PROVISIONAL ANSWER KEY
NAME OF THE POST
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Note: Candidate must ensure the compliance to send all suggestion in the given format with reference to this paper with provisional answer key only.

101. Sial' is a part of

(A) Outer core
(B) Upper mantle
(C) Upper Crust
(D) Lower mantle

102. The environment between the high tide and low tide levels of the sea is known as

(A) Neritic
(B) Bathyal
(C) Abyssal
(D) Littoral

103. Sinkhole, doline and dripstone are significant features of

(A) Aeolian landform
(B) Karst topography
(C) Glacial landform
(D) Fluvial landform

104. Which of the following is formed by wind erosion

(A) Gorges
(B) Loess
(C) Yardang
(D) Butte

105. Which one of the following geomorphic features can be formed by erosion

(A) Hook
(B) Terrace
(C) Loess
(D) Stalactite

106. Headlands are produced by

(A) Ground water erosion
(A) River erosion
(C) Marine erosion
(D) Wind erosion

107. Which one among the following is a feature produced by wind

(A) Drumlins
(B) Loess
(C) Delta
(D) Canyons

108. The mature stage feature of the river is

(A) Alluvial fan
(B) V- shaped valley
(C) Meanders
(D) Ox-bow lake

109. Deltaic deposits are characterized by

(A) coarsening upward sediment cycles

(B) fining upward sediment cycles

(C) mixed cycles

(D) none of the above

110. Tidal bundles form in

(A) rivers

(B) glaciers

(C) Shallow marine environment

(D) Mountains

111. The process in which the glacial wastage takes place by the double process of evaporation and melting is known as

(A) Nivation

(B) Calvation

(C) Ablation

(D) Plucking

112. Part of the Tidal Flats occurring near the high water line is known as:

(A) Mixed flat

(B) Sand flat

(C) Mud flat

(D) Tidal Flat

113. The structure having dip towards a common central point from all sides is

(A) Basin

(B) Fault

(C) Dome

(D) Joint

114. A group of folds having essentially parallel axial planes are

(A) Recumbent folds

(B) Isoclinal folds

(C) Conjugate folds

(D) Overturned folds

115. Heterolithic unconformity is also known as

(A) Parallel unconformity

(B) Angular unconformity

(C) Disconformity

(D) Nonconformity

116. The angle between any line and its horizontal projection, measured in a vertical plane is

(A) Pitch (B) Dip

(C) Plunge (D) Strike

117. The behavior of perfectly elastic body is governed by

(A) Hilt's Law (B) Bulk Modulus

(C) Hook's Law (D) Bode's Law

118. Compressibility can be described as the reciprocal of

(A) Young's Modulus (B) Rigidity Modulus

(C) Young's and Rigidity Modulus (D) Bulk Modulus

119. Joints perpendicular to the axis of fold more common in orogenic belts are termed as

(A) Columnar joints (B) Release joints

(C) Extension joints (D) Cross joints

120. A limited area of younger rocks surrounded by the older rocks is called

(A) Outlier (B) Overlap

(C) Inlier (D) Offlap

121. When two folds plunging away from each other are joined, then they formed

(A) Basin (B) Dome

(C) Culmination (D) Depression

122. Which of the following statements is true?

(A) Pitch and plunge are always same

(B) Fold hinge lines and fold axis are always same

(C) Pitch and rake are always same

(D) None of the above

123. Which of the following is true for passive shear folding?

(A) It develops in single layer competent beds

(B) It develops in single layer incompetent beds

(C) It develops because of bending of the beds

(D) It develops because of micro-faulting across the beds

124. The thrust fault will be generated when:

(A) σ_1 and σ_2 are horizontal (B) σ_1 and σ_3 are horizontal

(C) σ_2 and σ_3 are horizontal (C) None of the above

125. Which one of the following is true?

(A) The pi –diagram can differentiate between antiform and synform

(B) A vertical fold axis will be plotted at periphery of the stereonet in pi- diagram

