

Sl. No. :

70001161

ACFGE

Register
Number

--	--	--	--	--	--	--	--	--	--

2014

GEOLOGY

Time Allowed : 3 Hours]

[Maximum Marks : 300

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

IMPORTANT INSTRUCTIONS

1. This Booklet has a cover (this page) which should not be opened till the invigilator gives signal to open it at the commencement of the examination. As soon as the signal is received you should tear the right side of the booklet cover carefully to open the booklet. Then proceed to answer the questions.
2. This Question Booklet contains 200 questions. Prior to attempting to answer the candidates are requested to check whether all the questions are there in series without any omission 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.
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 (A), (B), (C) and (D) against each question. To answer the questions you are to mark with Blue or Black ink 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, (B) is the correct answer, you have to mark as follows :

(A) ● (C) (D)
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. 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.
12. In all matters and in cases of doubt, the English Version is final.
13. Do not tick-mark or mark the answers in the Question booklet.

SEAL

SPACE FOR ROUGH WORK

13110005

1. The age of solar system is judged to be

(A) 3:0 to 3:5 billion years <input checked="" type="checkbox"/> (C) 4.5 to 5.0 billion years	(B) 2:0 to 3.0 billion years (D) 5.0 to 5.5 billion years
--	--

2. The continental crust is

(A) 76 – 93 kilometers thick (C) 12 – 29 kilometers thick	<input checked="" type="checkbox"/> (B) 32 – 56 kilometers thick (D) 108 – 120 kilometers thick
--	--

3. Alluvial fans normally occur

<input checked="" type="checkbox"/> (A) near the mountain front (C) in river meanders	(B) near river banks (D) along the shoreline
--	---

4. Soil profile is a vertical cross section through

(A) zones (C) blocks	<input checked="" type="checkbox"/> (B) horizons (D) layers
-------------------------	--

5. Hot springs are

(A) periodic discharges of hot ground water <input checked="" type="checkbox"/> (B) more or less continuous discharges of hot ground water (C) surface water body with high temperature (D) reservoir confined above and below less permeable rocks	
--	--

6. Chelation encourages

<input checked="" type="checkbox"/> (A) chemical weathering (C) biological weathering	(B) physical weathering (D) desilication
--	---

7. Loess is a

<input checked="" type="checkbox"/> (A) wind deposit composed of silt (C) river deposit composed of sand	(B) wind deposit composed of gravel (D) river deposit composed of gravel
---	---

8. Salt weathering is also called as

(A) thermoclasty (C) dissolution	(B) slaking <input checked="" type="checkbox"/> (D) haloclasty
-------------------------------------	---

9. Levees are formed due to

<input checked="" type="checkbox"/> (A) deposition near the banks of the river (C) deposition near the beach	(B) deposition near the foot hills (D) deposition along the estuaries
---	--

10. Inner part of the core is

(A) Vacuum

(B) Liquid

(C) Solid

(D) Water vapour

11. Oxidation weathering chiefly affects

(A) minerals containing carbon

(B) minerals containing calcium carbonate

(C) minerals containing organic content

(D) minerals containing iron

12. Chestnut soils are developed under

(A) tall-grass prairie vegetation

(B) short-grass vegetation

(C) coniferous forests

(D) tropical rain forests

13. Spheroidal weathering occurs because weathering is more intense on

(A) upper layer of basement rock

(B) igneous rocks

(C) interior part of rock formation

(D) edges and corners

14. Mineral stability is also called as

(A) weathering series

(B) crystallography

(C) chelation

(D) mobility series

15. Match the List - I with List - II

List - I

List - II

(a) Paleosols

1. two-types of parent material

(b) Polygenetic soils

2. sequence of soil profiles

(c) Composite profile

3. ancient landscape

(d) Soil catena

4. complex soils

(a) (b) (c) (d)

