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ROLL No.

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TEST BOOKLET No.

067

TEST FOR POST GRADUATE PROGRAMMES

GEOLOGY

Time: 2 Hours

Maximum Marks: 450

INSTRUCTIONS TO CANDIDATES

1. You are provided with a Test Booklet and an Optical Mark Reader (OMR) Answer Sheet to mark your responses. Do not soil the Answer Sheet. Read carefully all the instructions given on the Answer Sheet.
 2. Write your Roll Number in the space provided on the top of this page.
 3. Also write your Roll Number, Test Code, and Test Subject in the columns provided for the same on the Answer Sheet. Darken the appropriate bubbles with a **Ball Point Pen**.
 4. The paper consists of 150 objective type questions. All questions carry equal marks.
 5. Each question has four alternative responses marked **A, B, C** and **D** and you have to **darken** the bubble fully by a **Ball Point Pen** corresponding to the correct response as indicated in the example shown on the Answer Sheet.
 6. Each correct answer carries 3 marks and each wrong answer carries 1 minus mark.
 7. Please do your rough work only on the space provided for it at the end of this Test Booklet.
 8. You should return the Answer Sheet to the Invigilator before you leave the examination hall. However, you can retain the Test Booklet.
 9. Every precaution has been taken to avoid errors in the Test Booklet. In the event of such unforeseen happenings the same may be brought to the notice of the Observer/Chief Superintendent in writing. Suitable remedial measures will be taken at the time of evaluation, if necessary.
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SEAL

GEOLOGY

1. Which statement is true?
 - (A) Phosphorescence does not continue when the exciter is removed
 - (B) Fluorescence is the opposite of phosphorescence
 - (C) Luminescence is a generalized term
 - (D) Triboluminescence takes place after heating

2. A polymorph of SiO_2 is found in the deep interior of Earth. What is it?
 - (A) Cairngorm
 - (B) Citrine
 - (C) Stishovite
 - (D) Chalcedony

3. Which one is non-pleochroic mineral?
 - (A) Biotite
 - (B) Olivine
 - (C) Hypersthene
 - (D) Garnet

4. The mineral tourmaline shows the absorption
 - (A) parallel to analyzer
 - (B) parallel to polarizer
 - (C) perpendicular to analyzer
 - (D) perpendicular to polarizer

5. Clinopinacoidal section is one which is
 - (A) parallel to c-axis
 - (B) parallel to b-axis
 - (C) perpendicular to c-axis
 - (D) parallel to both a and b-axis

6. Name the ore forming mineral in which lamellar twinning is present:
 - (A) Ilmenite
 - (B) Galena
 - (C) Psilomelane
 - (D) Pyrite

7. Which of the formation of Jurassic of Kutch has been renamed as Habo formation?
 - (A) Katrol
 - (B) Umia
 - (C) Patcham
 - (D) C hari



8. Which type of coiling is rare in gastropods?
- (A) Dextral (B) Sinistral
(C) Both (A) and (B) (D) Arnestral
9. Which of the following is a phosphate mineral?
- (A) Ilmenite (B) Silimanite
(C) Rutile (D) Monazite
10. Which is not an ore of copper?
- (A) Pyrite (B) Chalcopyrite
(C) Bornite (D) Azurite
11. According to Le Pichon, the Earth consists of major plates.
- (A) twenty (B) five
(C) twelve (D) six
12. The term "lost river" has been applied to streams which disappeared completely underground in a
- (A) granitic terrain (B) metamorphic terrain
(C) carbonate (D) basaltic
13. Which of the following is Polymorphous with diamond?
- (A) Corundum (B) Carborundum
(C) Graphite (D) Goethite
14. Which is a bauxitic mineral?
- (A) Diopside (B) Diaspore
(C) Corundum (D) Goethite



