1. The Chronostratigraphic equivalent of the Geochronologic unit 'Epoch'.
   A) System   B) Stage   C) Series   D) Age

2. The first recognized remains of Homo habilis, i.e., the type specimen OH7, nicknamed 'Johnny's Child' was discovered in
   A) Trinil Site, Indonesia   B) Olduvai Gorge, Tanzania
   C) Grottes d'Engis, Belgium   D) Solo River Bank, Trinil, East Java

3. Choose the correct increasing order of regions of crude oil reserves in India.
   A) Assam → Gujarat → Western Offshore → Eastern Offshore
   B) Western Offshore → Eastern Offshore → Gujarat → Assam
   C) Gujarat → Assam → Eastern Offshore → Western Offshore
   D) Eastern Offshore → Gujarat → Assam → Western Offshore

4. Which of the following is an example of Relict or Residual mountains?
   A) Andes Mountains   B) Harz Mountains
   C) Aravalli Mountains   D) Sierra Nevada Mountains

5. The sloping sides of the valley upon which a dam rests.
   A) Gradient   B) Side walls   C) Pier   D) Abutment

6. The artificial groundwater recharge method which is the least expensive of all the methods available and has very low maintenance costs.
   A) Flooding method   B) Basin method
   C) Induced recharge method   D) Stream channel method

7. The isotopic dating method in which the 'daughter' is an effect in the crystal rather than a daughter isotope.
   A) Rubidium-Strontium method
   B) Carbon-14 dating method
   C) Fission track dating method
   D) Rhenium-Osmium method

8. Match the objects in Column-I with corresponding colour standard in Column-II for topographic maps

Column-I	Column-II\
a. Water/Stream	1. Black
b. Grids and Roads	2. Blue
c. Contours	3. Brown
d. Boundaries	4. Red

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

9. In underground mining, the most common instrument used for measuring the presence of water vapour in air or humidity is the:
    A) Velometer   B) Pycnometer
    C) Pilot tube   D) Psychrometer

10. The first fundamental step in digital image processing.
    A) Image Filtration   B) Image Acquisition
    C) Image Restoration   D) Image Enhancement

11. To advocate the 'Continental Drift Hypothesis', Wegener found evidence of highly deformed rocks in Brazil that closely resembles similar rocks in:
    A) Australia   B) Africa   C) Russia   D) Europe

12. Which of the following is 'Chrome Mica'?
    A) Lepidolite   B) Zinnwaldite C) Fuchsite   D) Roscoelite

13. Heavy metals and nuclear wastes fall into the category of:
    A) Fund pollutants   B) Persistent pollutants
    C) Sustained pollutants   D) Stock pollutants

14. Match the quadrant bearings and their equivalent azimuth bearings in a geological compass and choose the correct answer.

    Quadrant Bearing   Azimuth Bearing
    a.   N 36° E   1. 144°
    b.   N 36° W   2. 036°
    c.   S 36° E   3. 216°
    d.   S 36° W   4. 324°

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

15. The deepest and most powerful earthquakes occur at ------ plate boundaries.
    A) Convergent   B) Transform
    C) Divergent   D) Transcurrent

16. The flattest areas found anywhere on the Earth having a regional slope of < 0.5 degrees.
    A) Salt flats   B) Mud flats
    C) Abyssal plains   D) Lake Baikal

17. The largest carbonaceous asteroid:
    A) Vesta   B) Pallas   C) Hygiea   D) Ceres

18. The most extensive hydrogeologic unit in Kerala.
    A) Coastal Alluvium   B) Alleppey Beds
    C) Warkali Beds   D) Laterites

19. If we consider the grid lines of maps, the vertical lines are classified as
    A)   Eastings   B)   Westings   C)   Northings   D)   Southings

20. Which of the following is the biggest problem with any GPS unit in remote areas?
    A)   Multipath signals   B)   Maintaining Battery Power
    C)   No satellite range   D)   Cold starts

21. The mountain range coming under the Alpide belt of Global Seismic Belts.
    A)   Appalachian Mountains   B)   Cordillera Mountains
    C)   Cascade Mountains   D)   Caucasus Mountains

22. The Kallakudi Limestone and Karai Shales in the Cretaceous succession of Trichinopoly belong to:
    A)   Uttattur Group   B)   Ariyallur Group
    C)   Trichinopoly Group   D)   Niniyur Group