(A) 3 4 1 2

(B) 3 4 2 1

(C) 4 3 1 2

(D) 1 2 3 4

16. Magnetic reversals are useful in giving relative and absolute dates to events in

(A) Mountain formation

(B) Shoreline changes

(C) Paleochannels

(D) Ocean basins

17. Puzzle of determining the age of the earth is unlocked by
 (A) Tree rings (B) Sedimentary basins
 (C) Meteorites (D) Radioactivity
18. Frost action will normally takes place in
 (A) Cold environments (B) Dissert environments
 (C) Seafloor (D) Mid-ocean ridges
19. Hanging valley is higher than the
 (A) Main stream (B) Mountain
 (C) Reservoir (D) Backwaters
20. Hydro fracturing process comes under
 (A) Chemical weathering (B) Physical or mechanical weathering
 (C) Biological weathering (D) All of the above
21. A Caldera that develops where collapse is followed by the doming of the central block is
 (A) Explosive caldera (B) Collapse caldera
 (C) Resurgent caldera (D) Erosion caldera
22. Pick out the right statement
 (A) Symmetrical ripples help in determining current direction
 (B) Bed thickness is a criteria in determining overturned beds
 (C) Fossils may be of great help in indicating whether beds are right side up or not
 (D) Current ripples can be used to determine top from bottom
23. Guyots are
 (A) Volcanic chains (B) Volcanic hills
 (C) Volcanic islands (D) Flat-topped seamounts
24. The subsidiary folds of main recumbent folds may be called as
 (A) digitations (B) root zone
 (C) arch-bend (D) kink bands
25. Identify the fault in which the hanging wall has move up relative to the footwall
 (A) Wrench fault (B) Strike-slip fault
 (C) Detachment fault (D) Thrust fault

26. Name the fold in which two limbs dip away from each other
- (A) Fan fold (B) Anticlinal fan fold
~~(C) Synclinal fan fold~~ (D) Box fold

27. Very complex patterns of soft – sediment folds may be termed as
- (A) Tepee structure ~~(B) Convolute bedding~~
 (C) Flame structure (D) Dish structure

28. Identify the important criteria for geometrical classification
- I the rake of the net slip and pattern of faults
 II the attitude of the fault relative to the attitude of the adjacent rocks
 III the angle at which the fault dips
 IV the apparent movement on the fault
- (A) Both I and II are important criteria
 (B) I, II and III are important
~~(C) I, II, III and IV are important criteria~~
 (D) II, III and IV are important

29. Anderson theory explains
- (A) the formation of composite sills
 (B) the formation of batholith structure
 (C) the formation of fractures occupied by ring dikes
~~(D) the formation of fractures occupied by ring dikes and cone sheets~~

30. Primary foliation forms are those that form
- (A) after the crystallisation of magma
~~(B) during the flowage of a partially crystallised magma~~
 (C) long after the crystallisation of magma
 (D) during the flowage of a entirely crystallised magma

31. Match the List I with the List II and select the answer using the codes given below the Lists

List I		List II	
(a) Lava cones		1. built chiefly of pyroclastic material	
(b) Hornitos		2. built of alternating layers of Lava and Pyroclastic material	
(c) Pyroclastic cones		3. are broad cones with low angles of slope	
(d) Composite cones		4. relatively small, eruption of plastic blobs of lava	

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

32. Which of the following is / are wrong?

- I Differentiated sills are injected horizontal sheets of magma
 - II Distinction of differentiated sill from composite sill may be difficult
 - III A differentiated sill will have at both the top and bottom relatively thick layers
- (A) Only III is correct
 (B) Both I and II are correct
(C) I and III are wrong
(D) Only II is correct

33. Which one of the following is correctly matched?

- I Laccolith – up lifted along an arcuate fault
- II Bysmalith – domed up the strata
- III Bushveld Igneous complex – Lopolith
- IV Phacolith – Oval shape in cross section

- (A) I (B) II
 (C) III (D) IV

34. Name the bedding that develops wherever sand has dropped over the edge of a growing sand bar, over the front of a sand dune and over the edge of a growing small delta .

- (A) Graded bedding (B) Hummocky cross bedding
 (C) Cross bedding (D) Torrential bedding

35. In one of the folds listed below, the deformation has been intense so that the beds become thicken and thin

- (A) Open fold (B) Drag fold
(C) Parellel fold (D) Tight fold

36. Consider the following statements :

Assertion (A) : The lower beds above the unconformity may consist of conglomerate with pebbles

Reason (R) : These pebbles show composition similar to those formations lying below the unconformity

- (A) Both (A) and (R) are individually true but (R) is not the correct explanation of (A)
(B) (A) is true but (R) is false
(C) (A) is false but (R) is true
 (D) Both (A) and (R) are individually true and (R) is the correct explanation of (A)

37. Match the List I with List II and select the correct answer using the codes given below :

List I		List II	
(a)	En échelon faults	1.	Net slip is parallel to strike of the fault
(b)	Parallel faults	2.	Hanging wall moved downward
(c)	Strike-slip fault	3.	Short faults that overlap each other
(d)	Normal fault	4.	Faults have essentially the same dip and strike

	(a)	(b)	(c)	(d)
(A)	3	4	2	1
<input checked="" type="checkbox"/> (B)	3	4	1	2
(C)	3	2	4	1
(D)	3	1	2	4

38. Which is the correct statement for up thrust fault?

- (A) A fault in which the footwall has been the active element
- (B) A high angle fault along which the relatively uplifted block has been the active element
- (C) A fault that dips less than about 10° and has a large net slip
- (D) It is a low angle normal fault due to downhill sliding of rocks from an uplifted region

