

W-117

Ph.D. Entrance Examination, 2024

GEOLOGY

Maximum Marks : 50

Note : Each question carrying 2 marks.

Q. 1. The earth's crust is thickest under :

- (a) Shield areas
- (b) Platforms
- (c) Phanerozoic orogenic belts
- (d) Archean Greenstone belts

Q. 2. Mohorovicic discontinuity is marked by :

- (a) Abrupt increase in the seismic wave velocities
- (b) Abrupt decrease in the seismic wave velocities
- (c) Gradual increase in the seismic wave velocities

- (d) Gradual decrease in the seismic wave velocities

Q. 3. The largest and the only out crop of an oceanic ridge is :

- (a) Greenland
- (b) Iceland
- (c) Ryukyu Islands
- (d) Galapagos

Q. 4. The youngest tectonic element among the following is :

- (a) Narmada-Son-Lineament
- (b) Indus Suture
- (c) Krol Nappe
- (d) Ganga Basin

Q. 5. Which of the following is a good source of phosphorus :

- (a) Globigerina ooze
- (b) Diatom ooze
- (c) Radiolarian ooze
- (d) Pteropod ooze

(3)

- Q. 6.** Which of the following dunes appear U-shaped in plan view ?
- (a) Barchans
 - (b) Parabolic dunes
 - (c) Seifs
 - (d) Dome dunes
- Q. 7.** The rarest of all the garnets is :
- (a) Pyrope
 - (b) Almandine
 - (c) Grossularite
 - (d) Uvarovite
- Q. 8.** Folds having multiple hinges are called :
- (a) Polyclinal folds
 - (b) Box folds
 - (c) Concentric folds
 - (d) Curvilinear folds
- Q. 9.** The fauna which comprises exclusively of active swimmers is described as :
- (a) Plankton
 - (b) Nekton

(4)

- (c) Benthic
 - (d) Pelagic
- Q. 10.** The first appearance of jaws in fishes took place in :
- (a) Cambrian
 - (b) Ordovician
 - (c) Silurian
 - (d) Devonian
- Q. 11.** Who amongst the following proposed the principle of order of superposition of Strata ?
- (a) Smith
 - (b) Wegener
 - (c) Steno
 - (d) Lyell
- Q. 12.** Gondwana supergroup is economically important because they are rich in :
- (a) Economic mineral
 - (b) Coal alone
 - (c) Iron ore alone
 - (d) Sandstone and Clay

(5)

- Q. 13.** All oil traps contain :
- (a) An impermeable layer
 - (b) An anticline
 - (c) A fault
 - (d) All of these
- Q. 14.** Glauconite is :
- (a) The potassium iron silicate
 - (b) Na-Fe silicate
 - (c) K-Fe carbonate
 - (d) Na-Fe carbonate
- Q. 15.** Uranium deposits are found in :
- (a) Epicontinental environments
 - (b) Marine environments
 - (c) Coastal environments
 - (d) All of the above
- Q. 16.** Gneissic rocks that are metamorphosed sediments are described as :
- (a) Orthogneisses
 - (b) Paragneisses
 - (c) Augen gneisses
 - (d) Phyllonites

W-117

P.T.O.

(6)

- Q. 17.** The optimum temperature range for the formation of hypothermal deposits is :
- (a) 300 – 600°C
 - (b) 300 – 450°C
 - (c) 200 – 300°C
 - (d) 50 – 200°C
- Q. 18.** Contour lines cannot cross or touch each other except in the case of :
- (a) Escarpments
 - (b) Scarp slope
 - (c) Water fall
 - (d) Plateau
- Q. 19.** Lingula is a :
- (a) Long range form
 - (b) Short range form
 - (c) Index fossil
 - (d) Extinct form
- Q. 20.** Which of the following groups of rocks have been subjected to intense folding ?

W-117

(7)

- (a) Semri group
- (b) Kaimur group
- (c) Rewa group
- (d) Bhandar group

Q. 21. Which of the following has the least ionic radius ?

- (a) Na^+
- (b) Mg^{2+}
- (c) Al^{3+}
- (d) Si^{4+}

Q. 22. The Moh's scale of hardness is a/an :

- (a) Arithmetic scale
- (b) Geometric scale
- (c) Logarithmic scale
- (d) Arbitrary scale

Q. 23. Which of the following weather's most rapidly ?

- (a) Anorthite
- (b) Bytownite
- (c) Albite
- (d) Orthoclase

W-117

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(8)

Q. 24. Which of the following river does not form a delta ?

- (a) Krishna
- (b) Godavari
- (c) Mahanadi
- (d) Narmada

Q. 25. Pleistocene Ice ages coincided with the rise of :

- (a) Tibetan Himalayas
 - (b) Higher Himalayas
 - (c) Outer Himalayas
 - (d) Tethyan Himalayas
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W-117