(C) An inclined bedding plane will occur as a curve on the pi diagram

(D) Pole of the bedding plane is plotted in case of pi diagram

126. Poisson's Ratio is the ratio between:

(A) Young's Modulus and Shear Modulus

(B) Axial strain and transverse strain

(C) Compressibility and rigidity

(D) All of the above

127. When the stream valleys are guided by the folds they are parallel to the system of fold axes, this pattern of drainage is called:

(A) Dendritic (B) Radial

(C) Trellis (D) Annular

128. The supercontinent that existed between 900-1000 million years ago is named as:

(A) Pangea (B) Panthalasa

(C) Rodinia (D) Gondwanaland

129. The volcanism at Iceland may be:

(A) MOR related

(B) Hot spot related

(C) Both MOR and Hot Spot related

(D) None of the above

130. The post-mortem history of fossils is studied under the branch of:

(A) Ichnology (B) Palaeoecology

(C) Biostratigraphy (D) Taphonomy

131. In brachiopods, the pedical valve is also called as

(A) Brachial valve (B) Ventral valve

(C) Right valve (D) Dorsal valve

132. Which of the following is a sinistrally coiled gastropod:

(A) Physa (B) Murex

(C) Turbo (D) Natica

133. In echinoids, Aristotle's Lantern is found in:

(A) Periproct (B) Peristome

(C) Apical Disc (D) Along lateral margins

134. Which of the following is a characteristic of the Upper Gondwana plant fossil:

(A) Glossopteris (B) Pecopteris

(C) Dicrodium (D) Ptilophyllum

135. Which of the following marks the Permian/Triassic boundary:

(A) First appearance of Olenus

(B) First appearance of Nautilus

(C) First appearance of Macrocephalites

(D) First appearance of Otoceras woodwardi

136. Cephalopoda with most complex suture is

(A) Ceratites (B) Ammonites

(C) Nautilus (D) Goniatite

137. The exoskeleton of Pteropods is made up of

(A) Aragonite (B) Calcite

(C) Calcium phosphate (D) Silica

138. Homo sapiens belong to

(A) Primates (B) Rodentia

(C) Chiroptera (D) Mollusca

139. Which one is not a bivalve

(A) Lima (B) Nautilus

(C) Nucula (D) Trigonia

140. Ediacaran fauna belong to:

(A) Mesoproterozoic (B) Palaeoproterozoic

(C) Neoproterozoic (D) Archaeozoic

141. Composition of the diatom microfossil tests is:

(A) Calcareous (B) Siliceous

(C) Phosphatic (D) Cutinous

142. Foraminifera belong to the Kingdom :

(A) Protista (B) Monera

(C) Planta (D) Animalia

143. The sister branch of Paleontology, which deals with the study of Pollens and Spores, is called:

(A) Ichnology (B) Paleobotany

(C) Palynology (D) Oncology

144. The Coccoliths are microscopic:

(A) Marine algae (B) Non-marine algae

(C) Marine fungi (D) Non-marine fungi

145. A depth in ocean below which no calcareous tests are preserved in sediments is called:

(A) Aragonite Compensation Depth (B) Calcite Compensation Depth

(C) Carbonate lysocline (D) Supra-lysocline

146. The microfossil group Ostracoda belongs to the phylum :

(A) Mollusca (B) Arthropoda

(C) Bryozoa (D) Protozoa

147. Which of the following microfossil groups is useful in stratigraphic correlation of a marine with a non-marine sequence :

(A) Foraminifera (B) Radiolaria

(C) Pteropoda (D) Ostracoda

148. Abundance of planktonic foraminifera from shallow shelf towards deep slope region:

(A) Increases (B) Decreases

(C) Remains same (D) No definite pattern

149. Occurrence of a larger foraminifera Fusulina in a sedimentary formation suggests an age of:

(A) Permian (B) Carboniferous

(C) Triassic (D) Jurassic

150. Which of the following oceans is contracting?

(A) Indian Ocean (B) Atlantic Ocean

(C) Pacific Ocean (D) None of the above

151. Seismic continental margins are usually associated with

(A) Oceanic trench (B) Microcontinents

(C) Transform faults (D) Ocean ridge

152. The Mediterranean represents an ocean in the _____ stage of its life.

(A) Embryonic (B) Mature

(C) Declining (D) Terminal

153. Mid-ocean ridge is formed due to the plate movement which is called :

(A) Convergent movement (B) Divergent movement

(C) Transform fault movement (D) Lateral slipping plate movement

154. Where would deep – focus earthquakes occur?

(A) Under spreading centers (B) At subduction zone

(C) Along the transform faults (D) At Mid-ocean ridge

155. Which of the following pairs of plumes is associated with rifting and breakup events between India-Madagascar-Seychelles that led to the development of western continental margin of India ?