15. A large glacier often melts at the base but not at the top because
- (A) the ice at the base contains impurities
 - (B) the base of the glacier remains in warmer surroundings
 - (C) due to high pressure, ice at the base has its melting point lowered
 - (D) ice at the top of glacier is of different type
16. Hornfelses generally possess
- (A) a porphyroblastic fabric
 - (B) a granoblastic fabric
 - (C) a combination of porphyroblastic and granoblastic fabric
 - (D) foliated fabric
17. The thermal or contact metamorphism is characterized by
- (A) high temperature, low pressure, low strain and variable fluid pressure
 - (B) high temperature, high pressure, low strain and variable fluid pressure
 - (C) high temperature, low pressure, variable strain and variable fluid pressure
 - (D) high temperature, high pressure, high strain and high fluid pressure
18. Which of the following crystal systems is not matched with the correct example of mineral?
- (A) Monoclinic-Beryl
 - (B) Monoclinic-Gypsum
 - (C) Hexagonal-Tourmaline
 - (D) Cubic-Galena
19. Which of the following volcanic rock contains the lowest percentage of silica?
- (A) Basalts
 - (B) Andesites
 - (C) Trachytes
 - (D) Komatiite
20. In normal class of Hexagonal system, there are
- (A) 5 planes, 5 axes and a centre of symmetry
 - (B) 3 planes, 3 axes and a centre of symmetry
 - (C) 7 planes, 7 axes and a centre of symmetry
 - (D) 1 plane, 1 axis and centre of symmetry



21. Which of the following Uranium minerals occur in definite veins?
- (A) Pitchblende (B) Monazite
(C) Carnotite (D) Tarbarnite
22. Extinction angle is the angle between
- (A) the light position and the dark position of a mineral.
(B) the zero of the circular scale and the dark position.
(C) the vibration direction of the lower and the upper nicols.
(D) a vibration plane and a crystallographic direction in a mineral section.
23. The minerals exhibiting "Cyclosilicate" structure are characterized by
- (A) tetrahedra independent of one another.
(B) tetrahedra forming closed units having a ring-like structure.
(C) tetrahedra occurring in pairs and the sharing of one oxygen between two silicons.
(D) tetrahedra forming a three dimensional network.
24. Migmatites are the result of
- (A) retrograde metamorphism (B) ultra metamorphism
(C) metasomatism (D) anatexis
25. Find the odd man out:
- (A) Clintonite (B) Xanthophyllite
(C) Marganite (D) Zinnwaldite
26. The drainage pattern which shows a lack of structural control to the stream flow direction is described as
- (A) parallel (B) dendritic
(C) rectangular (D) trellis
27. An impermeable formation that neither contains nor transmits water is called
- (A) aquifer (B) aquiclude
(C) aquifugo (D) aquitard

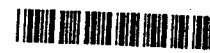


28. The dripstones hanging from the top of the limestone caves are called
- (A) stalactite (B) stalagmite
(C) stylolite (D) geodes
29. The hydraulic conductivity of a rock is called
- (A) permeability
(B) porosity
(C) water retentivity
(D) yield potential of UGW
30. Circular reefs enclosing a shallow body of water are called
- (A) lagoons (B) atolls
(C) fringing reefs (D) barrier reefs
31. Which one of the following is correctly matched?
- (A) Lamellibranches - Spire
(B) Gastropods - Hinge plate
(C) Cephalopods - Suture line
(D) Glossopteris - Adductor muscles impression
32. Water that is formed at the time of consolidation of magma is termed as
- (A) connate water (B) vadose water
(C) meteoric water (D) juvenile water
33. Shooty chalcocite shows its genesis by the process of
- (A) evaporation (B) super gene sulphide enrichment
(C) residual concentration (D) volcanogenic exhalation
34. Detailed survey for oil and gas is done by
- (A) seismic reflection (B) electrical methods
(C) geomagnetic methods (D) gravimetric methods



35. Flat topped hills or small hillocks formed by stream action are called
- (A) mesas (B) buttes
(C) cuestas (D) stream terrace
36. A low temperature variety of potash feldspar showing an opalescent play of colour is
- (A) adularia (B) moonstone
(C) sanidine (D) peristerite
37. When the lower beds of older series extend further than the younger ones it is described as an
- (A) overlap (B) offlap
(C) onlap (D) overstep
38. The perthitic texture is an intergrowth between
- (A) plagioclase and potash feldspar
(B) orthoclase and quartz
(C) orthoclase and plagioclase
(D) plagioclase and quartz
39. According to the theory of "Plate Tectonics" the displacement of lithospheric plates takes place
- (A) at sial-sima boundary
(B) at the asthenosphere
(C) at the crust-mantle boundary
(D) at the Guttenberg discontinuity
40. Which of the following is the youngest?
- (A) Quilon limestone (B) Warkalli sandstone
(C) Cuddalore sandstone (D) Tipam sandstone

