ———— are linear features in satellite images that are caused by linear alignment of features such as streams, mountains, faults.

(A) Linears
(B) Lineaments
(C) Lineation
(D) Contact line

88. Dolerite and Pyroxenite rocks can be recognised in the aerial photos by means of their ———— tone.

(A) Light grey
(B) White
(C) Medium grey
(D) Dark grey

89. Simultaneous solution of pre-existing components from a rock and replacement of the same by new minerals. In which type of mineral deposit the above said process may occur?

(A) Magmatic deposits
(B) Metasomatic deposits
(C) Pegmatite deposits
(D) Sedimentary deposits

90. Find out the stratified deposit type

(A) Saddle reefs
(B) Veins
(C) Shear-zone deposits
(D) Stock works

91. Find out the non-placer mineral from the followings

(A) Platinum
(B) Garnet
(C) Bauxite
(D) Tungsten

92. Match the following :

	Group		Mineral
(a)	Mineral fuels	1.	Corundum
(b)	Metallic minerals	2.	Uranite
(c)	Non-metallic minerals	3.	Chromite
(d)	Nuclear minerals	4.	Coal

	(a)	(b)	(c)	(d)
(A)	4	3	1	2
(B)	4	3	2	1
(C)	3	4	1	2
(D)	3	4	2	1

93. A rock or material which can be profitably mined for the purpose of metal extraction is known as

(A) Mineral
(B) Ore
(C) Gangue
(D) Metal

94. Important mineral deposit in the Shevaroy hills in Tamilnadu is

(A) Iron ore

(B) Magnesite

(C) Limestone

(D) Bauxite

95. Match the following :

	Mineral or Metal		Diagnostic colour
(a)	Copper	1.	Black
(b)	Nickel	2.	Green and Blue
(c)	Molybdenum	3.	Green
(d)	Manganese	4.	Bright Yellow

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	1	3	4	2
(C)	4	1	2	3
(D)	4	3	1	2

96. _____ are those whose existence is considered probable after a certain amount of prospecting work and geological observations.

(A) Probables reserves

(B) Possible reserves

(C) Assured reserves

(D) Inferred reserves

97. A strato-volcano exhibits rough stratification produced by

(A) Pyroclastic material

(B) Alternate sheets of lava

(C) Dykes

(D) Alternate sheet of lava and pyroclastic material

98. In the deltaic feature, the fore-set beds have ———— inclination.

(A) horizontal

(B) gentle slope

(C) steep inclination

(D) gentle inclination toward seaward

99. A very deep valley, developed in Limestone rocks, formed by the solution processes, is known as

(A) Blind valley

(B) Karst valley

(C) Swallow holes

(D) Polje

100. The channels of many meandering streams are bordered by

(A) Flood plains

(B) Braided streams

(C) Natural levees

(D) Point bars

101. The volcanoes that are built up from alternate layers of lava and ash, but besides the main crater, it has many craters on the slope, then the volcano is termed as

(A) Ash-cinder volcano

(B) Strato-volcano

(C) Fissure-volcano

(D) Caldera-volcano

102. The complex of geomorphic processes and agents which operate under a particular set of climatic conditions has been termed as

(A) Landforms

(B) Simple landscapes

(C) Morphogenetic system

(D) Compound landscapes

103. Long scoop-shaped hollows of sand with points tapering to windward and with a windward slope gentler than leeward are known as

(A) Transverse
(B) Parabolic dunes
(C) Longitudinal dune
(D) Sand levees

104. The frost-shivered fragments fall to lower levels of mountains and accumulate as angular debris are called

(A) Talus
(B) Screes
(C) Humus
(D) Hard-pan

105. Evidence from the salinity of the oceans indicate that the age of the oceans must be atleast

(A) 1500 my
(B) 1600 my
(C) 1700 my
(D) 1800 my

106. What is the primary effect of attrition by wind?

(A) change in shape
(B) reduction in size
(C) reduction of wind velocity
(D) reduction of distance of transport

107. 'A certain constant fraction of any sample of radioactive element undergoes change in a unit time'. This law of radioactive disintegration was framed by