(A) Reunion and Marion (B) Crozet and Marion

(C) Marion and Kerguelen (D) Reunion and Crozet

156. The Neotethys existed during:

(A) Paleozoic (B) Mesozoic

(C) Cenozoic (D) Neoproterozoic

157. Find odd one out

(A) Lathi Formation (B) Chari Formation

(C) Katrol Formation (D) Umia Formation

158. The base of Palaeozoic Era is marked by first appearance of

(A) Corals (B) Trilobites

(C) Pteropods (D) Cephalopods

159. The fundamental unit of chronostratigraphic classification is

(A) Erathem (B) System

(C) Stage (D) Series

160. Mount Everest Limestone belongs to

(A) Carboniferous (B) Ordovician

(C) Silurian (D) Devonian

161. The stratigraphic age of the Zewan beds is

(A) Devonian (B) Permian

(C) Carboniferous (D) Cambrian

162. Isopach maps are used for analysis of

(A) Stratigraphic thickness (B) Depositional environments

(C) Sedimentary structures (D) Structural features

163. The Himalayan Neogene succession is represented by

(A) Dagshai Formation

(B) Subathu Formation

(C) Ranikot Formation

(D) Siwalik Group and Karewa Formation

164. The Chari Formation is best developed in

(A) Spiti Basin (B) Jaisalmer Basin

(C) Kachchh Basin (D) Godavari Basin

165. Assign Kajrahat Formation to the correct Group in the following:

(A) Kaimur (B) Bhander

(C) Semri (D) Rewa

166. "Present is the key of past" is associated with which of the following principles of stratigraphy

(A) Law of superposition

(B) Principle of lateral continuity

(C) Principle of original horizontality

(D) Principle of uniformitarianism

167. Where do the ophiolite suit of rocks occur:

(A) Indus suture zone

(B) Lesser Himalaya

(C) Brahmaputra valley

(D) Himalayan foot hill zone

168. The highest degree of symmetry is shown by _____ and the lowest degree of symmetry is shown by _____ respectively:

(A) Cubic system and Triclinic system

(B) Cubic system and Monoclinic system

(C) Hexagonal system and Monoclinic system

(D) Tetragonal system and Monoclinic system

169. TetragonaI system is characterised by:

(A) Plane of symmetry

(B) Axis of symmetry.

(C) Centre of symmetry

(D) All the above.

170. Where would you expect to find the largest crystals in a lava flow?

(A) Near the top surface of the flow

(B) In the center of the flow

(C) Near the bottom of the flow

(D) The crystals would have the same grain size throughout the flow

171. According to Bowen's reaction series, which of the following pairs of phases are likely to be incompatible?

(A) Quartz and alkali feldspar

(B) Ca-Plagioclase and olivine

(C) Quartz and olivine

(D) Na-plagioclase and amphibole

172. During crystallization of a melt plagioclase become richer in _____ .

(A) Potassium
(B) Sodium
(C) Calcium
(D) Krypton

173. Which of the following pairs of intrusive and extrusive rocks have the same chemical composition?

(A) Granite and andesite
(B) Diorite and basalt
(C) Gabbro and basalt
(D) Gabbro and rhyolite