41. Pegmatites, in fact, are the result of one of the following processes:
- (A) early magmatic segregation
 - (B) late magmatic residual liquid segregation/injection
 - (C) late magmatic immiscible liquid segregation/injection
 - (D) early magmatic injection
42. When alternating beds of competent and incompetent rocks are tightly folded, they create a space at nose of the fold. When they filled by ores, such deposits are called
- (A) shear zone deposits
 - (B) conjugated fissure deposits
 - (C) saddle reef deposits
 - (D) ladder vein deposits
43. Bababudan hills are known for economic deposit of
- (A) Clays
 - (B) Chalk
 - (C) Talc
 - (D) Iron
44. Which form of igneous rock has a tabular shape and oriented approximately perpendicular to bedding plane?
- (A) Dyke
 - (B) Lopolith
 - (C) Laccolith
 - (D) Sill
45. Which type of fault strikes essentially normal to the strike of the affected rocks?
- (A) Strike slip fault
 - (B) Dip fault
 - (C) Thrust fault
 - (D) Parallel fault
46. A cryptocrystalline variety of quartz that is banded in alternate light and dark layers is
- (A) chalcedony
 - (B) agate
 - (C) onyx
 - (D) cat's eye



47. Which of the following is an orthorhombic amphibole?
- (A) Actinolite (B) Grunerite
(C) Anthophyllite (D) Tremolite
48. Choose the correct combination from the following:
- (A) Group, Formation, Member
(B) Eons, Eras, Period, Epoch, Age
(C) Biozone, Biochron, Telizone, Telichron
(D) System, Period, Series, Stage
49. Which of the following system has all closed forms?
- (A) Triclinic (B) Monoclinic
(C) Trigonal (D) Cubic
50. Principle of uniformitarianism which states "Present is the key to the past" was proposed by
- (A) Hutton (B) Dana
(C) Smith (D) Holmes
51. Pyritohedron is the hemihedral form of
- (A) trisoctohedron (B) tetra hexahedron
(C) trapezohedron (D) diploid-dodecahedron
52. In one type of folding, the strike and dip of axial plane coincide with those of the limbs. This type is called
- (A) parallel folding (B) reclined folding
(C) refolding (D) drag folding
53. The sea water is cool in the deeper zones because
- (A) energy is exchanged largely at the surface
(B) heat is lost mostly at the surface
(C) salinity increases with depth
(D) temperature decreases with depth

54. Which one of the following is stratigraphic trap for petroleum?
(A) Anticline (B) Faults
(C) Unconformity (D) Dome
55. If the rake of the net slip of a fault is 90° , the fault may be a
(A) shear fault (B) diagonal slip fault
(C) strike slip fault (D) dip slip fault
56. Which of the following group is richest in the plant fossils?
(A) Damodar formation (B) Barakar formation
(C) Raniganj formation (D) Rajmahal formation
57. Petroleum start migrating from its site of formation until trapped, because of
(A) gravity (B) buoyancy
(C) capillary action (D) All of the above
58. The vertical displacement of the fractured ends of a rock stratum is termed as
(A) rake (B) throw
(C) heave (D) plunge
59. Digboi oil field has been intersected by a major fault. This fault is called
(A) Naga thrust (B) Tipam thrust
(C) Khasi fault (D) Dihing fault
60. Earthquakes whose depth of focus ranges between 300 – 700 km are known as
(A) shallow focus earthquakes
(B) intermediate focus earthquakes
(C) deep focus earthquakes
(D) normal earthquakes
61. Which is the oldest among the following?
(A) Dharwars (B) Peninsular gneiss
(C) Sargurs (D) Closepet granite