(A) Laplace
(B) Q.J. Schmidt
(C) Marie curie
(D) Rutherford

108. When two Lithospheric plates are moving away from each other, inducing the development of newsurfaces, this margin of the plate is identified as,

(A) Destructive margin
(B) Conservative margin
(C) Constructive margin
(D) Neutral margin

109. The sulphorous gases that escape from the fumeroles are called as,

(A) Saffoni
(B) Mofettes
(C) Travertine
(D) Salfataras

110. Ptilophyllum is an index fossils of

(A) Jurassic
(B) Triassic
(C) UP. Gondwana
(D) L. Gondwana

111. Upper Gondwana beds of Trichirapalli contains

(A) Micaceous shale and clay
(B) Fossiferous limestone
(C) Conglomerate
(D) Dolomite

112. Find out the correct stratigraphic sequence

(A) Patcham series, Umia series, Katrol series, Chari series
(B) Umia series, Katrol series, Chari series, Patcham series
(C) Patcham series, Chari series, Katrol series, Umia series
(D) Katrol series, Patcham series, Chari series, Umia series

113. Find out the youngest stage of cretaceous succession in Trichirapalli

(A) Uttatur
(B) Trichirapalli
(C) Niniyur
(D) Ariyalur

114. Age of Satyavedu conglomerate is

(A) Cretaceous
(B) Jurassic
(C) Upper Gondwana
(D) Lower Gondwana

115. The famous kolar gold mines of India are located which one rocks?

(A) Cuddapah
(B) Archean
(C) Vindhyan
(D) Gondwana

116. A definite system of time-units and rock-units has been established and adapted in historical geology. To find out which one is correct

(A) Epoch-Series
(B) Era-System
(C) Age-Group
(D) Period-Stage

117. The ratio between the density of a mineral to that of water at 4° Celsius is known as

(A) Hardness

(B) Specific gravity

(C) Tenacity

(D) Surface tension

118. The angle of inclination of the fold axis from the horizontal is called as

(A) Interfacial angle

(B) Plunge

(C) Monocline fold

(D) Over fold

119. The hanging wall in a vertical section at right angles to the strike of the fault, appears to have gone down relative to the foot wall, then the fault is

(A) Apparent overthrust fault

(B) Apparent reverse fault

(C) Apparent thrust fault

(D) Apparent normal fault

120. The Chamundi granite is the best example for

(A) Sheet joints

(B) Mural joints

(C) Master joints

(D) Shear joints

121. The anticlines become sharper with depth, but broader and more open upward. Conversely, the synclines becomes broader with depth, but sharper upward, then the fold is called

(A) Similar

(B) Concentric

(C) Piercing

(D) Plunging

122. Within the elastic limit, what is the relation of stress and strain?

(A) Strain is proportional to stress

(B) Stress is inversely proportional to strain

(C) Stress is less than strain

(D) Stress is greater than strain

123. If a rock with upper triassic fossils is directly overlain by rocks with lower cretaceous fossils, even though the strata may appear to be conformable, then it is

(A) Fold
(B) Fault
(C) Unconformity
(D) Joint

124. A form of rupture similar to jointing is best exposed in artificial openings such as quarries is called

(A) Exfoliation
(B) Sheeting
(C) Tension joints
(D) Release joints

125. The angle between the fault plane and a vertical plane that strikes parallel to the fault is the

(A) Dip
(B) Strike
(C) Slip
(D) Hade

126. A local unconformity is similar to a

(A) Angular unconformity
(B) Disconformity
(C) Non-conformity
(D) Angular non-conformity

127. The apparent dip value will be always ———— to the true dip.

(A) equal
(B) less
(C) greater
(D) vertical

128. The surface indicating a hiatus in a normal order of sequence then it is called as

(A) Conformable series
(B) Unconformity
(C) Horst
(D) Over thrust

129. A complete skeleton of single theca of a solitary coral or united thecae of a colony is designated as

(A) Corallum
(B) Septa
(C) Scelerosepta
(D) Basal Plate

130. Foraminiferal tests range in size

(A) From 0.1 to 1.0 mm
(B) From 0.01 to 19.0 mm
(C) From 1.0 to 10.0 mm
(D) From 1.0 to 10.0 cm

