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FOR KUET EXAM PREPARATION

KUET 2022 Question Paper · M.Sc. Geology

EXAM	YEAR	TYPE	SUBJECT
KUET	2022	Question Paper	M.Sc. Geology

Sr. No. 120

ENTRANCE TEST-2022

SCHOOL OF ENVIRONMENTAL AND EARTH SCIENCES

APPLIED GEOLOGY

Total Questions : 60
Time Allowed : 70 Minutes

Question Booklet Series D

Roll No. : | | | | | | |

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.

SEAL

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1. The function of sutures in ammonites is to :
   (A) Increase the shell strength
   (B) Increase the surface area for the secretion of gas or liquid
   (C) Regulate the specific gravity of the anima
   (D) All of these
2. Which of the following flora belongs to the Lower Gondwana ?
   (A) Gangamopteris
   (B) Cladophlebis
   (C) Sphenopteris
   (D) Ptilophyllum
3. Select the correct stratigraphic sequence of the Vindhyan Supergroup :
   (A) Rewa – Bhander – Kaimur – Semri
   (B) Semri – Rewa – Kaimur – Bhander
   (C) Semri – Bhander – Rewa – Kaimur
   (D) Semri – Kaimur – Rewa – Bhander
4. Ophiolitic mélange is characteristic of :
   (A) Lesser Himalaya
   (B) Higher Himalaya
   (C) Outer Himalaya
   (D) Indus Suture Zone
5. The Guryul Ravine in Kashmir is famous for which of the following boundary ?
   (A) Cretaceous – Tertiary
   (B) Precambrian – Cambrian
   (C) Neogene – Quaternary
   (D) Permian – Triassic
6. Main boundary fault lies between :
   (A) Outer Himalaya and Lesser Himalaya
   (B) Lesser Himalaya and Higher Himalaya
   (C) Higher Himalaya and Trans Himalaya
   (D) None of these
7. Microwave spectrum having longer wavelength can penetrate :
   (A) Cloud
   (B) Fog
   (C) Rain
   (D) All of these
8. Geostationary satellites orbit at an altitude of :
   (A) 36000 kms
   (B) 26000 kms
   (C) 30000 kms
   (D) 45000 kms
9. The terminal support of a bridge on either side of the river valley is called as :
   (A) Piers
   (B) Abutment
   (C) Rock bolt
   (D) None of these
10. Nebulae from which the first generation of stars formed, consisted entirely of small atoms which were generated by :
   (A) Supernova explosions
   (B) Big-bang nucleosynthesis
   (C) Stellar nucleosynthesis
   (D) Both (B) and (C)
11. If a, b and c are the average P-wave velocities in the lower mantle, outer core and inner core respectively, then :
   (A) $a > b > c$
   (B) $a > c > b$
   (C) $c > a > b$
   (D) $c > b > a$

12. What shall be the colour of vegetation in a False Colour Composite (FCC) ?
    (A) Green
    (B) Blue
    (C) Yellow
    (D) Red

13. Which type of dam usually has triangular profile and can resist the forces by its own weight ?
    (A) Geotechnical dam
    (B) Arch dam
    (C) Gravity dam
    (D) Embankment dam

14. Which of the following region does not fall in seismic zone IV/V ?
    (A) Assam
    (B) Jammu and Kashmir
    (C) Central India
    (D) Kutchchh (Gujarat)

15. Which of the following is not a tectonic force responsible for folding or faulting rocks ?
    (A) Compressive force
    (B) Tensional force
    (C) Shear force
    (D) None of these

16. Which of the following is responsible for landslides ?
    (A) Rainfall
    (B) Topography
    (C) Lithology
    (D) All of these

17. The important Ozone-Depleting Chemical(s) (ODCs) is/are :
    (A) Chlorofluorocarbons
    (B) Halon
    (C) Methyl chloroform
    (D) All of these

18. Which of the following rocks are not present in the Himalayan foreland basin ?
    (A) Souni Volcanics
    (B) Murree
    (C) Siwalik
    (D) Subathu

19. The Cretaceous–Tertiary (K/T) boundary is delineated at :
    (A) 50 Ma
    (B) 66 Ma
    (C) 70 Ma
    (D) 75 Ma

20. Which of the following measures is part of proactive strategy regarding disaster management ?
    (A) Prevention
    (B) Mitigation
    (C) Preparedness
    (D) All of these

21. The dripstones that rise from the floor of a carbonate cave are called :
    (A) Stalactites
    (B) Stylolites
    (C) Stalagmites
    (D) Geodes

22. Coral reefs are generally found in the latitudinal extensions of :
(A) 20°N - 20°S
(B) 30°N - 30°S
(C) 45°N - 45°S
(D) 60°N - 60°S

23. Solifluction is related to :
(A) Creep
(B) Mudflow
(C) Rock fall
(D) Rock slide

24. Pot holes are commonly found on the :
(A) Sea floor
(B) Mountains
(C) Cave floor
(D) Channel floor

25. How many sets of cleavage are present in quartz ?
(A) One set
(B) Two set
(C) Three set
(D) No cleavage

26. Which among the following are single chain silicates ?
(A) Inosilicates
(B) Sorosilicates
(C) Cyclosilicates
(D) Nesosilicates

27. In VIBGYOR, from left to right the :
(A) Wavelength increases
(B) Wavelength decreases
(C) Frequency increases
(D) None of these

28. The interference colour of a mineral depends on :
(A) Phase difference
(B) Thickness of the slide
(C) Birefringence
(D) All of these