174. Crystal face with miller indices (111) is known as

(A) Parametral face
(B) Solid face
(C) Inclined face
(D) Unit face

175. The chemical composition of Jadeite is

(A) $NaAl(SiO_3)_2$
(B) $MgSiO_3$
(C) $NaFe(SiO_3)_2$
(D) $LiAl(SiO_3)_2$

176. Line perpendicular to a circular section of an indicatrix is

(A) Twin axis
(B) Optic axis
(C) Rotational axis
(D) Axis of symmetry

177. The mineral Augite shows

(A) 1^{st} order interference colours
(B) 2^{nd} order interference colours
(C) 3^{rd} order interference colours
(D) 4^{th} order interference colours

178. Which one is a non-pleochroic mineral

(A) Biotite
(B) Olivine
(C) Garnet
(D) Tourmaline

179. The end members of orthorhombic pyroxene are

(A) Enstatite-Diopside
(B) Diopside-Augite
(C) Enstatite-Hypersthene
(D) Augite-Jadeite

180. High-temperature polymorph of silica is

(A) Cristobalite (B) Flint

(C) Chert (D) Amethyst

181. The chemical composition of Orthoclase is

(A) $K\,Al\,Si_2\,O_4$ (B) $K\,Al\,Si_3\,O_6$

(C) $K\,Al\,Si_4\,O_8$ (D) $K\,Al\,Si_3\,O_8$

182. Chromite is a member mineral of

(A) Epidote group (B) Spinel group

(C) Olivine group (D) Mellilite group

183. Olivine belongs to

(A) Nesosilicate (B) Inosilicate

(C) Sorosilicate (D) Cyclosilicate

184. A texture in which phenocrysts are embedded in fine grained ground mass is

(A) Porphyritic (B) Perthite

(C) Graphic texture (D) Seriate texture

185. Which of the following mineral exhibits the property of magnetism

(A) Biotite (B) Orthoclase

(C) Albite (D) Pyrrhotite

186. The gabbroic rock without pyroxenes containing mainly feldspars and olivine is

(A) Andesite (B) Dacite

(C) Troctolite (D) Basalt

187. Batholiths are usually associated with

(A) Orogenic belt (B) Earthquake zone

(C) Island arcs (D) Fold and faults

188. Ophitic texture is commonly exhibited by

(A) Lamphrophyres (B) Dolerite

(C) Andesite (D) Trachyte

189. Lavas containing numerous gas cavities of irregular shape are

(A) Pumice (B) Amygdales

(C) Scoria (D) Ignimbrites

190. Granophyres are hypabyssal equivalent of

(A) Basalt (B) Granite

(C) Gabbro (D) Diorite

191. An example of a discordant igneous intrusion is

(A) Laccolith (B) Lopolith

(C) Bysmalith (D) Chonolith

192. Migmatites are the result of

(A) Ultrametamorphism (B) Retrograde metamorphism

(C) Palingenesis (D) Metasomatism

193. Khondalites are characteristic rocks of

(A) Amphibolite facies (B) Eclogite facies

(C) Granulite facies (D) Green-schist facies

194. A line joining the points where the rocks have the same grade of metamorphism is called

(A) Isogyre (B) Isograde

(C) Isopach (D) Isochore

195. Find odd one out

(A) Marble (B) Slate

(C) Granite (D) Phyllite

196. The typical product of contact metamorphism with maculose structure

(A) Granulose
(B) Cataclastic
(C) Hornfels
(D) Schistose

197. The most common accessory mineral in eclogites is

(A) Ilmenite
(B) Zoisite
(C) Rutile
(D) Sphene

198. Placer gold deposits are mostly

(A) Elluvial
(B) Colluvial
(C) Aeolian
(D) Alluvial

199. Presence of mineral Glauconite suggests

(A) Desert environment
(B) Glacial environment
(C) Fluvial environment
(D) Marine environment

200. The red shale or Arkosic facies are

(A) Marine one
(B) Both Marine and Non-marine
(C) Non-marine one
(D) Metamorphic one

201. Greywacke sandstone indicates

(A) Active provenance tectonics and prolonged transport
(B) Stable provenance and prolonged transport
(C) Stable provenance and less transport
(D) Active provenance tectonics and less transport

202. Chromite deposits are mostly of

(A) Igneous origin
(B) Metamorphic origin
(C) Sedimentary origin
(D) Both Metamorphic and Sedimentary origin