131. Megalospheric tests consists

(A) Smaller shell and large proloculus
(B) Large shell and large proloculus
(C) Large shell and small proloculus
(D) Small shell and small proloculus

132. Age of Terebratulina is

(A) Jurassic to present day
(B) Carboniferous to present
(C) Cambrian-recent
(D) Triassic-present

133. Which one is megascopic foraminifera fossil?

(A) Nummulite
(B) Globigerina
(C) Orbulina
(D) Rotalia

134. The oculogenetal system of Echinoid consists of ———— number of ocular plate and ———— number of genetal plate.

(A) 5 and 5
(B) 3 and 4
(C) 3 and 3
(D) 4 and 3

135. Heart shaped echinoid is

(A) Holectypus
(B) Conulus
(C) Pygaster
(D) Micraster

136. Nodo saria is a

(A) Ostracoda
(B) Mollusca
(C) Trilobita
(D) Foramini fera

137. For the forms that come under normal class of Hexagonal system will have

(A) 6 Horizontal planes

(B) 6 Vertical planes

(C) 4 Inclined planes

(D) 4 Vertical planes

138. In monoclinic system, the acute angle between the axes "a" and "c" is represented by the symbol

(A) α (B) β

(C) γ (D) θ

139. The contact-goniometer consists of a card on which is printed a semi-circular are graduated to

(A) $\frac{1}{2}$ degrees (B) $\frac{1}{4}$ degrees

(C) $\frac{3}{4}$ degrees (D) One degrees

140. A mineral showing no external form, but having a definite internal molecular structure is referred as,

(A) Massine (B) Crystalline

(C) Amorphous (D) Isomorphous

141. This mineral is having two sets of polysynthetic twinning

(A) Albite (B) Pericline

(C) Microcline (D) Sphalerite

142. Name the crystallographic system where $a \neq b \neq c$ and $\alpha \equiv \beta \equiv \gamma \equiv 90^\circ$

(A) Tetragonal (B) Rhombohedral

(C) Orthorhombic (D) Triclinic

143. With few exceptions, the twins of the normal class of isometric system will be of

(A) Contact twins

(B) Penetration twins

(C) Repeated twins

(D) Polysynthetic twins

144. The type mineral of the normal class of the hexagonal system is

(A) Calcite

(B) Tourmalines

(C) Corundum

(D) Beryl

145. Match the following :

	System		Axial Ratio
(a)	Isometric	1.	$a_1 = a_2 \neq c$
(b)	Tetragonal	2.	$a_1 = a_2 = a_3$
(c)	Orthorhombic	3.	$a_1 = a_2 = a_3 \neq c$
(d)	Hexagonal	4.	$a \neq b \neq c$

	(a)	(b)	(c)	(d)
(A)	2	1	4	3
(B)	2	4	1	3
(C)	2	1	3	4
(D)	2	3	1	4

146. Which of the following minerals ———— is not crystallizing in the Triclinic system?

(A) Albite

(B) Axinite

(C) Orthoclase

(D) Rhodonite

147. When light passes from one medium to another medium, there is a generally a decrease (or) increase in velocity, which is known as

(A) Refraction
(B) Reflection
(C) Double refraction
(D) Isotropism

148. A colored mineral, which shows a change in the intensity of color, during rotation in plane-polarised light, is referred as,

(A) Isotropic
(B) Anisotropic
(C) Mono chromatic
(D) Pleochroic

149. I. As the objective lens is raised the Becke line moves into the substance of higher refractive index.

II. As the microscope stage is raised the Becke line moves into the substance of higher refractive index

(A) Statement I and II are correct
(B) Statement I and II are incorrect
(C) Statement I is correct and II is incorrect
(D) Statement I is incorrect and II is correct

150. Dolomite crystallizes under

(A) Monoclinic system
(B) Triclinic system
(C) Cubic system
(D) Hexagonal system

151. Garnet minerals crystallize under

(A) Monoclinic system
(B) Triclinic system
(C) Cubic system
(D) Orthorhombic system