62. Synclinal hill is an example of
- (A) outlier (B) inlier
(C) overstep (D) overlie
63. Limestone for the manufacture of Portland cement should have
- (A) more than 40% CaO and less than 8% MgO
(B) more than 45% CaO and less than 5% MgO
(C) more than 50% CaO and less than 3% MgO
(D) more than 55% CaO and less than 1% MgO
64. Folds having multiple hinges are called
- (A) polyclinal fold (B) box fold
(C) concentric fold (D) curvilinear fold
65. Which one of the following is not due to the result of the geological work of glacier?
- (A) Drumlins (B) Meanders
(C) Kettles (D) Moraines
66. Dunes, which are more or less crescent shaped are commonly called
- (A) fore-dunes (B) barchans
(C) parabolic dunes (D) longitudinal dunes
67. Filter pressing movements are usually seen in
- (A) immiscible liquid injected deposits
(B) residual liquid injected deposits
(C) immiscible liquid segregated deposits
(D) residual liquid segregated deposits
68. The seismic velocities attain their maximum value for the Earth in
- (A) upper mantle (B) lower mantle
(C) outer core (D) inner core



69. Fossil ammonoids indicate a geological age of
- (A) cretaceous (B) precambrian
(C) tertiary (D) carboniferous
70. A typical lamellibranch of Jurassic cretaceous age found in Tiruchirapally region is
- (A) meretrix (B) inoceramus
(C) ostrea (D) spondylus
71. Which major event took place at the Cretaceous-Tertiary boundary?
- (A) Beginning of Himalayan orogeny
(B) Deccan volcanism
(C) Break-up of Gondwana land
(D) Eastern Ghat orogeny
72. "Plaster of Paris" is represented as
- (A) $CaSO_4 - H_2O$ (B) $CaSO_4 - 2H_2O$
(C) $2CaSO_4 - 2H_2O$ (D) $CaSO_4 - H_2H_2O$
73. In India the broadest continental shelf is found in
- (A) Gujarat (B) Maharashtra
(C) Tamilnadu (D) Andhrapradesh
74. Eutectic crystallization is not observed in which of the following mineral groups?
- (A) Orthoclase-quartz (B) Diopside-quartz
(C) Orthoclase-albite (D) Anorthite-olivine
75. The exact spot underneath the Earth's surface, at which an earthquake originates, is known as
- (A) focus (B) epicenter
(C) Benioff zone (D) shadow zone

76. A microscope is said to be "crossed" when
- (A) the axis of rotation coincides with the centre of the field of view
 - (B) the vibration directions of the polarizer coincides with the cross-wires in the oculars
 - (C) the polarizer and the analyzer are mutually perpendicular
 - (D) a ray of light passes from the polarizer to the analyzer without any deviation
77. A metamorphic texture with the predominance of equidimensional minerals is:
- (A) Cataclastic structure
 - (B) Gneissose structure
 - (C) Maculose structure
 - (D) Granulose structure
78. The most gigantic of all the molluscs are seen among:
- (A) Pelycypoda
 - (B) Gastropoda
 - (C) Nautiloids
 - (D) Ammonites
79. Presence of "Snowball" garnet is a characteristic feature of
- (A) palingenesis
 - (B) auto-metamorphism
 - (C) plutonic metamorphism
 - (D) dynamo thermal metamorphism
80. "The mountains are supported by their roots, which penetrate deep down into the denser substratum and keep the mountain floating due to its buoyancy". It explains
- (A) Airy's concept of Isostasy
 - (B) Pratt's concept of Isostasy
 - (C) concept of sea floor spreading
 - (D) concept of plate tectonics
81. An igneous rock under petrological microscope shows that smaller crystals are enclosed in the larger ones without orientation. This texture is called
- (A) felsitic
 - (B) porphyritic
 - (C) poikilitic
 - (D) graphic

82. The remanent magnetism which develops after the consolidation or lithification of the rock in question is known as
- (A) chemical remanent magnetism (CRM)
 - (B) viscous remanent magnetism (VRM)
 - (C) thermal remanent magnetism (TRM)
 - (D) depositional remanent magnetism (DRM)
83. Which is not a member of the spinel group?
- (A) Hematite
 - (B) Magnetite
 - (C) Chromite
 - (D) Ilmenite
84. According to A.L. Du Toit horizontal shifting of continents was associated with
- (A) the force of Earth's rotation.
 - (B) injection of magma and opening of continental block.
 - (C) tidal force due to lunar and solar attraction.
 - (D) gravitational force of the Earth.
85. What is the hardness of gypsum?
- (A) 2
 - (B) 3
 - (C) 4
 - (D) 5
86. The rate of increase in temperature in the interior of the Earth with depth is called
- (A) temperature variation
 - (B) temperature gradient
 - (C) depth gradient
 - (D) geothermal gradient
87. Wegner postulated a general drift of continents towards
- (A) north
 - (B) south
 - (C) east
 - (D) west