39. The explanation of the term : "Décollement" may be that

- (A) Sedimentary strata lying over the basement crystalline rock thrown into faulted segments because of the presence of salt beds of the base
- (B) Sedimentary strata lying over crystalline basement rock thrown into series of anticlines and synclines because of weak shales and salt beds at the base
- (C) Sedimentary strata over the crystalline basement rocks thrown into recumbent folds because of the presence of salt beds at the bottom
- (D) Sedimentary strata above the basement rocks thrown into complex fold patterns because of the presence of shale layer at the bottom

40. Mention the other name of strike-slip faults

- (A) Detachment faults
- (B) Reverse faults
- (C) Wrench faults
- (D) Gravity faults

41. The top most of the Kistna group is

- (A) Pulivendla quartzites
- (B) Srisailam quartzites
- (C) Bairenkonda quartzites
- (D) Gulcheru quartzites

42. Which group is particularly well developed in the eastern part of the Cuddapah basin?
(A) Papaghni group (B) Kistna group
~~(C) Nallamalai group~~ (D) Cheyair group
43. The name 'Gondwana' was introduced in 1872 by
~~(A) H.B. Medicott~~ (B) James Hutton
(C) William Smith (D) R. Bruce Foote
44. Which one of the following terms is derived from the Latin Word for Chalk and was originally applied to rocks extensively developed in the Paris basin?
(A) Triassic ~~(B) Cretaceous~~
(C) Jurassic (D) Carboniferous
45. The Dharwars were first studied in 1880 by
(A) Thomas Holland (B) Smeeth
~~(C) R. Bruce Foote~~ (D) D. Rama Rao
46. Fairly full succession of the Dharwars is found in
~~(A) Shimoga belt~~ (B) Kolar belt
(C) Chitaldrug belt (D) Nagamangala belt
47. The Dharwars exhibit _____ plunging folds.
(A) Southerly (B) Westerly
~~(C) Northerly~~ (D) Easterly
48. Which one of the following sequence is true for the Cuddapah super group?
~~(A) Kistna, Nallamalai, Cheyair, Papaghni~~
(B) Kistna, Nallamalai, Papaghni, Cheyair
(C) Nallamalai, Kistna, Cheyair, Papaghni
(D) Nallamalai, Kistna, Papaghni, Cheyair
49. Pick out the correct sequence
~~(A) Bhandar, Rewa, Kaimur, Semri~~ (B) Bhandar, Rewa, Semri, Kaimur
(C) Rewa, Bhandar, Semri, Kaimur (D) Rewa, Bhandar, Kaimur, Semri

50. Large trunks as well as broken pieces of fossil wood in several places are found in
 (A) Trichinopoly Group (B) Uttatur Group
 (C) Ariyalur Group (D) Niniyur Group
51. Which one of the following does not indicate physical evidence of correlation?
 (A) Unconformable relations (B) Structural development
 (C) Continuity of strata (D) Evolutionary development
52. Which one of the following is in the correct order of sequence?
 (A) System, Series, Stage, Zone (B) Series, System, Stage, Zone
 (C) System, Series, Zone, Stage (D) Series, System, Zone, Stage
53. Which one of the following terms was originally used in Geology by Fuchsel for the continuous succession of strata produced under similar conditions?
 (A) Formation (B) Group
 (C) System (D) Series
54. Which one of the following groups of the Vindhya is mainly calcareous?
 (A) Rewa Group (B) Semri Group
 (C) Kaimur Group (D) Bhandar Group
55. The duration of the Cretaceous period is
 (A) 80 million years (B) 70 million years
 (C) 55 million years (D) 40 million years
56. The fossils definitely indicate a _____ age for the Panchet Group.
 (A) Upper Carboniferous (B) Lower Triassic
 (C) Upper Triassic (D) Middle Triassic
57. Needle Shales are found in
 (A) Talchir (B) Barakar
 (C) Raniganj (D) Karharbari