152. Percussion figure is produced in the mineral

(A) Amphibole
(B) Mica
(C) Pyroxene
(D) Quartz

153. A process of emission of light at the same time as the irradiation is called

(A) Phosphorescence

(B) Fluorescence

(C) Incandescence

(D) Luminescence

154. The following mineral is having adamantine luster.

(A) Cassiterite

(B) Stilbite

(C) Albite

(D) Heulandite

155. I. 'Pyro electric' minerals develop an electric charge when subjected to a change in stress.

II. 'Piezo electric' minerals develop an electric charge when subjected to a change in temperature

(A) Statement I and II are correct

(B) Statement I is correct and II is incorrect

(C) Statement I and II are incorrect

(D) Statement I is incorrect and II is correct

156. The property of a mineral, to display play of color due to the interference of rays of light either by minute globules of water trapped in the crystal lattice (or) by distortion in the atomic lattice, is known as,

(A) Pleochroism

(B) Schiller

(C) Iridescence

(D) Opalescence

157. When Nepheline replaces the feldspar in quartz gabbro, the rock approaches to

(A) Norite
(B) Essexite
(C) Pyroxenite
(D) Monzonite

158. The ratio of FeO to Fe_2O_3 is ———— in the ropy lava.

(A) greater
(B) smaller
(C) equal
(D) constant

159. The mineralogical composition of norite is

(A) Anorthite and Clinopyroxene
(B) Anorthite and Orthopyroxene
(C) Labrodorite and Orthopyroxene
(D) Labrodorite and Clinopyroxene

160. ————, ———— and ———— are mafic minerals.

(A) Biotite, Hypersthene, Leucite
(B) Biotite, Hypersthene, olivine
(C) Biotite, Hornblende, Orthoclase
(D) Biotite, Hornblende, Analcite

161. ————, ———— and ———— are salic minerals

(A) Quartz, Albite, Apatite
(B) Quartz, Albite, Hypersthene
(C) Quartz, Albite, Zircon
(D) Quartz, Albite, Acmite

162. Find out the name of the rocks for the composition of andesite, quartz, hornblende, biotite and orthoclase

(A) Tonalitis
(B) Gabbros
(C) Granodiorite
(D) Granite

163. The volcanic rock which is the equivalent of monzonite , carrying alkali-feldspar and soda-lime feldspar in approximately equal amounts is called

(A) Trachyte
(B) Trachyandesite
(C) Andesite
(D) Dacite

164. Fast cooling and high viscosity favour the formation of

(A) bigger crystals
(B) smaller crystals
(C) glass
(D) both (A) and (B)

165. The transformation of glass to crystalline matter is called

(A) crystallisation
(B) devitrification
(C) recrystallisation
(D) felsitisation

166. The rock which more often forms glassy form is

(A) Andesite
(B) Rhyolite
(C) Basalt
(D) Trachyte

167. Textures in igneous rock is defined as

(A) size and shape of the grains arrangement
(B) mutual relation of mineral and glassy matter
(C) ratio between crystallized and non-crystallised
(D) the fabric

168. Find out the incorrect carbonate rock

(A) limestone
(B) dolomite
(C) marl
(D) magnesite

169. Chalk is a type of

(A) mud stone
(B) dolomite
(C) gypsum
(D) lime stone

170. In aqueous ripple marks, the finer grains are found on the

(A) crests
(B) troughs
(C) short slopes of the ripple
(D) long slopes of the ripple

171. A sand stone with abundant feldspar derived from the disintegration of granite is called

(A) Grit
(B) Arkose
(C) Graywacke
(D) Ganister

172. Very plastic, highly aluminous and iron free clay is called

(A) fire clay
(B) chira clay
(C) brick clay
(D) pottery clay

173. Graywacke is chiefly composed of

(A) Quartz and orthoclase
(B) Quartz and plagioclase
(C) Quartz and muscovite
(D) Quartz and biotite

174. Match the followings :

(a)	Cataclastic structure	1.	Lense like appearance
(b)	Schistose structure	2.	Spotted appearance
(c)	Maculose structure	3.	Parallel bands of platy minerals
(d)	Augen structure	4.	Extremely fine rock mass

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	4	3	2	1
(C)	4	3	1	2
(D)	1	2	4	3

175. Find out the non-foliated rock

(A) Quartzite

(B) Slate

(C) Schist

(D) Gneiss

176. Find out the correct sequence :

1. Slate → Phyllite → Schists → Shale
2. Shale → Phyllite → Schists → Slate
3. Shale → Slate → Phyllite → Schists
4. Phyllite → Schist → Shale → Slate