203. The chief ore of Aluminum is

(A) Pyrolusite (B) Sphalerite

(C) Bauxite (D) Chalcopyrite

204. Diamond is found in _____ region

(A) Panna (B) Kolar

(C) Baster (D) Singhbhum

205. Bornite is an ore of

(A) Iron (B) Lead

(C) Nickel (D) Copper

206. Ajabgarh Group is associated with

(A) Iron (B) Zinc

(C) Copper (D) Manganese

207. Rutile is source for

(A) Tin (B) Titanium

(C) Tungston (D) Iron

208. The most important ore of lead is

(A) Rutile (B) Psilomelane

(C) Sphalerite (D) Galena

209. The Kolar Gold field is Located in

(A) Bihar (B) Karnataka

(C) Andhra Pradesh (D) Tamil Nadu

210. 'Smarskite' is an ore mineral of

(A) Thorium (B) Nickel

(C) Cobalt (D) Copper

211. Uranium deposits of Jaduguda are of

(A) Metamorphic origin (B) Sedimentary origin

(C) Magmatic origin (D) Hydrothermal origin

212. Oil in Digboi is found in

(A) Tipam Formation (B) Jaintia Formation

(C) Sylhet Formation (D) Disang Formation

213. Richest bentonite deposit of Gujarat is located in

(A) Jamnagar (B) Mehsana

(C) Kachchh (D) Bharuch

214. Boghead coals are rich in:

(A) Alginite (B) Sporinite

(C) Fusinite (D) Collotelinite

215. In Seyler's classification, two important parameters considered are:

(A) Carbon and oxygen (B) Hydrogen and oxygen

(C) Carbon and hydrogen (D) Nitrogen and sulphur

216. In coal, the carbon that has not combined with any other element, is regarded as:

(A) Fixed carbon (B) Total elemental carbon

(C) Total organic carbon (D) Inorganic carbon

217. The ratio of 'fixed carbon' to 'volatile matter' content in coal is called as:

(A) Fuel ratio (B) Carbon-hydrogen ratio

(C) Carbon-oxygen ratio (D) Carbon-nitrogen ratio

218. Spheroid or ovoidal, sometimes angular concretions containing mainly carbonates and fossilized plant remains and occur within coal seams are:

(A) Coal ball (B) Ball coal

(C) Eye ball coal (D) Fireball coal

219. The thermal maturity of coal is determined by measuring reflectance of which of the following:

(A) Inertinite
(B) Liptinite
(C) Vitrinite
(D) Mineral matter

220. Cannel coals are rich in:

(A) Alginate
(B) Sporinite
(C) Suberinite
(D) Resinite

221. The optical behaviour of which maceral changes uniformly with increasing rank:

(A) Inertinite
(B) Vitrinite
(C) Liptinite
(D) Secondary liptinite

222. Coal seams are often found to be associated with:

(A) Fire clays
(B) China clays
(C) Bentonites
(D) Pottery clay

223. The microlithotype 'durite' is a:

(A) Monomacerite
(B) Bimacerite
(C) Trimacerite
(D) Tetramacerite

224. Grade of coal is related to:

(A) Carbon content
(B) Ash content
(C) Bed moisture
(D) Sulphur content

225. Which one of the following is the most effective seal for petroleum

(A) Mudstone
(B) Shale
(C) Siltstone
(D) Evaporite

226. The percentage of interconnected pore volume to the bulk rock volume is known as

(A) Absolute porosity
(B) Effective porosity
(C) Fracture porosity
(D) Secondary porosity

227. Which one of the following is the most explored petroleum traps ?

(A) Structural closure
(B) Fault closure
(C) Sub-unconformity traps
(D) Salt domes

228. In deep water setting petroleum is often associated with

(A) Organic build ups or "Reefs"
(B) Sub-marine levee channel system
(C) Offshore bars
(D) Marine sabkhas

229. Which of the following is true in a reservoir under hydrodynamic equilibrium?

(A) Water column is above oil column
(B) Gas column is above oil column
(C) Oil column is above gas column
(D) None of the above