58. The geological age of Ariyalur Group ranges from
 (A) Maastrichtian to Danian (B) Cenomanian to upper Albian
 (C) Turonian to Senonian (D) Senonian to Maastrichtian
59. Myrmekite is sometimes seen, while fine grained Aplite is common in
 (A) Peninsular Gneiss (B) Charnockite
 (C) Closepet Granite (D) Champion Gneiss
60. According to B. Rama Rao's classification of the Dharwars, Shimoga and Bababudan belts are confined to
 (A) West - central group (B) East - central group
 (C) Easternmost group (D) Westernmost group
61. The process of complete mineralization of the original structures of plants, bones or shells by which more or less original material is preserved, is known as
 (A) Recrystallization (B) Petrification
 (C) Carbonisation (D) Pyritization
62. In which of the following gastropod, the dextral coiling is seen
 (A) Physa (B) Conus
 (C) Planorbis (D) Cypraea
63. Two small calcareous plates by which delthyrium is closed in Brachiopods are called
 (A) Anterior area (B) Deltidium
 (C) Pseudodeltidium (D) Foramen
64. Which one of the following Gastropods exhibits sinistral coiling?
 (A) Murex (B) Cerithium
 (C) Physa (D) Conus
65. All the whorls except the last whorl constitute _____ of the shell in Gastropods.
 (A) Spire (B) Protoconch
 (C) Body whorl (D) Suture

66. The study of the conditions of burial of fossils is called
 (A) Paleozoology ~~(B) Taphonomy~~
 (C) Mineralization (D) Distillation
67. The simplest form of cephalopod shell is a straight cone, which is termed as
 (A) Gyroceracone ~~(B) Orthoceracone~~
 (C) Tarphyceracone (D) Cyrtoceracone
68. The third and posterior part of the exoskeleton of trilobites is known as
 (A) Cephalon (B) Glabella
~~(C) Pygidium~~ (D) Thorax
69. In Brachiopods, the spiriferid type of shells have
~~(A) Straight hinge line and width is more than the length~~
 (B) Straight hinge line and width is less than the length
 (C) Curved hinge line and length is more than the width
 (D) Curved hinge line and length is less than the width
70. The lophophore is enclosed in the mantle cavity of _____.
~~(A) Brachiopods~~ (B) Lamellibranchs
 (C) Gastropods (D) Cephalopods
71. The term to define the equally developed teeth in pelecypods is
 (A) Taxodont ~~(B) Isodont~~
 (C) Teleodont (D) Schizodont
72. Which one of the following is a dimyarian Lamellibranch?
~~(A) Venus~~ (B) Ostrea
 (C) Pecten (D) Gryphea
73. If the ligament in Lamellibranchs is made up of single layer of muscles, it is termed as
~~(A) Alvincular~~ (B) Multivincular
 (C) Paravincular (D) Postvincular

74. In Lamellibranch, the lunule and escutcheon are present _____ to the umbo.
- (A) Anterior and Posterior (B) Posterior and Anterior
(C) Dorsal and Anterior (D) Posterior and Dorsal
75. In Lamellibranchia, if the ligament lies behind the umbo, the condition is known as
- (A) Opisthodontic condition (B) Prosodontic condition
(C) Amphidontic condition (D) Prosogyre condition
76. The suture line in cephalopods with rounded saddles and somewhat angular lobes is defined as
- (A) Goniatitic suture (B) Ammonitic suture
(C) Ceratitic suture (D) Nautilitic suture
77. The angle between the two sides of the spire converging near the protoconch is known as
- (A) Spiral angle (B) Axial angle
(C) Pleural angle (D) Primary angle
78. The convolute type of form of the shell is noticed in
- (A) Voluta (B) Cypraea
(C) Trochus (D) Conus
79. Which one of the following genus belongs to class Inarticulata of phylum Brachiopoda?
- (A) Lingula (B) Terebratula
(C) Spirifer (D) Productus
80. If the Umbo in Lamellibranch is pointed towards anterior side, then it is known as
- (A) Prosogyre condition (B) Opisthogyre condition
(C) Orthogyre condition (D) Spiral condition
81. Four fold axis of symmetry is also called as
- (A) Trigonal axis (B) Tetragonal axis
(C) Hexagonal axis (D) Binary axis

82. Ditetragonal pyramid in Tetragonal system has
 (A) Eight similar faces ~~(B) Sixteen similar faces~~
 (C) Eight discontinuous faces (D) Sixteen irregular faces
83. The type mineral for normal class of orthorhombic system is
 (A) Epsomite (B) Calamine
~~(C) Barite~~ (D) Gypsum
84. The prism of the first order in normal class of Hexagonal system has six faces, each one of which is parallel to the vertical axis and meets
 (A) all horizontal axes at equal distances
~~(B) two adjacent horizontal axes at equal distances, while it is parallel to the third horizontal axis~~
 (C) all horizontal axes at unequal distances
 (D) only one horizontal axis
85. The type mineral for normal class of Monoclinic system is
 (A) Clinohedrite ~~(B) Gypsum~~
 (C) Axinite (D) Tourmaline
86. Open forms occur in all the systems, except
 (A) Isometric system (B) Tetragonal system
 (C) Orthorhombic system ~~(D) Monoclinic system~~
87. The Miller indices of Trisoctahedron of Isometric system is
 (A) hll ~~(B) hhl~~
 (C) hkl (D) hko
88. The forms belonging to the normal class of the Tetragonal system has
~~(A) only one horizontal plane of symmetry~~
 (B) two planes of symmetry
 (C) no centre of symmetry
 (D) six axes of symmetry
89. In Orthorhombic system, the crystals have three unlike planes of symmetry meeting at
 (A) 30° (B) 45°
 (C) 60° ~~(D) 90°~~