29. Which of the following is a non-pleochroic mineral ?
(A) Biotite
(B) Quartz
(C) Hornblende
(D) Hypersthene

30. Quartz crystallizes in which of the following crystal system ?
(A) Cubic system
(B) Monoclinic system
(C) Triclinic system
(D) Hexagonal system

31. Which of the following crystal system has three mutually perpendicular axes of different lengths ?
(A) Cubic
(B) Tetragonal
(C) Orthorhombic
(D) Hexagonal

32. Which of the following twinning is characteristic of plagioclase ?
(A) Cyclical
(B) Polysynthetic
(C) Penetration
(D) None

33. Muscovite is a _____ mineral.
(A) Uniaxial positive
(B) Uniaxial negative
(C) Biaxial positive
(D) Biaxial negative

34. Crystals of igneous rocks that are too small to be seen with naked eyes are known as :
(A) Phaneritic
(B) Aphanitic
(C) Porphyrytic
(D) Pyroclastic

35. The ultrabasic rock constituted solely of olivine is called :
(A) Dunite
(B) Kimberlite
(C) Periodotite
(D) Harzburgite

36. The plutonic equivalent of basalt rock is :
(A) Andesite
(B) Gabbro
(C) Granite
(D) Rhyolite

37. Which of the following factor doesn't affect metamorphism ?
(A) Diagenesis
(B) Temperature
(C) Pressure
(D) Chemically active fluids

38. An equigranular texture in which most of the grains are euhedral is called :
(A) Allotriomorphic
(B) Hypidiomorphic
(C) Panidiomorphic
(D) Perthitic

39. In clastic sediments, the correct order of decreasing grain size is :
(A) Boulder > pebble > silt > sand
(B) Granule > pebble > clay > silt
(C) Cobble > granule > silt > clay
(D) Granule > pebble > sand > silt

40. A sedimentary rock composed of angular gravels is called :
(A) Shale
(B) Breccia
(C) Sandstone
(D) Conglomerate

41. A rudaceous sedimentary rock consisting of clasts of several different rock types is called :
(A) Oligomictic
(B) Petromictic
(C) Polymictic
(D) None

42. Which of the following process is not involved in the formation of clastic sedimentary rocks ?
(A) Weathering
(B) Transportation
(C) Deposition
(D) Precipitation

43. Bauxite is the primary source of which of the following minerals ?
(A) Aluminium
(B) Oxygen
(C) Titanium
(D) Carbon

44. Metal content of an ore is denoted by :
(A) Tenor
(B) Gangue
(C) Ore content
(D) None of these

45. The solid, insoluble organic matter which yields petroleum type hydrocarbons on heating and distillation is called :
(A) Crude oil
(B) High density natural gas
(C) Kerogen
(D) None of these

46. Match the fuels in Group I with corresponding areas of occurrence in Group II :

Group I	Group II
P. Uranium	1. Vastan, Gujarat
Q. Lignite	2. Singrauli, Madhya Pradesh
R. Bituminous coal	3. Digboi, Assam
S. Petroleum	4. Jadugoda, Jharkhand

(A) P-4, Q-1, R-3, S-2
(B) P-4, Q-1, R-2, S-3
(C) P-3, Q-4, R-2, S-1
(D) P-2, Q-4, R-1, S-3

47. Elements having strong affinity towards sulphides are known as :
(A) Siderophiles
(B) Chalcophiles
(C) Lithophiles
(D) Atmophiles

48. Each carbon atom in diamond is joined to four other carbon atoms by :
(A) Metallic bonds
(B) Ionic bonds
(C) van der Waals bond
(D) Covalent bonds

49. Which of the following rock contributes the highest amount of radioactive heat in the Earth's crust ?
(A) Granite
(B) Basalt
(C) Dunite
(D) Gabbro

50. The most important tool of a geologist is :
(A) Field diary
(B) Clinometer
(C) Hammer
(D) Chisel

51. Which of the following sub-disciplines of geology deals in the physical characteristics of the whole Earth and the forces operating in the Earth ?
(A) Geomorphology
(B) Tectonics
(C) Structural Geology
(D) Geophysics

52. The water in the zone of aeration is called :
(A) Hygroscopic water
(B) Connate water
(C) Vadose water
(D) None of these

53. As per Darcy's law the rate of flow of water through a porous media is :
(A) Directly proportional to head loss
(B) Inversely proportional to length of flow path
(C) Applicable only under laminar conditions
(D) All of these

54. Which of the following is a low angle reverse fault ?
(A) Normal fault
(B) Strike-slip fault
(C) Thrust fault
(D) All of these

55. Which of the following components reflect non-rigid deformation ?
(A) Translation
(B) Rotation
(C) Strain
(D) All of these

56. Which of the following fold has inclined fold axis ?
(A) Plunging fold
(B) Non-plunging
(C) Homocline
(D) None of these

57. Which among the following separates a younger sedimentary rock unit from an intrusive igneous rock or metamorphic rock ?
(A) Non-conformity
(B) Disconformity
(C) Angular unconformity
(D) None

58. Trace fossils are also known as :
(A) Body fossils
(B) Chemical fossils
(C) Pseudofossils
(D) Ichnofossils

59. Which among the following has short geological range, wide geographical distribution and rapid evolutionary rate ?
(A) Trace fossil
(B) Index fossil
(C) Living fossil
(D) Chemical fossil

60. Which among the following is a late Eocene-Oligocene horse ?
(A) *Eohippus*
(B) *Mesohippus*
(C) *Orohippus*
(D) *Pliohippus*

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