

13 — EARTH SCIENCES

(Answer ALL questions)

56. LOESS deposited by _____

1. Glacier
2. Wind
3. River
4. Sea

57. Spheroidal weathering causes due to _____ process

1. Biological
2. Chemical
3. Thermal
4. Anthropogenic

58. Oceanic crust is composed of _____

1. SIMA
2. SIAL
3. SICA
4. SIMG

59. The composition of earth outercore is _____

1. Si and Na
2. Ni and Fe alloy
3. Na and Mg
4. Si and Ca

60. One lithospheric (crustal) plate is forced downward under an upper plate is known as _____ zone

1. Subduction
2. Sial
3. Seismic
4. Sima

61. When is the wind deflected due to the rotation of the Earth, it is called _____

1. Polar wind
2. Geotropic wind
3. Westerlies
4. Trade winds

62. The reason behind the drifting away continents is _____

1. Weathering process
2. Folding and faulting of rocks
3. Tectonic process
4. Erosion process

63. The drainage pattern which shows a lack structural control to the stream flow direction is described as

1. parallel
2. rectangular
3. annular
4. dendritic

64. Fining upward sequences are characterized of

1. Meandering streams
2. Braided streams
3. Anastomosing streams
4. Point bar

65. Batholiths are always associated with

1. Earth zones
2. Orogenic belt
3. Island arcs
4. Folds and faults

66. When the two plate collide, they form a

1. Basin
2. Subduction zone
3. Bénioff zone
4. Transform fault

67. Darcy's law is generally not applicable in the _____ region

1. Sand dunes
2. Sedimentary rocks
3. Karst
4. Glacial deposits

68. The thickest coal seam in India is

1. Jaharia
2. Bokaro
3. Raniganj
4. Singrauli

69. Diamond bearing conglomerates of central India underlie _____

1. Bhander series
2. Kaladgi series
3. Sakoli series
4. Saline series

70. Fore deep sediments occurs in

1. Siwalik System
2. Cuddapah System
3. Vindhyan System
4. Haimantha System

71. Leucoxene is a variety of

1. Tourmaline
2. Talc
3. Topaz
4. Sphene

72. An angle that a line in a plane makes with a horizontal line in that plane is called

1. Rake
2. Hade
3. Plunge
4. Axis

73. Tear faults are a variety of

1. Strike faults
2. Strike-slip faults
3. Dip faults
4. Dip-slip faults

74. Thickness variations within a tabular unit, layer or stratum illustrate by

1. Isopach map
2. Isotope map
3. Geological map
4. Thematic map

75. Asphaltenes are molecular substances that are found in _____

1. Gas
2. Paraffin
3. Crude oil
4. Resins

76. The geological age of the major hydrocarbon reservoir in the Bombay High oil field is

1. Cretaceous
2. Holocene
3. Oligocene
4. Miocene

77. Which of the following is the correct sequence of minerals in terms of descending order of their hardness

1. Apatite-Calcite-Quartz
2. Calcite-Apatite-Quartz
3. Quartz-Apatite-Calcite
4. Quartz-Calcite-Apatite

78. Porphyritic texture frequently found in

1. Plutonic rocks
2. Volcanic rocks
3. Hypabyssal rocks
4. Volcanic and Hypabyssal rocks

79. In which of the following environment would you expect to find Oscillation Ripple marks?

1. Alluvial
2. Beach
3. Deep sea
4. Estuary

80. Which of the following will not make a fossil?

1. Decomposed organic material
2. Plant impressions
3. Animal footprints
4. Loose animal bones

81. Petrified fossil is formed

1. When minerals replace all or part of an plant
2. Solid copy of the shape of an organism
3. An extremely thin coating of carbon on rock
4. An extremely thick coating of carbon on rock

82. Choose the sediment texture from order of largest to smallest

1. Boulder-Cobble-Gravel-Sand-Silt-Clay
2. Boulder-Sand-Gravel-Cobble-Clay
3. Sand-Boulder-Gravel-Clay
4. Clay-Sand-Boulder-Gravel

83. When you stand in the beach, you can observe a tiny drainage channels in a beach caused by the flow seaward of water left the sands of the upper part of the beach after the retreat of the tide. This sedimentary structure is referred as

1. Ripple marks
2. Rain prints
3. Rill marks
4. Rain drop

84. Which of the following is a stress mineral?

1. Andalusite
2. Kyanite
3. Sillimanite
4. Cordierite

85. Thermal metamorphism leads to

1. Change in mineralogical composition only
2. Change in fabric only
3. Change in mineralogical composition and fabric
4. Change in texture only