23. The prograde sequence of Barrowian zones is:
    A)   Biotite → Chlorite → Staurolite → Sillimanite → Garnet → Kyanite
    B)   Chlorite → Biotite → Garnet →   Staurolite → Kyanite → Sillimanite
    C)   Staurolite → Chlorite → Biotite →   Kyanite → Garnet →   Sillimanite
    D)   Biotite → Chlorite → Staurolite → Garnet → Sillimanite →   Kyanite

24. The igneous rock texture wherein plagioclase grains show a preferred orientation due to flowage and the interstices between plagioclase grains are occupied by glass or cryptocrystalline material.
    A)   Spherulitic texture   B)   Hyalo-ophitic texture
    C)   Trachytic texture   D)   Perthitic texture

25. The numeral VIII in the Modified Mercalli Intensity Scale refers to:
    A)   Strong Earthquake   B)   Severe Earthquake
    C)   Moderate Earthquake   D)   Violent Earthquake

26. Small, low-elevation, sandy islands formed on the surface of coral reefs from eroded materials that pile up and that may be inhabitable and covered by vegetation.
    A)   Habili   B)   Cays   C)   Coves   D)   Ebeye

27. The 'Genesis Rock' is
    A)   a sample of Moon rock retrieved by Apollo 15 astronauts in 1971.
    B)   a meteorite sample that fell in Arizona desert.
    C)   a Mars rock sample of Mars Exploration Rover.
    D)   the first ever asteroid sample by NASA.

28. The first manned vessel to reach the bottom of the Challenger Deep.
    A)   Aluminaut   B)   Alvin   C)   Trieste   D)   Shinkai

29. Match the following:

Forms	Crystal System
a. Orthodome	1. Orthorhombic System
b. Scalenohedron	2. Monoclinic System
c. Macropinacoid	3. Hexagonal System
d. Sphenoid	4. Tetragonal System

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

30. The 'psephite' among the following sedimentary rocks:
A)   Conglomerate   B)   Siltstone
C)   Sandstone   D)   Limestone

31. The source of energy that falls in the category of non-renewable energy resource.
A)   Nuclear energy   B)   Geothermal energy
C)   Solar energy   D)   Hydro energy

32. The device used in ore beneficiation to classify, separate or sort particles in a liquid suspension based on the ratio of their centripetal force to fluid resistance.
A)   Hydroclone   B)   Knelson concentrator
C)   Reichert Cone   D)   Group

33. Choose the incorrect pair from the following.
A)   Rhodonite - Manganese   B)   Tenorite - Copper
C)   Goethite   - Iron   D)   Azurite - Zinc

34. The most abundant Sulphur isotope:
A) ^{32}S B) ^{33}S C) ^{34}S D) ^{36}S

35. Match the following youngest polarity chrons of Magnetic Time Scale with their ages

Chrons	Ages
a. Matuyama	1. 0 – 0.8 Ma
b. Gilbert	2. 0.8 – 2.6 Ma
c. Brunhes	3. 3.58 – 5.97 Ma
d. Gauss	4. 2.6 – 3.59 Ma

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

36. Linear deformation structures which are restricted to the interface between a competent and incompetent rock.
A)   Mullion Structures   B)   Rodding Structures
C)   Pencil Structures   D)   Boudinage Structures

37. The correct sequential order of arrangement of minerals in the Bowen's Reaction Series in their decreasing order of melting points?
A)   Olivine → Muscovite → Hornblende → Quartz
B)   Enstatite → Olivine → Orthoclase → Biotite
C)   Hypersthene → Tremolite → Orthoclase → Muscovite
D)   Biotite → Hypersthene → Muscovite → Actinolite

38. The granite body marking the boundary between the Archaean and Proterozoic formations in the Aravalli craton.
A)   Erinpura Granite   B)   Idar Granite
C)   Berach Granite   D)   Untala Granite

39. Which of the following statements regarding the rules applied for plotting crystal faces on the stereonet is <u>incorrect</u>?
A)   All crystal faces are plotted as poles.
B)   Crystal faces that are on the top of the crystal ($\rho < 90^O$) will be plotted as '+' signs.
C)   Any two faces on the same great circle are in the same zone.
D)   Positive angles (Φ) will be measured clockwise on the stereonet.