90. The Ortho-axis in Monoclinic system is also called as
 (A) a - axis (B) clino - axis
 (C) b - axis (D) vertical "c" axis
91. The angles of inclination between like faces on the crystals of any species are essentially
 (A) depends on the intersection of axes (B) vary from one area to other
 (C) depends on the parallelism to axes (D) constant
92. There may be variation in the size of like faces, thus producing
 (A) crystalline massive forms (B) different crystallines
 (C) distorted forms (D) pseudomorphous forms
93. An axis of symmetry is always normal to a possible crystal face and parallel to the
 (A) two similar faces (B) edge of intersection of two crystal faces
 (C) two dissimilar faces (D) a crystallographic plane
94. A zone includes a series of faces of a crystal whose intersection - lines are mutually parallel to each other and to a common line drawn through the centre of the crystal, called the
 (A) Zonal plane (B) Zone - axis
 (C) Zonal equation (D) Mimetic zone
95. The form Hexoctahedron of Isometric system is bounded by forty-eight similar faces, each intersects
 (A) three axes at equal distances (B) two axes at unequal distances
 (C) three axes at unequal distances (D) two axes at equal distances
96. The Miller indices for the face of Ditetragonal prism of Tetragonal system is
 (A) hko (B) hhl
 (C) hol (D) hkl
97. In Orthorhombic system, of the two horizontal axes, the longer is always taken as
 (A) "a" axis (B) macro axis
 (C) brachy axis (D) vertical "c" axis
98. The forms of normal class in Hexagonal system have
 (A) six horizontal planes of symmetry (B) six vertical planes of symmetry
 (C) six horizontal 6-fold axis of symmetry (D) two vertical axes of 4-fold

99. The symbol hkl represent the face of a form _____ in monoclinic system.
- (A) Clino-dome (B) Clino-pinacoid
 (C) Pyramid (D) Ortho-dome
100. The diametral prism of normal class in Triclinic system has
- (A) three sets of unlike faces (B) three sets of like faces
 (C) two sets of unlike faces (D) one set of like faces
101. Which of the following does not have basal cleavage?
- (A) Isometric system (B) Tetragonal system
 (C) Hexagonal system (D) Rhombohedral system
102. All the forms having three axes of equal lengths and are at right angle to each other belong to
- (A) Isometric system (B) Tetragonal system
 (C) Hexagonal system (D) Triclinic system
103. Tendency of a crystallized mineral to break in certain definite directions, yielding more or less smooth surface is called
- (A) Elasticity (B) Cleavage
 (C) Porosity (D) Limit of plasticity
104. Which of the following is orthorhombic?
- (A) Diopside (B) Hypersthene
 (C) Augite (D) Hedenbergite
105. Which of the following does not belong to pyroxene group?
- (A) Enstatite (B) Braunite
 (C) Bronzite (D) Augite
106. Quartz is a mineral originated from
- (A) Magmatic segregation (B) Pegmatitic
 (C) Hydrothermal (D) Sublimation
107. In 'Moh's scale' of hardness which of the following represents the value for quartz
- (A) 6 (B) 7
 (C) 8 (D) 9

116. Jadeite can be differentiated from Nephrite by the determination of

- (A) Specific gravity (B) Refractive index
(C) Colour (D) Luster

117. Match the following:

- | | |
|-----------------|--------------------------|
| (a) Almandine | 1. $Mg_3 Al_2 (SiO_4)_3$ |
| (b) Pyrope | 2. $Mn_3 Al_2 (SiO_4)_3$ |
| (c) Spessartine | 3. $Ca_3 Al_2 (SiO_4)_3$ |
| (d) Grossular | 4. $Fe_3 Al_2 (SiO_4)_3$ |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 2 | 3 | 4 | 1 |
| (C) | 3 | 4 | 1 | 2 |
| <input checked="" type="checkbox"/> (D) | 4 | 1 | 2 | 3 |

118. Which pale lilac colour mineral occurs in complex granite pegmatites?

- (A) Muscovite (B) Phlogopite
(C) Biotite (D) Lepidolite

119. Brown variety of muscovite closely resembles

- (A) Phlogopite (B) Biotite
(C) Lepidolite (D) Glauconite

120. Hornblende is distinguished from pyroxene by its

- (A) Luster (B) Streak
 (C) Cleavage (D) Refractive index

121. Igneous rocks containing abundant quartz and alkali feldspar are known as

- (A) Saturated rock (B) Over saturated rock
(C) Intermediate rock (D) Under saturated rock