88. The best fit of the continents on the sides of Atlantic and Indian Ocean, according to Bullard is at a depth of
- (A) 500 *fathoms* (B) 700 *fathoms*
(C) 1000 *fathoms* (D) 1200 *fathoms*
89. A constant proportion in which two constituents of magma simultaneously crystallise is called
- (A) incongruent (B) metastable
(C) eutectic (D) labile
90. A berek compensator is made up of
- (A) calcite plate (B) selenite plate
(C) mica plate (D) satomspar plate
91. The body of trilobites is divided into
- (A) two parts
(B) four parts
(C) two parts by means of a furrow
(D) three parts by means of two furrows
92. In Echinoids the mouth is surrounded by a membrane called
- (A) peristome (B) periproct
(C) madreporite (D) Aristotle's Lantern
93. Which of the following minerals has the highest specific gravity?
- (A) Diamond (B) Cinnabar
(C) Native Copper (D) Native Gold
94. Match the following and choose the correct answer:
- | | |
|--------------------|----------------|
| a. Brachiopoda | 1. Calceola |
| b. Lamellibranchia | 2. Bellerophon |
| c. Gastropoda | 3. Crania |
| d. Coelenterata | 4. Spondylus |
- (A) a-1, b-2, c-3, d-4 (B) a-2, b-3, c-4, d-1
(C) a-3, b-4, c-2, d-1 (D) a-4, b-3, c-2, d-1



95. Periodic eruption of hot water and steam which sometimes attains a height about 100 m or so is known as
- (A) mud volcano (B) pelean
(C) fumaroles (D) None of the above
96. Which is included under Hemichordata?
- (A) Trilobites (B) Graptolites
(C) Belemnites (D) Corals
97. Match the following and choose the correct answer:
- | | |
|---------------|------------------------------|
| a. Moraines | 1. I-shaped valley |
| b. Gorges | 2. Air chair like depression |
| c. Cirque | 3. Calcium Carbonate deposit |
| d. Stalactite | 4. Glacial deposits |
- (A) a-1, b-3, c-2, d-4 (B) a-2, b-3, c-4, d-1
(C) a-4, b-1, c-2, d-3 (D) a-1, b-2, c-3, d-4
98. Volcanism along oceanic rise and marginal seas is characterized by magma of
- (A) calc-alkali series (B) alkali series
(C) low K-tholeite (D) bimodal volcanics
99. Lonar lake of India is thought to have been resulted
- (A) due to folding of rocks (B) due to meteoritic impact
(C) in the crater of volcano (D) due to block faulting
100. An oasis is formed
- (A) when the glacier terminates
(B) by the filling in of a depression by rain water
(C) by wind erosion down to water table in a desert
(D) a relic in the form of a small lake of large ancient bodies of water near coastal regions



101. In planetary motion
- (A) the angular speed remains constant
 - (B) the total angular momentum remains constant
 - (C) the linear speed remains constant
 - (D) neither the angular momentum nor the angular speed remains constant
102. S-waves extinct at
- (A) mantle-core boundary
 - (B) crust-mantle boundary
 - (C) the core
 - (D) None of the above
103. Guano deposits are made up of:
- (A) sulphates
 - (B) phosphates
 - (C) chlorides
 - (D) sulphides
104. What is the average elevation of the Western ghats?
- (A) 1.2 km
 - (B) 2.2 km
 - (C) 3.2 km
 - (D) 4.2 km
105. Which of the following rocks occur as pipes?
- (A) Eclogite
 - (B) Anorthosite
 - (C) Kimberlite
 - (D) Lamprophyre
106. Choose the odd man out:
- (A) Upper mantle
 - (B) Lower continental crust
 - (C) Outer core
 - (D) Inner mantle
107. Choose the statement which is not correct:
- (A) The Sun-spots appears dark by contrast with the solar surface.
 - (B) The Sun-spots are dark because they have a somewhat lower temperature of about 4500°K .
 - (C) The Sun-spots are characterized by intense magnetic fields at two to three thousand Gauss.
 - (D) No polarity exists in the variation of the number of Sun-spots.