40. Choose the correct option depicting the increasing order of elemental abundance in sea water.
A)   Sulphur → Magnesium → Calcium → Sodium
B)   Calcium → Sulphur → Magnesium → Sodium
C)   Sulphur → Magnesium → Sodium → Chlorine
D)   Magnesium → Sulphur → Chlorine → Sodium

41. Match the following Groups and Formations of the Vindhyan Supergroup:

	Groups		Formations
a.	Kaimur Group	1.	Bijaigarh Shales
b.	Semri Group	2.	Jhiri Shales
c.	Bhander Group	3.	Sirbu Shales
d.	Rewa Group	4.	Suket Shales

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

42. The organisms often referred to as 'jewels of the sea' or 'living opals' or 'pearls of ocean', due to their optical properties.
A)   Radiolarians B)   Diatoms   C)   Foraminifers D)   Ostracodes

43. Drift method of tunnelling is used to construct tunnels in
A)   Hard Rocks   B)   Broken Grounds
C)   Weathered Rocks   D)   Soft Grounds

44. The main isotopic separation method used in modern times throughout the world to enrich Uranium.
   A) Centrifugal method
   B) Electromagnetic method
   C) Diffusion method
   D) Chemical method

45. The GM Counter can detect all kinds of radiations such as α, β, and γ rays, whereas the Scintillation counters can detect only
   A) Infra-red radiations
   B) Microwave radiations
   C) Ionizing radiations
   D) Acoustic radiations

46. Which among the following falls under the category of 'Good Floatation Frothers' used in the Froth Floatation process of ore concentration?
   A) Soaps and Fatty acids
   B) Lime and Sodium Sulphite
   C) Pine oil and Eucalyptus oil
   D) Soda Ash and Sodium Silicate

47. In which of the following types of faults the downthrown and upthrown sides change on the two sides of the hinge-cum-axis of the fault line?
   A) Radial faults
   B) Axial faults
   C) Reverse faults
   D) Wrench faults

48. The pathfinder element associated with uranium in sandstone type deposits.
   A) Sb
   B) Au
   C) Se
   D) Bi

49. The term 'Comminution' in any ore dressing process refers to:
   A) Sizing and Screening
   B) Concentration and Classification
   C) Drying and Calcination
   D) Crushing and Grinding

50. DBMS in Geoinformatics represents:
   A) Digital Base Model System
   B) Database Manipulation System
   C) Database Monitoring System
   D) Database Management System

51. Which among the following operational Earth Observation Satellites is not in Sun-synchronous orbit?
   A) Mega-Tropiques
   B) RISA-1
   C) CARTOSAT-2B
   D) INSAT-3A

52. Which of the following does not fall into the category of principal emissions resulting from coal combustion that adversely influence the environment and human health?
   A) Carbon dioxide
   B) Carbon tetrahydride
   C) Sulphur dioxide
   D) Particulate matter

53. The angle of inclination generally provided in a tilted aerial photograph
   A) 10°
   B) 5°
   C) 3°
   D) 7°

54. The inner core of the Earth is solid due to:
    A) The immense pressure that exists in the centre of the Earth
    B) The presence of solid nickel-iron metal in the centre of the Earth
    C) The lesser temperature that exists in the centre of the Earth
    D) The presence of oxygen, silicon and sulphur that readily form compounds with iron

55. According to W. M. Davis, landform is a function of:
    A) Structure, Lithology and Time
    B) Structure and Time
    C) Process, Stage and Time
    D) Structure, Process and Stage

56. The dendrochronological equation defining the law of growth of tree rings was proposed by:
    A) Jacob Kuechler   B) Alexander Catlin Twining
    C) A. E. Douglass   D) Alexandr N. Tetearing

57. Match the names of the Molluscs with the Class to which they belong:

	Molluscs		Class
a.	Physa	1.	Cephalopoda
b.	Dentalium	2.	Gastropoda
c.	Nautilus	3.	Scaphopoda
d.	Nucula	4.	Bivalvia

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

58. The Enhanced Thematic Mapper Plus (ETM+) scanner is used in:
    A) Landsat 8   B) Landsat 1 to 5
    C) Landsat 4 and 5   D) Landsat 7

59. Which of the following statement is incorrect?
    A) Intrinsic permeability is representative of the porous medium only.
    B) Hydraulic conductivity is a function of only the fluid passing through the medium.
    C) The rate of groundwater flow through an aquifer is proportional to the Hydraulic conductivity.
    D) Saturated thickness times Hydraulic conductivity is a measure of Transmissivity.