230. API gravity is a measure of:

(A) Viscosity of the fluid
(B) Density of the fluid
(C) Porosity of the rock
(D) Permeability of the rock

231. Hydraulic fracturing of a well will generally:

(A) Decrease the average permeability near the well bore
(B) Damage the formation
(C) Improve the production of the well
(D) Produce more water

232. The water saturation in a petroleum reservoir usually:

(A) Increases from top to bottom

(B) Decreases from top to bottom

(C) Increases from east to west

(D) Decreases from north to south

233. In an undersaturated reservoir, the reservoir pressure is:

(A) Equal to bubble point pressure

(B) Less than the bubble point pressure

(C) More than the bubble point pressure

(D) None of these

234. Which one of the following controls the recovery factors of the petroleum reservoirs:

(A) Primary drive mechanism

(B) Reservoir permeability

(C) Timely implementation of suitable EOR

(D) All of the above

235. 'Trenching' involves:

(A) Linear excavation

(B) Linear excavation in which one dimension is greater than other

(C) Drilling wedge-shaped bore holes

(D) Digging even-sized pits

236. Diamond drilling can be used to bore holes in:

(A) Horizontal direction only

(B) Vertical direction only

(C) Horizontal and vertical directions

(D) All directions

237. The P-wave velocities are highest in:

(A) Air
(B) Water
(C) Sand
(D) Granite

238. Which of the following has the least electrical resistivity:

(A) Diamond
(B) Sulphur
(C) Clay
(D) Anthracite

239. A horizontal entry into an ore body is called:

(A) Adit
(B) Shaft
(C) Bench
(D) Pit

240. Seismic facies analysis is:

(A) Regional stratigraphic interpretation only
(B) Depositional environment only
(C) Geologic history only
(D) All the three above

241. Seismic attributes represents the seismically driven parameters:

(A) Velocity only
(B) Amplitude only
(C) Frequency only
(D) All the three above

242. A well log of the travel time (transit time) for the seismic waves is:

(A) Inversely proportional to S-wave velocity
(B) Reciprocal of P-wave velocity
(C) Equal to the S-wave velocity
(D) Equal to the P-wave velocity

243. If the water saturation is S_w, then oil saturation is:

(A) S_w/S.S.P.
(B) $1-S_w$
(C) S_w^{-1}
(D) $1-R_w$

244. In seismic method of exploration the recorded waves are of:

(A) Low frequency
(B) Zero frequency
(C) High frequency
(D) Aliased frequency

245. The radius of the Fresnel zone is given by:

(A) $R = d\sqrt{\lambda/2}$
(B) $R = d^2/\lambda$
(C) $R = d\sqrt{d\lambda/2}$
(D) $R = 4\pi\lambda^2$

246. Snell's law is applied to:

(A) Reflected ray only
(B) Refracted ray only
(C) Diffracted ray only
(D) Reflected and refracted rays both

247. Poisson's ratio for consolidated rocks is about

(A) 0.25
(B) 0.12
(C) 1.30
(D) 3.01

248. The propagation of P wave & S wave are as under:

(A) P wave arrives later than S wave
(B) P wave and S wave arrive simultaneously
(C) P wave arrives earlier than S wave
(D) S wave arrives earlier than P wave

249. The associated particle motion in Rayleigh wave is:

(A) Circular
(B) Elliptic
(C) Straight line
(D) Hyperbola

250. Love waves are used for the study of the velocity structure of the:

(A) Lithosphere only
(B) Asthenosphere only
(C) Hydrosphere
(D) Lithosphere and Asthenosphere both

