

IIT JAM 2024 MSQ Model Questions

Subject - Geology (GG)

Q.1 At which of the following locations do lignite deposits occur in India?

- (A) Raniganj
- (B) Singrauli
- (C) Barmer
- (D) Neyveli

Q.2 Which of the following types of dunes form(s) primarily by uni-directional wind?

- (A) Linear dunes
- (B) Parabolic dunes
- (C) Barchan dunes
- (D) Star dunes

Q.3 The attitude of a fault plane was measured to be $350, 75E$. The rake of the slickenline on the fault plane was found to be 90 . Which of the faults listed below satisfy(ies) these observations?

- (A) Dip-slip fault
- (B) Normal fault
- (C) Reverse fault
- (D) Strike-slip fault

Q.4 What type(s) of fossil remains is/are studied in ichnology?

- (A) Fishes and amphibians
- (B) Spores and pollens
- (C) Tracks and trails
- (D) Burrows and bioturbation

Q.5 Which of the following combinations of Basin and Formation is/are CORRECT?

- (A) Cauvery Basin – Niniyur Formation
- (B) Assam Basin – Tipam Formation
- (C) Bengal Basin – Jalangi Formation
- (D) Kutch Basin – Dhok Pathan Formation

Q.6 Fossils from which of the following invertebrate classes show pentamerous symmetry? (A)

- Echinoidea
- (B) Anthozoa
- (C) Cephalopoda
- (D) Trilobita

Q.7 The attitude of the two limbs of a fold was measured as striking 4° N, dipping 85° easterly and striking 30° N, dipping 60° easterly. Which of the following is/are TRUE for describing the geometry of the fold?

- (A) Synform
- (B) Antiform
- (C) Overturned
- (D) Plunging

Q.8 Which of the following statement(s) is/are CORRECT regarding ophitic texture?

- (A) Plagioclase laths are completely enclosed by large pyroxene crystals.
- (B) Intergrowth occurs between quartz and alkali-feldspar.
- (C) It is a variety of poikilitic texture.
- (D) It is a texture observed in peridotite.

Q.9 Which mineral(s) among the following represent(s) AB_2O_4 composition?

- (A) Spinel
- (B) Magnetite
- (C) Chromite
- (D) Ilmenite

Q.10 Which among the following statement(s) is/are TRUE?

- (A) Attrition is more dominant in aeolian than in glacial environments.
- (B) Centrifugal force drives the sediment-laden water outward when the river channel meanders.
- (C) U-shaped valley is a common fluvial geomorphic feature.
- (D) The downstream water velocity in a river channel increases upward from the channel bed towards the water surface.

Q.11 Which of the following statement(s) is/are correct for a plot of $(^{87}\text{Sr}/^{86}\text{Sr})$ versus $(^{87}\text{Rb}/^{86}\text{Sr})$ of a rock which has evolved in a closed system?

- (A) The slopes of the lines of evolution for the minerals in the rock are all equal and positive
- (B) The slopes of the lines of evolution for the minerals in the rock are all equal and negative
- (C) The slope of the isochron is identical in direction to the slope of the lines of evolution for the minerals in the rock
- (D) The slope of the isochron is opposite in direction to the slope of the lines of evolution for the minerals in the rock

Q.12 Which of the following statements is/are correct with reference to subsurface water? (A)

- The perched water table occurs below the water table
- (B) Vadose water occurs in the zone of aeration
- (C) For significant groundwater underflow, the medium must be highly permeable
- (D) Intersection of the water table with the land surface can result in the formation of a spring

Q.13 Which of the following geomorphic features indicate(s) the presence of a fault?

- (A) Triangular facets
- (B) Sudden topographic jump
- (C) Ox-bow lake
- (D) Point bar

Q.14 Which of the following gastropods has/have a siphonal canal?

- (A) Cerithium
- (B) Cypraea
- (C) Fusus
- (D) Murex

Q.15 Which of the following is/are mode(s) of preservation of fossils?

- (A) Small organisms get trapped on viscous resins secreted by trees
- (B) Leaves preserved as thin films of carbon
- (C) Negative impressions of hard parts of organisms
- (D) Mineral growths that branch like ferns

ANSWER KEY

Question No.	Question Type (QT)	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	MSQ	GG	C, D	2
2	MSQ	GG	B, C	2
3	MSQ	GG	A, B, C	2
4	MSQ	GG	C, D	2
5	MSQ	GG	A, B, C	2
6	MSQ	GG	A	2
7	MSQ	GG	A, B, C, D	2
8	MSQ	GG	A, C	2
9	MSQ	GG	A, B, C	2

10	MSQ	GG	A, B, D	2
11	MSQ	GG	B, D	2
12	MSQ	GG	B, C, D	2
13	MSQ	GG	A, B	2
14	MSQ	GG	A, B, C, D	2
15	MSQ	GG	A, B, C	2