60. Earth's seven major lithospheric plates considered for the 'Theory of Plate Tectonics' in their decreasing order of size are:
    A) Pacific → N. American → Antarctic → African → S. American → Eurasian → Australian-Indian
    B) Eurasian → Pacific → N. American → S. American → Antarctic → African → Australian-Indian
    C) Pacific → N. American → Eurasian → African → Antarctic → Australian-Indian → S. American
    D) N. American → Eurasian → African → Pacific → S. American → Australian-Indian → Antarctic

61. The Splitting Tensile Test on rocks is also called:
    A)   Brazilian Test   B)   Standard Penetration Test
    C)   Triaxial Compression Test   D)   Unconfined Compression test

62. Among the most common electrode arrays in electrical resistivity method for groundwater exploration, the array that has the strongest signal strength is the
    A)   Pole-dipole Array   B)   Dipole-dipole Array
    C)   Schlumberger Array   D)   Wenner Array

63. The lithophiles are characterized by Ionic bonds while the Siderophiles are characterized by:
    A)   Van der Waals bonds   B)   Covalent bonds
    C)   Metallic bonds   D)   Hydrogen bonds

64. The hydrothermal deposit sub-category among the following, which is syngenetic formation.
    A)   Mississippi Valley type
    B)   Skarn
    C)   Volcanogenic massive sulphide
    D)   Porphyry

65. The most accepted method of sampling which is best suited to bedded, banded and vein type of deposits:
    A)   Channel sampling   B)   Grab sampling
    C)   Face sampling   D)   Bulk sampling

66. Match the metamorphic facies of Eskola in Column-I with their typical minerals in Column-II
Column-I	Column-II
a. Eclogite Facies	1. Glaucophane and Laumontite
b. Greenschist Facies	2. Chlorite and Actinolite
c. Blueschist Facies	3. Omphacite and Pyrope
d. Zeolite Facies	4. Laumontite and Heulandite

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

67. Which of the following falls in the category of penecontemporaneous sedimentary structures?
    A)   Stylolites   B)   Mudcracks   C)   Beddings   D)   Concretions

68. Non-depositional unconformity or pseudoconformity is synonymous to
    A)   Blended unconformity   B)   Paraconformity
    C)   Nonconformity   D)   Disconformity

69. Which one of the following is not an element of Milankovitch cycle?
    A)   Precession   B)   Eccentricity   C)   Gravity   D)   Obliquity

70. Which among the following geologic periods is the youngest during which land-based ice formed prior to Quaternary glaciation?
    A) Cryogenian
    B) Huronian
    C) Andean-Saharan
    D) Karoo

71. The land bridge that occurred between north-eastern Asia and north-western North America and that was associated with periods of worldwide glaciations and subsequent lowering of sea levels.
    A) Beringia
    B) Lemuria
    C) Doggerland
    D) Sinai

72. Which of the following pairs is incorrect?
    A) Similar fold   –   Constant layer thickness
    B) Box fold   –   Conjugate fold type
    C) Wrench fault   –   Strike-slip fault
    D) Schuppen structure   –   Thrust fault

73. The 'Snowball Earth Hypothesis' was first proposed by:
    A) Louis Agassiz
    B) Paul F. Hoffman
    C) J. L. Kirschvink
    D) Luis Alvarez

74. Match the items in Column-I and Column-II based on Ramsay classification of folds

Column-I	Column-II
a. Class 1B	1. Dip isogons diverge
b. Class 3	2. Dip isogons are parallel
c. Class 1C	3. Limbs thinner than hinges
d. Class 2	4. Layer thickness constant

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

75. Which of the following statement is correct?
    A) L-tectonites indicate flattening strain.
    B) S-tectonites have a dominant linear fabric.
    C) L-S tectonites indicate a plane strain deformation.
    D) B-tectonites have a fabric dominated by planar elements.

76. Match the phases of Disaster Management Cycle with the Activities undertaken:

Phases	Activities
a. Recovery	1. Relocation of people
b. Preparedness	2. Training of personnel
c. Mitigation	3. Counselling
d. Response	4. Search and Rescue

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

77. The most common and popular mining method used for steeply dipping metalliferous deposits and vein deposits.
A) Cut and Fill method
B) Longwall method
C) Block Caving method
D) Room and Pillar method

78. Which of the following orthogenesis of horses from Lower Eocene to Upper Oligocene is correct?
A) Epihippus → Orohippus → Miohippus → Eohippus → Mesohippus
B) Orohippus → Mesohippus → Miohippus → Eohippus → Epihippus
C) Epihippus → Eohippus → Mesohippus → Orohippus → Miohippus
D) Eohippus → Orohippus → Epihippus → Mesohippus → Miohippus

79. Which of the following statements regarding the Earth's magnetic field is <u>incorrect</u>?
A) The Earth's magnetic field is dipolar.
B) The Earth's magnetic axis is not parallel to the Earth's axis of rotation.
C) The total magnetic intensity of the Earth is strongest at the poles.
D) The Earth's magnetic axis is linear in orientation.