251. Diffraction of seismic waves in the ground is due to:

(A) Edges of faulted layers only

(B) Small isolated objects only

(C) Edges of faulted layers and small objects both

(D) Scattering of incident seismic energy

252. Waterholding capacity is more in _____ soils.

(A) Clayey (B) Sandy

(C) Loamy (D) Red

253. The underground water that occur within the zone of aeration is termed as

(A) Meteoric water (B) Vadose water

(C) Connate water (D) Plutonic water

254. An impermeable formation that neither contains nor transmits water is called

(A) Aquifer (B) Aquitard

(C) Aquiclude (D) Aquifuge

255. The hydraulic conductivity of a rock is expressive of its

(A) Porosity

(B) Permeability

(C) Yield potential of Under Ground Water

(D) Water retentivity

256. Deeply confined aquifers can be recharged by means of

(A) Pits and shafts (B) Percolation of surface water

(C) Inverted wells (D) Water spreading

257. Which of the following areas consists of several prolific aquifers?

(A) Kolkata (B) Jaisalmer

(C) Jabalpur (D) Nasik

258. An influent stream is one which

(A) Flows parallel to a consequent stream

(B) Recharges the ground water

(C) Flows into a parent stream

(D) Receives discharges from the ground water

259. Deforestation is occurring in many countries and it is therefore difficult to detect the ongoing damage. Which of the following types of remote sensing would be best suited for locating deforestation?

(A) Thermal infrared

(B) Microwave

(C) Radar

(D) Colour infrared

260. Using the latitude and longitude system (degree, minutes, second), 20 minutes is equal to what?

(A) 0.20^{o}

(B) 1/3 hour

(C) 200 second

(D) $1/3^{o}$

261. An automated system for the capture, storage, retrieval, analysis and display of spatial data is known as-

(A) GPS

(B) LANDSAT

(C) GIS

(D) None of the above

262. Precise measurement of Earth's features can be obtained from

(A) High- oblique photographs

(B) Vertical aerial photographs

(C) Low- oblique photographs

(D) All the above types of photographs

263. Which of the following remote sensing technologies uses sound?

(A) Radar

(B) Colour infrared

(C) Thermal infrared

(D) Sonar

264. Who is said to be the "Father of the Indian Space Program"?

(A) Dr. A. P. J. Abdul Kalam (B) Dr. Vikram A. Sarabhai

(C) Dr. K. Kasturirangan (D) Prof. Satish Dhawan

265. The largest scale of the following is.

(A) 1:24000 (B) 1:62500

(C) 1:100000 (D) 1:500000

266. Which one is not an open source GIS technique

(A) Quantum GIS (B) Arc GIS

(C) SAGA GIS (D) GRASS GIS

267. Which of the following is a reverse magnetic polarity event

(A) Reunion (B) Olduvai

(C) Jaramillo (D) None of the above

268. Which of the following is a radio-isotope

(A) ^{12}C (B) ^{13}C

(C) ^{14}C (D) ^{18}O

269. Carbon – 14 has a half – life of

(A) 6,000 years (B) 4,730 years

(C) 5,730 years (D) 10,000 years

270. Broadly the Himalayan region is a

(A) Convergent margin (B) Divergent margin

(C) Transform margin (D) Transcurrent margin

271. The term 'heat island' is used in connection with a

(A) Volcano (B) Hotspot

(C) City (D) Road intersection

272. Hurricanes are not similar to

(A) Cyclones
(B) Typhoons
(C) Wily-willies
(D) Thunderstorms

273. Which one of the following will have the lowest value at the center of Earth?

(A) Temperature
(B) Density
(C) Pressure
(D) Gravity

274. Which of the following regions of India gets the maximum precipitation during the northeast monsoon ?

(A) Western Ghats
(B) North-east India
(C) Tamil Nadu
(D) Rajasthan

275. Western Disturbance occurs

(A) Over southern India during summer
(B) Over northern India during summer
(C) Over northern India during winter
(D) Over southern India during winter

276. The most turbulent zone of the Earth's atmosphere is

(A) Thermosphere
(B) Troposphere
(C) Stratosphere
(D) Mesosphere

277. Coriolis force on air parcels is due to

(A) Pressure gradients
(B) Temperature gradients
(C) Earth's revolution around the Sun
(D) Earth's rotation about its own axis

