

Code No.	L – 4036
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Entrance Examination for Admission to the P.G. Courses in the Teaching Departments, 2021

**CSS
GEOLOGY**

General Instructions

1. The Question Paper is having two Parts — Part 'A' Objective type (60%) & Part 'B' Descriptive type (40%).
2. Objective type questions which carry 1 mark each are to be (✓) 'tick marked' in the response sheets against the appropriate answers provided.
3. 8 questions are to be answered out of 12 questions carrying 5 marks each in Part 'B'.
4. **Negative marking** : 0.25 marks will be deducted for each wrong answer in Part 'A'.

Time : 2 Hours

Max. Marks : 100

To be filled in by the Candidate									
Register Number	In Figures								
	In words								

PART – A
(Objective Type)

Choose appropriate answer from the options in the questions. **One mark each.**
(60 × 1 = 60 marks)

1. Geoid is equipotential surface coinciding with
 - a) Ocean bottom
 - b) Low topographic level in the continent
 - c) The mean sea level
 - d) The topographic high

DO NOT WRITE HERE

2. The deepest ocean in the world is

- a) Indian ocean
- b) Atlantic ocean
- c) Pacific ocean
- d) Artic Ocean

3. Density of water is

- a) 1 g/m^3
- b) 10 kg/m^3
- c) 1 g/cm^3
- d) 100 kg/m^3

4. Scale of aerial photograph can be determined by
- a) focal length/flying Height
 - b) photo distance /ground distance
 - c) ground base/ height
 - d) parallax method
5. Tsunami cannot be generated due to
- a) Earthquake
 - b) Volcano
 - c) Glacier break off
 - d) Solifluction
6. This is used as a refractory
- a) mullite
 - b) kyanite
 - c) sillimanite
 - d) andalusite
7. The pumping test is not done to understand
- a) Transmissivity
 - b) Conductivity
 - c) Specific storage
 - d) Evapotranspiration
8. Which of the following radioactive isotopes has the shortest half-life?
- a) Uranium-238
 - b) Rubidium-87
 - c) Potassium-40
 - d) Carbon-14
9. Which one is a cavity filling deposit?
- a) Stock works
 - b) Saddle reef
 - c) Sheeted vein
 - d) Ladder vein
10. Source rocks of petroleum are
- a) Shales and lime stones
 - b) Sandstone
 - c) Conglomerates
 - d) Fractured shales
11. Which element is most abundant in earth crust?
- a) O
 - b) Si
 - c) Al
 - d) Ca

12. Which of the following are most radioactive?
- a) Younger acidic rock
 - b) Younger basic rock
 - c) Older acidic rock
 - d) Older basic rock
13. Which one of the following mineral has poor cleavage in all direction?
- a) Orthoclase
 - b) quartz
 - c) muscovite
 - d) hornblend
14. The most abundant radioactive isotope in the continental crust
- a) ^{40}K
 - b) ^{232}Th
 - c) ^{238}U
 - d) ^{235}U
15. The dominant process of heat transport in the lithosphere is
- a) advection
 - b) conduction
 - c) convection
 - d) radiation
16. Which of the following mineral cannot be used as abrasive?
- a) garnet
 - b) corundum
 - c) quartz
 - d) gypsum
17. The number of hydrous minerals in the Moh's scale of hardness is
- a) 3
 - b) 4
 - c) 2
 - d) 5
18. Which of the following is NOT a variety of silica (SiO_2)?
- a) Jasper
 - b) Coesite
 - c) Stishovite
 - d) Flinkite

19. The age of oldest rock in present day ocean basin
- a) Devonian
 - b) Jurassic
 - c) Eocene
 - d) Permian
20. Which of the followings is fibre mineral?
- a) Zinc
 - b) Asbestos
 - c) Coal
 - d) Asphalt
21. For which of the following manufacturing industries does India have the most natural resources?
- a) Glass Synthetic rubber
 - b) Synthetic rubber
 - c) Iron and Steel
 - d) Aluminium
22. Ankaleshwar is famous for
- a) Gold mining
 - b) Petrochemical Industry
 - c) Manufacturing Industry
 - d) Wheat production
23. Which of the following is not a mineral?
- a) Slate
 - b) Limestone
 - c) Coal
 - d) Calcite
24. Colourless variety of Tourmaline is
- a) Rebellite
 - b) Achroite
 - c) Scholl
 - d) None of these
25. Pyroxenes belong to
- a) Single chain structure (Inosilicate)
 - b) Double chain structure (Inosilicate)
 - c) Nesosilicate
 - d) Sorosilicate

