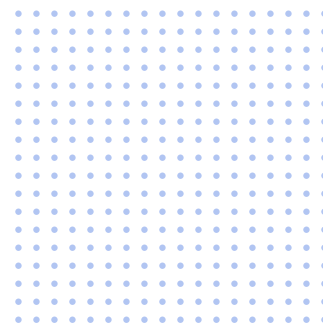




FOR KUET EXAM PREPARATION

KUET 2024

Question Paper · M.Sc. Geology

EXAM	YEAR	TYPE	SUBJECT
KUET	2024	Question Paper	M.Sc. Geology

081

Sr. No.

ENTRANCE TEST-2024**SCHOOL OF EARTH & ENVIRONMENTAL SCIENCES****APPLIED GEOLOGY**

Question Booklet Series

A

Total Questions : 60

Time Allowed : 70 Minutes

Roll No. :

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Instructions for Candidates :

1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be '**Negative Marking**' for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.
8. Only those candidates who would obtain positive score in Entrance Test Examination shall be eligible for admission.
9. Do not make any stray mark on the OMR sheet.
10. Calculators and mobiles shall not be permitted inside the examination hall.
11. Rough work, if any, should be done on the blank sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
13. Ensure that your OMR Answer Sheet has been signed by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

SP-4509-A

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[Turn over**SEAL**

- 180
- The first stage of the Ocean basin formation where due to the splitting of the continents formation of rift valleys occurs is called :
 (A) Terminal stage
 (B) Declining stage
 (C) Suturing stage
 (D) Embryonic stage
 - Mohorovicic discontinuity is a discontinuity between :
 (A) Lithosphere and Asthenosphere
 (B) Crust and Mantle
 (C) Mantle and core
 (D) Outer and inner core
 - All the connected continents (Pangaea) in Palaeozoic era were surrounded by an Ocean known as :
 (A) Panthalassa
 (B) Gondwana
 (C) Laurasia
 (D) Tethys Sea
 - An ultrabasic igneous rock with minerals olivine and pyroxenes as its major constituents is :
 (A) Basalt
 (B) Andesite
 (C) Peridotite
 (D) Rhyolite
 - An isolated crescent shaped sand dune produced by the action of wind predominantly from one direction is known as :
 (A) Seif dunes
 (B) Hairpin dunes
 (C) Barchans
 (D) Star dunes
 - Soil material (clay, silt, etc.) deposited by the running water of a river is called :
 (A) Sedimentary rock
 (B) Moraine
 (C) Loess
 (D) Alluvium
 - The Abyssal plain is an underwater plain on the deep ocean floor found at a depth of :
 (A) 3000-6000 Meters
 (B) 1000-2000 Meters
 (C) 4000-7000 Meters
 (D) 1500-2500 Meters
 - The soil which is a mixture of clay, sand, silt consists of additional organic matter and is very fertile is known as :
 (A) Loamy soil
 (B) Laterite soil
 (C) Peat soil
 (D) Chalk soil
 - Which of the following minerals shows Rhomboidal cleavage ?
 (A) Muscovite
 (B) Calcite
 (C) Quartz
 (D) Pyrope
 - The ratio of the velocity of light in a vacuum to its velocity in a specific medium gives :
 (A) Pleochroism
 (B) Refractive Index
 (C) Birefringence
 (D) Optic sign



11. Which of the following four metals are found as oxide ores in nature ?
 - (A) Copper, Iron, Lithium, Cobalt
 - (B) Zinc, Titanium, Silver, Nickel
 - (C) Silver, Cobalt, Copper, Aluminium
 - (D) Aluminium, Manganese, Iron, Zinc
12. Which of the following two minerals belong to the pyroxene group ?
 - (A) Pyrope and Almandine
 - (B) Agate and Jasper
 - (C) Augite and Pigeonite
 - (D) Paragonite and Lepidolite
13. The point of intersection formed by three or more adjacent faces in a crystal is called :
 - (A) Interfacial angle
 - (B) Extinction angle
 - (C) Solid angle
 - (D) $2V$ angle
14. The phenomenon of some minerals existing in two crystal systems while still having the same chemical formula is known as :
 - (A) Polymorphism
 - (B) Dimorphism
 - (C) Pseudomorphism
 - (D) Isomorphism
15. An arrangement of atoms or molecules in three dimensions and in repetitive pattern forms :
 - (A) A space lattice
 - (B) Interfacial angle
 - (C) Twinning
 - (D) Screw axis
16. In some crystals two or more crystals of the same mineral grow together in a series of repeated very thin layers that are parallel or at a slight angle forming twins. Such type of twins are known as :
 - (A) Polysynthetic twins
 - (B) Cross twins
 - (C) Carlsbad twins
 - (D) Merohedral twins
17. The characteristic texture of plutonic (intrusive) rocks crystallised from slowly cooling intrusions at greater depths and built up by mutually inter-grown crystals visible by the naked eye is known as :
 - (A) Porphyritic Texture
 - (B) Phaneritic Texture
 - (C) Aphanitic Texture
 - (D) Pyroclastic Texture
18. Diorite is a medium-grained intrusive igneous rock. Its fine-grained equivalent is
 - (A) basalt
 - (B) andesite
 - (C) pumice
 - (D) rhyolite
19. The process whereby a pre-existing igneous, sedimentary, or metamorphic rock undergoes compositional and mineralogical transformations associated with chemical reactions triggered by the reaction of fluids that invade the protolith is known as :
 - (A) Anatexis
 - (B) Partial Melting
 - (C) Migmatization
 - (D) Metasomatism