278. Which is the warmest region in the Oceans?

(A) The Bay of Bengal barrier layer

(B) The Indo-Pacific warm pool

(C) The Arabian Sea seasonal warm pool

(D) The Dead Sea

279. Pick the correct statement:

(A) The oceans are heated from below and the atmosphere is heated from above

(B) Both the ocean and the atmosphere are heated from above

(C) Both the ocean and the atmosphere are heated from the below

(D) The ocean is heated from above and the atmosphere is heated from below

280. Hadley cell is a circulation associated with

(A) Ocean

(B) Atmosphere

(C) Groundwater

(D) River

281. Which is a correct description of the air circulation patterns of the earth?

(A) Warm air rises at the equator and moves all the way to the poles where it cools and sinks

(B) In the Northern Hemisphere, the surface air moving north east from 30 to 60 degrees is moist and encounters cold air moving south to form a stormy region

(C) Air evaporating at equator is dry and therefore causes deserts when it sinks at 30 degree north

(D) The polar cells are cold and cause rainfall as they descend to the equator

282. The stromatolites are

(A) Layered biochemical accretionary structures

(B) Earliest live forms on the earth

(C) Red brown algae

(D) Associated commonly with granite

283. Arsenic contamination in the groundwater is widely prevalent in India in the state of

(A) Goa and Himachal Pradesh (B) Andhra Pradesh

(C) Tamil Nadu (D) West Bengal

284. Diamonds occur in _____ rocks

(A) Sandstone (B) Granite gneiss

(C) Kimberlite (D) Basalt and limestone

285. Which ocean has the largest quantity of polymetallic nodules

(A) Atlantic (B) Pacific

(C) Indian (D) Antarctic

286. Gypsum deposits are

(A) Clastic deposits (B) Evaporite deposits

(C) Supergene deposits (D) Bog deposits

287. If one travels from Tibet to India, that is from North to South across the Himalaya: what type of tectonic boundary does one come across between Tibet and India in modern times

(A) Subduction zone (B) Mid-ocean ridge

(C) Island arc (D) Collisional boundary

288. In which of the following climates will chemical weathering be most rapid?

(A) Hot and dry
(B) Hot and humid
(C) Cold and dry
(D) Cold and humid

289. In caverns, water containing calcium carbonate solution drips from the ceiling, and thereby long, cylindrical, pendent concretions are formed and they are known as

(A) Stalactites
(B) Stalagmites
(C) Speleotherms
(D) Caves

290. The 2004 Indian Ocean tsunami was caused due to an earthquake of the

(A) Andaman islands
(B) Indonesian island of Sumatra
(C) Indonesian island of Java
(D) Malaysia

291. What is the term that is used for the layer of loose, heterogeneous weathered material lying on top of rocky hill slopes?

(A) Soil
(B) Weathering profile
(C) Regolith
(D) Alluvium

292. In drinking water, the upper limit of fluoride content is

(A) mg/l
(B) 1.5 mg/l
(C) 15 mg/l
(D) 20 mg/l

293. Which of the following came first in the stratigraphic record?

(A) Dinosaurs
(B) Birds
(C) Flowering plants
(D) Conifers

294. Phosphorite or rock phosphate deposits are a type of

(A) Non-detrital sedimentary formation

(B) Detrital sedimentary formation

(C) Metamorphic rocks

(D) Igneous rocks

295. Most tropical cyclones originate

(A) Between 0° and 5° north and south of the equator

(B) In the centers of sub-tropical highs

(C) Between 10° and 20° north and south of equator

(D) To the west of westerly winds

296. The Ozone layer is located in

(A) The troposphere

(B) The ionosphere

(C) The stratosphere

(D) The exosphere

297. The phenomenon of polar lights (aurora) commonly occurs in the

(A) Stratosphere

(B) Ionosphere

(C) Troposphere

(D) Mesosphere

298. The portion of the atmosphere which extends from the earth's surface up to 8 miles and experiences decrease in temperature at constant rate is

(A) Stratosphere

(B) Tropopause

(C) Troposphere

(D) Mesosphere

299. A northerly wind means a

(A) Wind coming from the north

(B) Wind going towards the north

(C) Wind in the northern hemisphere

(D) Wind in northern India

300. Mineral that is commonly used in glazing porcelain is

(A) Mica (B) Feldspar

(C) Clay (D) Quartz