86. The purple colour of Amethyst is due to process of

1. Titanium
2. Manganese
3. Iron
4. Chromium

87. Placer gold deposits are mostly

1. Elluvial
2. Alluvial
3. Pluvial
4. Colluvial

88. If the colour of the gossan is black, it indicates the presence of

1. Iron
2. Graphite
3. Copper
4. Manganese

89. _____ type of coal is mining in Neyveli

1. Peat
2. Anthracite
3. Lignite
4. Bituminous

90. Which of the following serves as an aquitard?

1. Loam
2. Clay
3. Sandy loam
4. Solid granite

91. Permeability is measured in units called _____

1. Darcy
2. Stokes
3. Poise
4. Weber

92. The type of dam preferred where the river section is wide and the foundation is unsound is _____

1. Gravity dam
2. Multi arch dam
3. Arch dam
4. Embankment dam

93. Which of the following is NOT a fire-resistant material?

1. Vermiculite
2. Biotite
3. Chrysotile
4. Powdered mica

94. Which of the following has the highest compressive strength?

1. Granite
2. Dacite
3. Marble
4. Quartzite

95. Which of the following can be estimated from SP log against a saline-water saturated sandstone formation encountered in a well

1. Resistivity of formation water
2. porosity
3. Permeability
4. Depth of invasion

96. Rock solution is geomorphologically significant in the weathering of _____

1. Glacial erosion
2. Karst terrain
3. Arid terrain
4. Fluvial terrain

97. GPS constellation means

1. 8 orbit 4 satellites in each orbit
2. 24 orbits 4 satellites in each orbit
3. 6 orbits 4 satellites in each orbit
4. 12 orbits 4 satellites in each orbit

98. Altimeter is a sensor to record the measurement of

1. Height
2. Temperature
3. Direction
4. Pressure

99. El-Nino and La Nino are associated with

1. Ocean currents
2. Tsunami
3. Rare climatic events
4. Cyclone storms

100. Which one of the following resistivity layers result in K type curve?

1. Low-High-Low
2. Low-Low-High
3. High-Low-Low
4. High-Low-High

101. Thermal remote sensing for studies is confined to _____ portion of the EMR

1. 3 to 8 microns
2. 3 to 5 microns
3. 8 to 9 microns
4. 8 to 15 microns

102. Art of map making is referred as

1. Cartography
2. Topography
3. Contouring
4. Bathymetry

103. Inverse slope technique of interpretation used in _____

1. Induce polarisation method
2. Self potential method
3. Electrical profiling method
4. Vertical Electrical Sounding method

104. Which is the correct sequence of process water moves from the ocean to land in hydrologic cycle?

1. Evaporation, Precipitation, run condensation
2. Evaporation, condensation, precipitation runoff
3. Evaporation, runoff, Precipitation condensation
4. Evaporation, condensation, runoff, Precipitation

105. Isohytes are the points joining the areas equal

1. Pressure
2. Temperature
3. Rainfall
4. Salinity

106. The sensor on-board Chandrayaan-1 used to identify lunar minerals is

1. HEX
2. HySI
3. PAN
4. LISS

107. Which one of the following wavelengths penetrates clouds, rain, fog etc?

1. Infra-red
2. Visible
3. Ultra-violet
4. Microwave

108. Which of the following is NOT a polar orbiting satellite

1. IRS P4
2. CARTOSAT
3. INSAT 1D
4. LANDSAT 5

109. Flat topped hills or small mountains formed by stream action are called

1. Mesas
2. Cuestas
3. Buttes
4. Stream terraces

110. When a rock layer bends in response to stress and does NOT recover its original shape when the stress is removed, its behaviour is said to be _____

1. Plastic
2. Brittle
3. Elastic
4. Ductile

111. An isolated volcanic mountain, with a flat top and located below the surface of the sea is known as _____

1. Atoll
2. Guyot
3. Aqua-crater
4. Submarine trench

112. The wavelength region of the EMR exhibiting absorption for iron rich minerals is _____

1. NIR
2. SWIR
3. TIR
4. UV

113. Which of the following negative skewness?

1. Aeolian sands
2. River sands
3. Loess
4. Beach sands

114. Koyna reservoir is in

1. Madhya Pradesh
2. Maharashtra
3. Manipur
4. Mizoram

115. Salt domes which may indicate oil fields are indicated in aerial photo as _____

1. Radial drainage
2. Dendritic drainage
3. Braided drainage
4. Rectangular drainage