20. High-pressure metamorphism resulting from the crushing and shearing of rock during tectonic movement, mostly along faults is referred to as :
 (A) Contact metamorphism
 (B) Cataclastic metamorphism
 (C) Shock metamorphism
 (D) Regional metamorphism
21. As per Wentworth Scale the average range of size (diameter) of a cobble is :
 (A) 64-256 mm
 (B) 256-320 mm
 (C) 32-64 mm
 (D) 16-32 mm
22. Clastic sedimentary rocks containing silt or clay-sized particles that are less than 0.0625 mm in size with clay minerals are called :
 (A) Rudaceous rocks
 (B) Arenaceous rocks
 (C) Argillaceous rocks
 (D) Calcareous rocks
23. Sedimentary structures that usually occur at the interface of two differing lithologies and grain size and indicate small scale (in Centimeters) groove or irregularities are known as :
 (A) Ripple Marks
 (B) Horizontal bedding
 (C) Sole marks
 (D) Cross bedding
24. The measuring unit of dynamic viscosity is :
 (A) Darcy
 (B) Centimeters
 (C) Millimeters
 (D) Centipoises
25. A variety of coal with 86 -94 percent dry carbon content is :
 (A) Anthracite
 (B) Bituminous
 (C) Sub-bituminous
 (D) Lignite
26. Which is the State in India that produces the largest quantity of Bauxite ?
 (A) Jharkhand
 (B) Madhya Pradesh
 (C) Orissa
 (D) West Bengal
27. A mineral/ore deposit where grains of valuable minerals like gold or rare earths are mixed with sand deposited by a river or glacier is :
 (A) Hydrothermal deposits
 (B) Placer deposits
 (C) Magmatic deposits
 (D) Epithermal deposits
28. Which of the following is not an ore mineral of copper ?
 (A) Cuprite
 (B) Chalcopyrite
 (C) Bornite
 (D) Pyrite
29. The degree of freedom at a Eutectic point of a binary system is :
 (A) One
 (B) Ten
 (C) Twenty
 (D) Zero

30. As per Gold Schmidt's geochemical classification of elements, metals and heavier non-metals that have a low affinity for oxygen and prefer to bond with sulphur to form sulphide type minerals or highly insoluble sulphides are called :
- Lithophile
 - Siderophile
 - Chalcophile
 - Atmophile
31. The ratio of the radius of the cation to the radius of anion gives us the :
- Radius ratio
 - Coordination number
 - Phase rule
 - Partition Coefficient
32. Dendrochronology is :
- A technique of radiometric dating
 - Determination of age based on natural splitting (fission) of Uranium-238
 - Technique of dating Varves the Paired layers of outwash gravel and sediments deposited in glacial lakes by retreating ice sheets
 - Technique of dating events, artifacts, etc. by using the number and characteristic patterns of annual growth rings of trees
33. In paleomagnetism "Superchron" is a :
- Polarity interval of the earth lasting at least 10 million years
 - Periods in which the predominant direction of the earth's magnetic field was the same as the present
 - Polarity interval of the earth lasting at least one million years
 - Periods in which the predominant direction of the earth's magnetic field was the opposite as the present
34. The Mercalli scale is used to measure :
- Gravitational pull
 - Intensity of an earthquake
 - Depth of the Ocean
 - Geological structures
35. Secondary seismic waves cannot travel through :
- Gases
 - Solids
 - Vacuum
 - Liquids
36. A geophysical exploration method in which the bulk electric property of all materials that shows how strongly it opposes the flow of electric current is used is known as :
- Seismic method
 - Magnetic method
 - Gravity method
 - Resistivity method
37. As per WHO standards the permissible limit of fluoride in drinking water is :
- 1- 1.5 mg/L
 - 0.5- 0.8 mg/L
 - 1.5- 2 mg/L
 - 2- 3 mg/L
38. A relatively small body of water occurring above the regional water table with an impermeable base under which lies an unsaturated zone is called :
- Unconfined aquifer
 - Confined aquifer
 - Perched aquifer
 - Karst aquifer