122. Crescent shaped bodies of igneous rocks that occupy crest and troughs of folded strata are called

- (A) Lopolith (B) Lacolith
 (C) Phacolith (D) Batholith

123. Textures produced by flow in magma during crystallization are called
 (A) Intergranular (B) Directive
 (C) Ophitic (D) Poikilitic
124. Common and essential mineral constituents of granite are
 (A) Plagioclase feldspars (B) Quartz and feldspar
 (C) Orthoclase and albite (D) Calcic plagioclase
125. Based on color index peridotite belongs to
 (A) Leucocratic (B) Malanocratic
 (C) Mesocratic (D) Hyalocratic
126. _____ is a pyroclastic material which ranges from 2 mm to 64 mm in diameter
 (A) Ash (B) Tuff
 (C) Lapilli (D) Bombs
127. Which of the following pairs is an example for solid solution?
 (A) Albite - Anorthite (B) Orthoclase - Albite
 (C) Orthoclase - Quartz (D) Diopside - Anorthite
128. The percentage of Al_2O_3 in igneous rocks ranges
 (A) 40-50 % (B) 10-20 %
 (C) 30-40 % (D) 25-35 %
129. Partially digested xenoliths are
 (A) Acid rocks (B) Hybrid rocks
 (C) Basic rocks (D) Unhybrid rocks
130. _____ is a glassy rock of acid composition
 (A) Pitchstone (B) Pumice
 (C) Obsidian (D) Oceanite
131. The texture with glassy or fine grained chloritic or serpentinous materials in the inter spaces is called
 (A) Intergranular texture (B) Sub-ophitic texture
 (C) Intersertal texture (D) Hyalophitic texture

132. The process of alteration of plagioclase into epidote is called
 (A) Sericitization (B) Uralitization
 (C) Biotitization (D) Saussuritization
133. Phenocryst of the same or different minerals occurring in a cluster is
 (A) Hialial porphyritic (B) Glomeroporphyritic
 (C) Seriate (D) Cumulophyric
134. The temperature range for which the Bowen's reaction series has been worked out is
 (A) 1100°C to 573°C (B) 573°C to 383°C
 (C) 1335°C to 876°C (D) 900°C to 775°C
135. A process in which a Homogeneous magma breaks up to form rocks of different composition is called
 (A) Assimilation (B) Fractional crystallization
 (C) Equilibrium crystallization (D) Magmatic differentiation
136. A zone of finer grain size resulting from the rapid solidification of the pluton. When it comes in contact with cooler country rock is called
 (A) Chill zone (B) Agmatite zone
 (C) Apophyses zone (D) Schlieren zone
137. _____ is a structure in which phenocrysts segregate into clots
 (A) Vitrophyric (B) Orthophyric
 (C) Felsophyric (D) Glomero - porphyritic
138. The first mineral to crystallize in the discontinuous reaction series - is
 (A) Mg - pyroxene (B) Olivine
 (C) Fe - pyroxene (D) Anorthite
139. The hypabyssal equivalent of diorite is
 (A) Rhyolites (B) Andesite
 (C) Granite (D) Granophyres

140. A blue coloured alkali syenite containing anorthoclase is called
 (A) Nordmarkite (B) Larvikite
 (C) Theralite (D) Teschenite
141. Identify the property which is not a part of the clastic texture
 (A) Size (B) Roundness
 (C) Sphericity (D) Overgrowth
142. The shells that are associated with abyssal red clay
 (A) Pteropods (B) Globigerina
 (C) Crinoids (D) Radiolaria
143. The grain size range of sand is
 (A) 2 to 4 mm (B) 2 to 1/16 mm
 (C) 1/16 to 1/256 mm (D) 4 to 64 mm
144. The globigerina ooze, contains chiefly of
 (A) Planktonic feraminifera (B) Benthic feraminifera
 (C) Pteropods (D) Radiolarians
145. The residual laterite and bauxite deposits are the weathering products of
 (A) Temperate regions (B) Tropical and sub-tropical regions
 (C) Acid regions (D) Tundra regions
146. A clay rich rock which lacks fissility is
 (A) Shale (B) Kaolinite
 (C) Mudstone (D) Black shale
147. Name the coal which has highest concentration of carbon and poor volatile materials
 (A) Lignite (B) Bituminous
 (C) Anthracite (D) Cannel coal