80. The area of ocean or lake surface over which the wind blows in an essentially constant direction, thus generating waves.
A) Fetch
B) Seiche
C) Loch
D) Gyre

81. Match Column-I and Column II.

Column-I	Column-II
a. Planispiral	1. Globigerina
b. Trochospiral	2. Nodosaria
c. Irregular Spiral	3. Rotalia
d. Helicoid Spiral	4. Ammonia

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

82. The lowest stage or age of the Quaternary Period:
A) Gelasian
B) Greenlandian
C) Calabrian
D) Chibanian

83. The unit cell that contains lattice points only at the corners is known as:
A) Primary Unit Cell
B) Primitive Unit Cell
C) Secondary Unit Cell
D) Centred Unit Cell

84. The vertical stratigraphic succession that typifies marine transgression and regression is a classic example of
A) Steno's Law of Superposition
B) Walther's Law of facies
C) Stoke's Law of sedimentation rate
D) Stensen's Law of Lateral Continuity

85. The concept of 'Biozone' in the biostratigraphic studies was introduced by:
A) William Smith
B) Aleide d'Orbigny
C) Georges Cuvier
D) Albert Oppel

86. The term 'Geochemistry' was first used by:
A) F. W. Clarke B) C. F. Schönbein
C) V. Goldschmidt D) O. C. Farrington

87. Borehole diameter is usually recorded by
A) Gamma logs B) S-P logs C) Acoustic logs D) Caliper logs

88. Match Column-I and Column II.
Column-I   Column-II
a. Jamser deposits, Bikaner   1. Kyanite
b. Lapsa-Buru deposits, Kharswan 2. Graphite
c. Koderma deposits, Jharkhand   3. Gypsum
d. Taliha deposits, Upper Subansiri 4. Mica

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

89. A cadastral map is a:
A) Small scale map B) Medium scale map
C) Large scale map D) Wall map

90. The AFM diagram for graphical representation of metamorphic mineral assemblages was Introduced by:
A) P. Eskola B) G. Barrow
C) J. B. Thompson D) A. Miyashiro

91. The place on the Earth having the highest gravity:
A) Mount Nevado Huascarán
B) Surface of the Arctic Ocean
C) The Bermuda Triangle
D) Deepest point of Mariana Trench

92. Spatial Resolution of 68m X 83 m (or 60 m) and Spectral Range of 0.5 – 1.1 μm is characteristic of:
A) Multispectral Scanners B) Thermal Scanners
C) Hyperspectral Scanners D) Thematic Mappers

93. The only pyroxene mineral that occurs in felsic igneous rocks:
A) Omphacite B) Augite C) Jadeite D) Spodumene

94. Match the deltas with their receiving basins and choose the correct answer.
Deltas   Receiving Basins
a. Huang Ho   1. Caspian Sea
b. Amu Darya   2. Andaman Sea
c. Volga   3. Yellow Sea
d. Irrawaddy   4. Aral Sea

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

95. The Triassic succession of Spiti Valley is known as:
    A) Haimanta Group
    B) Kanawar Group
    C) Kuling Group
    D) Lilang Group

96. The axial relationship characteristic of Monoclinic System:
    A) $a = b \neq c$
    B) $a \neq b = c$
    C) $a \neq b \neq c$
    D) $a = b = c$

97. The physical property of a rock to be considered as a building stone, which tells the relationship of ratio of load or pressure at failure to the area of cross section of stone under the load
    A) Tensile Strength
    B) Crushing Strength
    C) Shearing Strength
    D) Transverse Strength

98. The engineering property of soil that tells about the ability of soil to transmit moisture in all directions regardless of any gravitational force.
    A) Capillarity
    B) Cohesion
    C) Permeability
    D) Elasticity