108. Lehman discontinuity occurs at a depth of
- (A) 2900 km (B) 5200 km
(C) 60 km (D) 4700 km
109. Which is not an ultramafic rock?
- (A) Dunite (B) Peridotite
(C) Keratophyre (D) Perknite
110. Which is non-radiogenic lead?
- (A) ^{206}Pb (B) ^{207}Pb
(C) ^{204}Pb (D) ^{208}Pb
111. A narrow strip of land, bordered on both sides by water, connecting two larger bodies of land is called
- (A) dune (B) isthmus
(C) equinox (D) strait
112. Which are the dominant minerals in amphibolites?
- (A) Amphibole and Pyroxene
(B) Hornblende and Quartz
(C) Hornblende and Plagioclase
(D) Hornblende and Chloride
113. Match the following and choose the correct answer:
- | | |
|---|-------------|
| a. Arid land equivalent of a peneplain | 1. Badlands |
| b. Windblown glacial silt and clay | 2. Erratic |
| c. Arid climate terrain in closely dissected soft rocks | 3. Pediment |
| d. Glacier boulder sitting on foreign rock | 4. Loess |
- (A) a-1, b-2, c-3, d-4 (B) a-3, b-4, c-1, d-2
(C) a-2, b-3, c-4, d-1 (D) a-3, b-4, c-2, d-1



114. Normal class of tetragonal system is

(A) $\frac{4}{m} \frac{2}{m} \frac{2}{m}$

(B) $\frac{2}{m} \frac{2}{m} \frac{2}{m}$

(C) $\frac{6}{m} \frac{2}{m} \frac{2}{m}$

(D) $\frac{4}{m} \frac{3}{m} \frac{2}{m}$

115. Match the following and choose the correct answer:

- | | |
|---------------------------|-------------------------|
| a. Cube | 1. Equilateral triangle |
| b. Octahedron | 2. Isosceles triangle |
| c. Prism of first order | 3. Rectangle |
| d. Pyramid of first order | 4. Squares |

(A) a-1, b-2, c-3, d-4

(B) a-4, b-1, c-3, d-2

(C) a-2, b-3, c-4, d-1

(D) a-1, b-3, c-4, d-2

116. In the hexagonal system, the algebraic sum of h, j and k is necessarily

(A) zero

(B) three

(C) seven

(D) nine

117. Stereogram of a crystal depicts primarily

- (A) the distribution of faces in zones
 (B) a symmetry in the distribution of faces
 (C) the interfacial angle projected on the stereogram in the form of straight lines and arcs
 (D) All of the above

118. The "Baveno" twins (021) is the

- (A) twin plane
 (B) twin axis
 (C) composition plane
 (D) both twin plane and composition plane

119. Which of the following exhibit pleochroic halo?

(A) Quartz

(B) Kyanite

(C) Cordierite

(D) Beryl



120. What is the Silicon: Oxygen ratio in single chain silicates?
- (A) 1:2 (B) 1:3
(C) 2:5 (D) 1:4
121. Which of the following is an orthopyroxene?
- (A) Diopside (B) Bronzite
(C) Augite (D) Enstatite
122. Asterism is shown by the minerals crystallizing in the system
- (A) orthorhombic (B) hexagonal
(C) triclinic (D) cubic
123. Which of the following is associated with mechanical weathering?
- (A) Hydrolysis (B) Sink holes
(C) Spheroidal (D) Frost wedging
124. The Nebular hypothesis was proposed by
- (A) Kant (B) Laplace
(C) Kant and Laplace together (D) Kant and Laplace independently
125. Folds having sharp hinges and smooth sides are termed as
- (A) convolute folds (B) concentric folds
(C) cusped folds (D) chevron folds
126. Mushroom shaped structures having slender columns and wide tops resulting from the abrasive action of wind are described as
- (A) ventifacts (B) Brazil nuts
(C) pedestal rocks (D) draas
127. In the case of normal faults, the hade is towards
- (A) downthrown side (B) upthrown side
(C) either downthrown or upthrown side (D) None of the above