148. A feldspathic sandstone that contains more than 25% feldspar may be termed as
 (A) Subarkose (B) Arkose
 (C) Graywacke (D) Ganister
149. Pick out one of the clay rocks that contains considerable proportion of carbonates of lime and magnesia
 (A) Shale (B) Marl
 (C) Graywacke (D) Dolomite
150. Marine organisms of diatoms which form diatomaceous oozes are restricted to
 (A) Tropical climate zone (B) Subtropical climate zone
 (C) Polar climate zone (D) Sub polar climate zone
151. Which is wrongly matched?
 I Pottery clay - Aluminous clay free from Iron
 II Fire clay - Used for making refractory bricks
 III Brick clay - Contains compounds of Iron and magnesium
 IV China clay - White plastic material containing illite clay mineral
 (A) I (B) II
 (C) III (D) IV
152. Assertion (A): Fragments in conglomerate beds are rounded
 Reason (R): These fragments of clastics travelled long distance of transport
 (A) Both (A) and (R) are individually true but (R) is not a correct explanation of (A)
 (B) Both (A) and (R) are individually true and (R) is the correct explanation of (A)
 (C) (A) is true but (R) is false
 (D) (A) is false but (R) is true
153. Which is not the correct statement?
 (A) Pteropod ooze consists of minute, delicate molluscan shells called pteropoda
 (B) Chalk is a consolidated ooze rich in foraminifera, sponge spicules, coccoliths etc
 (C) Guano is a siliceous deposit of organic origin
 (D) The accumulation of ferriferous casts of bacteria along with granules due to chemical precipitation produces bog Iron ore

157. Consider the following statements:

Assertion (A): Breccias and conglomerates are rudaceous rocks and their shapes are angular, and rounded

Reason (R): Breccia materials suffered little or no transport and conglomerates have undergone considerable transport

- Both (A) and (R) are true and (R) is the correct explanation of (A)
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A)
(C) Both (A) and (R) are false
(D) (A) is true but (R) is false

158. Which is correctly matched?

- I. Freestone - A uniform thick bedded sandstone with few divisional planes
II. Volcanic breccia - Mylonisation
III. Oil shale - Rich in sulphide of iron
IV. Talus - Rounded fragments

- I (B) II
(C) III (D) IV

159. Point out the wrong statement in the following

- (A) Evaporites are due to evaporation and the deposits include salt and gypsum
(B) Siliceous deposits are chert, flint and siliceous sinter
(C) Clastic rocks are detrital and fragmental rocks deposited by mechanical means
 Rudaceous rocks consist chiefly particles of sand-grade

160. Identify the rock which is highly poorly sorted

- Boulder clay (B) Arkose
(C) Conglomerate (D) Arenite

161. Ore minerals are normally

- Profitable (B) Non-profitable
(C) Non-available (D) Non-exploitable

162. The useless minerals which occur in association with the ore are called

- (A) Tenor (B) Syngenetic
(C) Epigenetic (D) Gangue minerals

163. Hydrothermal ore deposits are examples of

- (A) Epigenetic ore deposits (B) Syngenetic ore deposits
(C) Gangue deposits (D) Placer deposits

164. Example of nonmetallic mineral deposit is

- (A) Graphite (B) Copper
(C) Lead (D) Zinc

165. Gypsum is

- (A) Sedimentation deposit (B) Replacement deposit
(C) Shear zone deposit (D) Evaporation deposit

166. Gossan is an useful indicator for

- (A) Ground water (B) Ore deposits
(C) Hydrocarbon (D) Hot springs

167. Calorific value of lignite is about

- (A) 7,500 B. T. U (B) 7,000 B. T. U
(C) 5,500 B. T. U (D) 10,000 B. T. U

168. Ankleshwar oil field is located in

- (A) Bombay high (B) South of Narmada River
(C) Offshore of Tamil Nadu (D) Godavari basin

169. Cuprite and tenorite are common ore minerals of

- (A) Hydration zone (B) Evaporation zone
(C) Metamorphic zone (D) Oxidation zone

170. Digboi oilfield has oil-bearing formation of

- (A) Mio-pliocene age (B) Oligocene age
(C) Eocene age (D) Cretaceous age

171. Early magmatic segregation deposits are formed as a result of

- (A) Crystallization at low temperature
(B) Residual liquid segregation
(C) Gravitative crystallization differentiation
(D) Immiscible liquid injection

172. The ore deposits of magnetite and ilmenite are formed by

- (A) Immiscible liquid segregation (B) Hydrothermal solution
(C) Residual liquid injection (D) Immiscible liquid injection

173. Match List - I with List - II

- | List - I | | List - II | |
|-------------------------------|--|-----------------------------|--|
| (a) Supergene enrichment zone | | 1. Above water table | |
| (b) Gossan | | 2. Mechanical concentration | |
| (c) Zone of oxidation | | 3. Ferruginous residue | |
| (d) Placers | | 4. Below water table | |