99. The fundamental unit of lithostratigraphic classification.
    A) Group
    B) Member
    C) Formation
    D) Bed

100. Which of the following is an example of discrete raster data?
    A) Air temperature
    B) Population Density
    C) Soil Salinity
    D) Elevation

101. The space segment of the autonomous regional satellite navigation system IRNSS developed by ISRO has:
    A) 5 satellites
    B) 10 satellites
    C) 8 satellites
    D) 7 satellites

102. Match the Latin names of Lunar Maria with the English names

Latin Name	English Name
a. Mare Frigoris	1. Sea of Rains
b. Mare Imbrium	2. Sea of Clouds
c. Mare Insularum	3. Sea of Islands
d. Mare Nubium	4. Sea of Cold

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

103. The name given to the black areas of an interference figure in mineral optics.
    A) Isochrome
    B) Isohyet
    C) Isogyre
    D) Isochore

104. The mineral which indicates medium to high grade of metamorphism:
    A) Zeolite
    B) Sillimanite
    C) Staurolite
    D) Garnet

105. In the tectonic classification of sedimentary basins, aulocogens fall under the category
    A) Foreland Basins
    B) Intracontinental Basins
    C) Arch-Trench Basins
    D) Rift Basins

106. The Spatial Analyst toolset that allows you to apply weights to several inputs and combine them into a single output:
A)   Overlay Analysis Tool
B)   Conditional Tool
C)   Generalization Analysis Tool
D)   Raster Creation Tool

107. Match the types of Lamprophyres in Column-I with the dominant minerals in Column-II.

	Column-I		Column-II
a.	Vogesite	1.	Hornblende and Orthoclase
b.	Minette	2.	Hornblende and Plagioclase
c.	Spessartite	3.	Biotite and Plagioclase
d.	Kersantite	4.	Biotite and Orthoclase

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

108. The mineral that does not occur in the four-component normative system of Yoder and Tilley tetrahedron:
A)   Nepheline   B)   Olivine   C)   Orthoclase   D)   Quartz

109. The textural term applied to S-shaped or reversed S-shaped trails of inclusions in poikilitic crystals found in regionally metamorphosed rocks:
A)   Helicitic   B)   Blastopsammitic
C)   Blastophyric   D)   Nematoblastic

110. According to Dunham's classification of carbonate rocks, if the rock is grain supported and if the grains have shapes that allow for small amounts of mud to occur in the interstices, it is called:
A)   Packstone   B)   Boundstone   C)   Wackestone   D)   Mudstone

111. The method which is <u>not</u> used for the estimation of aquifer parameters:
A)   Theis method   B)   Ferris method
C)   Hill's method   D)   Boulton's method

112. Match the following silicate structures and corresponding minerals:

	Silicate structures		Minerals
a.	Inosilicate	1.	Nepheline
b.	Tectosilicate	2.	Olivine
c.	Sorosilicate	3.	Enstatite
d.	Nesosilicate	4.	Hemimorphite

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

113. The second largest barrier reef in the world.
    A) New Caledonia Barrier Reef
    B) Red Sea Coral Reef
    C) Raja Ampat Reef
    D) Belize Barrier Reef

114. Soil type containing sand, silt and clay in roughly equal proportions with nutrients, moisture and humus.
    A) Podzol   B) Pedalfer   C) Chernozem   D) Loam

115. The two most common kinds of rocks seen at the lunar surface:
    A) Granites and Granitoids   B) Andesites and Diorites
    C) Granites and Rhyolites   D) Anorthosites and Basalts

116. The only plausible parent body for SNC meteorites.
    A) Mars   B) Jupiter   C) Saturn   D) Uranus

117. The longest mainland coastline in India is in:
    A) Maharashtra
    B) Tamil Nadu
    C) Andaman and Nicobar Islands
    D) Gujarat

118. The rhizome (root) on which Glossopteris and Gangamopteris grew
    A) Sigillaria   B) Nilssonia
    C) Vertebraria   D) Brachyphyllum

119. Match the lithostratigraphic units of Siwalik Group with their standard European Equivalent.

Lithostratigraphic unit	Standard European Equivalent
a. Chinji Formation	1. Sarmatian
b. Tatrot Formation	2. Tortonian
c. Nagri Formation	3. Helvetian
d. Kamlial Formation	4. Astian

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

120. The 'most faithful' indicator plant for copper deposits:
    A) Ocimum centraliafricanum   B) Pandanus candelabrum
    C) Calamine violet   D) Astralagus bisulcatus

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