(A) 1 (B) 2

(C) 3 (D) 4

177. The rotary drilling used in which formation?

(A) Formation change from soft to hard

(B) Soft formation

(C) Hard formation

(D) Formation change from hard to soft

178. Idukki Dam is a type of

(A) Gravity Dam

(B) Buttress Dam

(C) Arch Dam

(D) Earth-rock fill Dam

179. It is employed in the exploitation of placers occurring underground at depths, such as buried beach placers and ancient river channels, the mining method is

(A) Long tom

(B) Dredging

(C) Drift mining

(D) Ground sluicing

180. Small sized, irregular and unsystematic underground workings that comprise drifts or other openings, which follow the ore shoot or vein is called

(A) Breast stoping

(B) Gophering

(C) Open underhand stoping

(D) Open overhand stoping

181. Joints that dip from 0° to 20° irrespective of strike to the tunnel axis is

(A) Favourable

(B) Unfavourable

(C) Fair

(D) Very favourable

182. The wavelength of microwave region of EMR is

(A) 0.4 to 0.7 micrometers.

(B) 1.0 to 1.4 micrometers

(C) 0.1 mm to 0.5 mm

(D) 1 mm to 1 m

183. The critical angle of slope varies from ———————— for perfectly crystalline unjointed rocks, as for as landslides are concerned.

(A) 45° (B) 60°

(C) 75° (D) 90°

184. ———————— is one of the longest masonry-earth dams of the world as in 2003.

(A) Krishnaraja Sagar

(B) Nagarjuna Sagar

(C) Bhakra Dam

(D) Hirakud Dam

185. When the layers of weak plastic character such as those of peat and shale are overlain by other deposits, there is a possibility of

(A) Slump (B) Subsidence

(C) Rock fall (D) Rock slides

186. What is the length of the Hirakud Dam?

(A) 5400 m (B) 5800 m

(C) 4800 m (D) 4400 m

187. The greatest number of large dams are in

(A) Madhya Pradesh (B) Maharashtra

(C) Gujarat (D) Karnataka

188. The longest dam, the Hirakud dam built across ———————— river.

(A) Ganges (B) Godavari

(C) Mahanadi (D) Krishna

189. Porphyritic copper deposit is a

(A) Vesicular filling deposit

(B) Breccia filling deposit

(C) Replacement deposit

(D) Ladder vein deposit

190. Which of the following is 'not' a process of mineral formation?

(A) Sublimation

(B) Sedimentation

(C) Erosion

(D) Evaporation

191. Alabaster is a softer and lighter variety of

(A) Calcium sulphate

(B) Gypsum

(C) Borax

(D) Celestite

192. The chief boron mineral formed by evaporation of playas is

(A) Colemanite

(B) Mirabilite

(C) Argendite

(D) Travertine

193. The Hutti gold deposit occurs as

(A) Ladder vein

(B) Saddle reef

(C) Pitches and Flat

(D) Breccia filling deposit

194. Copper sulphides minerals are formed by

(A) Evaporation

(B) Sedimentation

(C) Magmatic concentration

(D) Mechanical concentration

195. The temperature of formation of hypothermal deposits are between ———— deg C.

(A) 50 and 200
(B) 200 and 300
(C) 300 and 500
(D) 500 and 800

196. The mineral Bronzite Crystallizes in ———— system.

(A) Rhombohedral
(B) Triclinic
(C) Hexagonal
(D) Orthorhombic

197. The composition of chalcopyrite mineral is

(A) $CuFeS_2$
(B) Cu_2S
(C) FeS_2
(D) $FeSO_4$

198. The high temperature hydrothermal deposit is called as

(A) Epithermal deposit
(B) Mesothermal deposit
(C) Hypothermal deposit
(D) Epi-Mesothermal deposit

199. Tertiary coal field is found in

(A) Andhra Pradesh
(B) Bihar
(C) Maharashtra
(D) Jammu and Kashmir

200. This copper ore is common in oxidation zone

(A) Bornite
(B) Cuprite
(C) Chalcopyrite
(D) Covelite

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