- | | (a) | (b) | (c) | (d) |
|---|-----|-----|-----|-----|
| (A) <input checked="" type="checkbox"/> | 4 | 3 | 1 | 2 |
| (B) | 4 | 3 | 2 | 1 |
| (C) | 4 | 2 | 3 | 1 |
| (D) | 3 | 4 | 2 | 1 |

174. Match List - I with List - II

List - I		List - II	
(a) Medium coking coal		1. Coking constituent of coal	
(b) Fusain		2. Brown coal	
(c) Lignite		3. Mineral charcoal	
(d) Clarain		4. Volatile content between 22% and 25%	
(a)	(b)	(c)	(d)
<input checked="" type="checkbox"/> 4	3	2	1
(B) 4	3	1	2
(C) 1	2	3	4
(D) 4	1	3	2

175. Talchir coal fields occur in

- (A) West bengal Orissa
 (C) Bihar (D) Maharashtra

176. A stock work is

- An interlacing network of small ore bearing veinlets
 (B) Equally distributed throughout a fissure vein
 (C) Fat lenses in schists
 (D) Closely spaced, distinct and parallel veins

177. Fluid inclusions are very commonly found in

- Pegmatitic ores (B) Saddle reef
 (C) Coal (D) Petroleum

178. Gondwana coal normally occurs as

- (A) In -situ deposits Driftes deposits
 (C) Hydrothermal deposits (D) Mesothermal deposits

179. The greatest period of coal - formation in India is

- (A) Miocene (B) Triassic
 (C) Eocene Permian

180. In asymmetric folds, oil mostly occur in
(A) Crest
(B) Gently – dipping limbs
(C) Steep-dipping limbs
(D) Trough
181. The age of Hutti gold deposit
(A) Dharwar
(B) Vindhyan
(C) Cuddapah
(D) Pleistocene
182. Which one is base metal?
(A) Gold
(B) manganese
(C) Nickel
(D) Copper
183. Which rock mostly associated with fire clays
(A) Coal
(B) Bauxite
(C) Basalt
(D) Granite
184. Agnigundala copper deposit situated at
(A) Trichinopoly
(B) Gondwana basin
(C) Cuddapah Basin
(D) Vindhyan
185. Gold dissolves in
(A) Sulfuric acid
(B) Perchloric acid
(C) Acetone
(D) Aquaregia
186. Big chunks of gold are called
(A) Quartz-vein
(B) Fractured vein
(C) Nuggets
(D) Blankets
187. Malanjhand copper deposits is in
(A) Rajasthan
(B) Bihar
(C) Sikkim
(D) Madhya Pradesh

188. For which mineral in India is self sufficient?

(A) Copper

(B) Lead

(C) Iron

(D) Zinc

189. In which state calcite deposit occur abundantly?

(A) Tamil Nadu

(B) Odisha

(C) Rajasthan

(D) West Bengal

190. Phosphorite deposits found in

(A) Udaipur (Rajasthan)

(B) Salem (Tamil Nadu)

(C) Srikakulam (Andhra Pradesh)

(D) Cuttack (Odisha)

191. Which type of gold deposit is in Assam

(A) Magmatic deposit

(B) Residual concentration

(C) Load deposit

(D) Alluvial placer deposits

192. Tamilnadu Bauxite deposits is a

(A) Packet type

(B) Interstratified type

(C) Blanket type

(D) Placer type

193. The age of Assam iron ore formation is

(A) Tertiary

(B) Deccan trap

(C) Precambrian

(D) Dharwar

194. What is the streak of Hematite mineral

(A) Black

(B) Golden yellow

(C) Cherry red

(D) Brown

195. Which type of clay used for pharmaceutical and insecticide industry

- (A) Kaolin (B) Bentonite
(C) Fuller's earth (D) Fireclay

196. Huge deposits of bauxite are occur in

- (A) Kangra (Himachal Pradesh) (B) Chittoor (Andhra Pradesh)
(C) Khetri (Rajasthan) (D) Korapet (Odisha)

197. Bauxite deposit commonly associated with which type of rock

- (A) Laterite (B) Gabbro
(C) Peridotite (D) Serpentite

198. Chromite is associated with

- (A) Granite (B) Dolerite
(C) Pegmatite (D) Dunite

199. Magnesite used in

- (A) Alloys used in aeroplanes
(B) As an insulating material in electrical industry
(C) Wide application in steel industry
(D) In chemical industries for dry batteries

200. What is the tenor of Iron ore

- (A) 30-50% (B) 40-60%
(C) 20-40% (D) 50-70%

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK

SEAL