39. Measuring unit of permeability is :
 (A) Millilitres
 (B) Cubic meters
 (C) Milidarcy
 (D) Litre
40. Geological formation which is neither porous nor permeable and cannot store water in it and at the same time it cannot permit water through it, is a :
 (A) Confined aquifer
 (B) Aquifuge
 (C) Aquiclude
 (D) Aquitard
41. Contour line in a geological map is a line :
 (A) That joins points of equal pressure in a map
 (B) That joins points of equal temperature in a map
 (C) That joins points of equal precipitation in a map
 (D) That joins points of equal elevation in a map
42. What type of fault is associated with the creation of Horst and Graben ?
 (A) Reverse fault
 (B) Thrust fault
 (C) Normal fault
 (D) Strike Slip fault
43. The sense of movement across a boundary, such as a fault in which the left side opposite the observer moves is known as :
 (A) Opposite
 (B) Sinistral
 (C) Parallel
 (D) Dextral
44. What is hade in a fault ?
 (A) It is the inclination of the fault plane with vertical
 (B) It is the inclination of the fault plane with horizontal
 (C) It is the inclination of fault with any strata
 (D) It is the bearing of the fault with the ground
45. Shallow-focus earthquakes occur at :
 (A) Convergent plate boundary
 (B) Divergent plate boundary
 (C) Transform plate boundary
 (D) None of these
46. The Indian subcontinent broke away from the southern part of Pangea at around :
 (A) 70 Ma
 (B) 90 Ma
 (C) 110 Ma
 (D) 130 Ma
47. Drucker-Prager Failure theory is dependent upon :
 (A) Pressure
 (B) Temperature
 (C) Rock strength
 (D) None of the Above
48. Hotspots are thought to be the surface expressions of :
 (A) Listric faults
 (B) Mantle plumes
 (C) Magma chambers
 (D) Igneous dykes
49. The roots of *Glossopteris* and *Gangamopteris* plants are called :
 (A) *Thinnfeldia*
 (B) *Sigillaria*
 (C) *Vertibraria*
 (D) *Nilssonia*
50. Trilobite genera that existed in the Cambrian included :
 (A) *Abadiella*, *Judomia*, *Paradoxides*, and *Olenus*
 (B) *Cyclopyge*, *Cheirurus*, *Parabolina*, and *Trinucleus*
 (C) *Dalmanites*, *Encrinurus*, *Calymene*, and *Paralejurus*
 (D) *Archegonus*, *Hesslerides*, *Endops*, and *Triproetus*

51. The forest-dwelling dog sized-horse from which the modern horse evolved belonged to the genus :
 (A) Equis
 (B) Loxodonta
 (C) Eohippus
 (D) Australopithecus
52. Dinosaurs went extinct :
 (A) At the end of the Carboniferous
 (B) At the end of the Permian
 (C) At the end of the Ordovician
 (D) At the end of the Cretaceous
53. Rannibennur, Chitradurga, and Bababudan are the stratigraphic units of:
 (A) Cuddapah supergroup
 (B) Dharwar supergroup
 (C) Vindhyan supergroup
 (D) Gondwana supergroup
54. The Karewa Lake in Kashmir existed during :
 (A) Carboniferous
 (B) Jurassic
 (C) Cretaceous
 (D) Pleistocene
55. In Stratigraphy, a part of the formation which has some remarkable lithology or some characteristic fossil assemblage is demarcated as :
 (A) Complex
 (B) Group
 (C) Member
 (D) Bed
56. Pinjor and Tatrot formations belong to :
 (A) Upper Siwaliks
 (B) Jutogh Group
 (C) Middle Siwaliks
 (D) Salkhala Group
57. The speed of electromagnetic waves in a vacuum is :
 (A) 2.25×10^8 m/s
 (B) 3×10^8 m/s
 (C) 2.45×10^8 m/s
 (D) 2×10^8 m/s
58. Albedo of fresh snow ranges between :
 (A) 75-90 %
 (B) 05-10%
 (C) 10-15%
 (D) 40-45%
59. Which law states that a good absorbent of heat is also a good radiator ?
 (A) Stefan's Law
 (B) Kirchoff's Law
 (C) Plank's Law
 (D) Wien's Law
60. Which colour has the highest wavelength in Electromagnetic Spectrum ?
 (A) Violet
 (B) Red
 (C) Orange
 (D) Indigo