128. The Mohorovic discontinuity is a
- (A) compositional boundary
 - (B) phase change boundary
 - (C) compositional as well as phase change boundary
 - (D) None of the above
129. Which one of the following is correctly matched?
- (A) River - Alluvial fan
 - (B) Groundwater - Water fall
 - (C) Wind - 'U' shape valley
 - (D) Sea - Cirque
130. A placer deposit formed at the site of the destruction of the primary source rock is called
- (A) aeolian placer
 - (B) alluvial placer
 - (C) eluvial placer
 - (D) colluvial placer
131. Which of the following statements about glaciers is not correct?
- (A) The top portion moves faster than the bottom
 - (B) The middle portion moves slower than the sides
 - (C) The velocity increases with the thickness of ice
 - (D) Their velocity increases with temperature
132. Joints which are developed parallel to the fold axes are called
- (A) extension joints
 - (B) release joints
 - (C) tension joints
 - (D) shear joints
133. The most commonly mined ore of iron in India is
- (A) magnetite
 - (B) laterite
 - (C) hematite
 - (D) siderite
134. The greatest principal stress axis is vertical in
- (A) normal faults
 - (B) transform faults
 - (C) thrust faults
 - (D) strike slip faults



135. Match the following and select your answer using the codes given below:

(Metamorphic facies)

(Diagnostic mineral)

- | | |
|-----------------------|---------------|
| a. Zeolite facies | 1. Lawsonite |
| b. Sanidinite facies | 2. Chlorite |
| c. Blueschist facies | 3. Laumontite |
| d. Greenschist facies | 4. Sanidine |

(A) a-3, b-4, c-1, d-2

(B) a-4, b-2, c-3, d-1

(C) a-2, b-4, c-3, d-1

(D) a-1, b-2, c-3, d-4

136. The type of metamorphism around igneous Pluton is

- (A) cataclastic metamorphism
 (B) thermal metamorphism
 (C) plutonic metamorphism
 (D) dynamo thermal metamorphism

137. To which group the mineral melanite belongs to?

- (A) Olivine
 (B) Pyroxene
 (C) Mica
 (D) Garnet

138. In Geological Time Scale, Mesozoic group has been divided into

- (A) three systems
 (B) two systems
 (C) four systems
 (D) six systems

139. The rock syenite is characterized by the predominance of

- (A) quartz
 (B) nepheline
 (C) Na feldspar
 (D) K-feldspar

140. Katazone is a depth zone of metamorphism, present at

- (A) great depth
 (B) intermediate depth
 (C) near the surface of the Earth
 (D) None of the above



141. The most distinctive features of gastropods when compared with other classes of the mollusca is
- (A) shell made up of CaCO_3 (B) shell consists of one valve
(C) un chambered shell (D) shell with one opening
142. The primary magmas, as generally accepted, are
- (A) granitic and rhyolite magmas
(B) andesitic and basaltic magmas
(C) andesitic and tholeiite magmas
(D) basaltic and granitic magmas
143. Bedding joints are
- (A) at right angle to the bedding of the associated sedimentary rocks
(B) parallel to the bedding of the associated sedimentary rocks
(C) present in igneous rock to form bedding like structures
(D) None of the above
144. Which one of the following statements is false?
- (A) An unconformity is surface of erosion
(B) An unconformity is a surface of relative motion
(C) An unconformity separates younger strata from older rocks
(D) An unconformity is period of non-deposition
145. Which of the following forms the Lower Vindhyan?
- (A) Semri series (B) Rewa series
(C) Nallamalai series (D) Kurnool series
146. Emery is a mixture of finely granular
- (A) beryl and quartz (B) beryl and magnetite
(C) corundum and quartz (D) corundum and magnetite
147. The Ordovician is known as the age of
- (A) crinoids (B) graptolites
(C) brachiopods (D) corals



148. The best example of residual deposit is
- (A) bauxite deposits (B) iron deposits
(C) chromium deposits (D) phosphate deposits
149. Which of the following combination is incorrect?
- (A) Optical twins - Quartz (B) Cyclic twins - Aragonite
(C) Glide twins - Calcite (D) Tartan twins - Pyrite
150. Pleochroism and Pleochroic halos are observed by using
- (A) polarizer only (B) analyzer only
(C) both polarizer and analyzer (D) gypsum plate