26. What are the cleavage angles in pyroxenes?
- a) Exactly 90°
 - b) 80° and 100°
 - c) 87° and 93°
 - d) 84° and 96°
27. Emerald is a pale green variety of
- a) Topaz
 - b) Zircon
 - c) Beryl
 - d) Tourmaline
28. Mica belongs to
- a) Nesosilicate
 - b) Sorosilicate
 - c) Phyllosilicate
 - d) Inosilicate
29. Kaolinite results from the alteration of the
- a) Quartz
 - b) Felspars
 - c) Micas
 - d) Amphiboles
30. The Monazite sands of Kerala are rich in
- a) coal
 - b) uranium
 - c) thorium
 - d) platinum
31. What is low grade brown coal called?
- a) Bituminous
 - b) Anthracite
 - c) Lignite
 - d) Diamond
32. The point where the second river is diverted from first river is known as
- a) River-piracy
 - b) Misfit point
 - c) Elbow of capture
 - d) Wind gap

33. Smaller flat topped hill is known as
- a) Mesa
 - b) Butte
 - c) Hog- back
 - d) Inselberg
34. Point bar deposit is associated with
- a) Braided river
 - b) Meandering river
 - c) Estuary
 - d) Beach
35. The combination of weathering and erosion called
- a) Exfoliation
 - b) Denudation
 - c) Disintegration
 - d) Frost action
36. Basins formed by deflation containing some water is called
- a) Playas
 - b) Wadies
 - c) Deflation basin
 - d) Oases
37. The concept of cycle of erosion was formulated by
- a) J. Hutton
 - b) W.M Davis
 - c) G.B Pratt
 - d) Dutton
38. Example of antecedent river is
- a) Yamuna
 - b) Brahmaputra
 - c) Ganga
 - d) Godavari
39. Hanging valley is formed due to
- a) Wind action
 - b) Glacial action
 - c) Fluvial action
 - d) Tectonic action

40. Half life period of C14 is
- a) 1130 yr
 - b) 12 yr
 - c) 40 yr
 - d) 5730 yr
41. The youngest folded mountain in India is
- a) Vindhyas
 - b) Nilgiri
 - c) Aravallis
 - d) Siwaliks
42. Which of the following latitudes is the longest?
- a) 23°N
 - b) 0°
 - c) 66°N
 - d) 80°N
43. Which one of the following states produces silver in abundance?
- a) Orissa
 - b) Kerala
 - c) Rajasthan
 - d) West Bengal
44. Leaky aquifer is a
- a) Less Saturated aquifer
 - b) unsaturated aquifer
 - c) perched aquifer
 - d) confined aquifer
45. This is not a structural trap
- a) Overlap
 - b) fissure
 - c) salt domes
 - d) Terrace
46. Which one of the following is a chronostratigraphic unit?
- a) Period
 - b) Era
 - c) System
 - d) Eon
47. The discontinuity that separate lower mantle and outer core is
- a) Cornard
 - b) Gutenberg
 - c) Mohorovicic
 - d) Repetti

48. Horizontal component of displacement of fault is known as
- a) Heave
 - b) Hade
 - c) Throw
 - d) Dip
49. The Grand Canyon is located on the
- a) Niger river
 - b) Tapti river
 - c) Rhine river
 - d) Colorado river
50. Careful management of water catchment areas results in
- a) more desertification
 - b) more deforestation
 - c) less waste of water
 - d) more waste water
51. Fossil excreta which give clues to the diet of ancient animals are called
- a) Artifacts
 - b) Gastroliths
 - c) Borings
 - d) Coprolites
52. TIN can be created using
- a) Spot heights
 - b) Aerial photos
 - c) Satellite image
 - d) River network
53. The pH of a solution is the
- a) Negative Log of the H ions concentration
 - b) Negative Log of the reciprocal of its Hydrogen ion concentration
 - c) Log of its H⁺ ion concentration
 - d) Hydrogen ion concentration of the solution
54. Neotectonics referred to tectonic activity after _____ period
- a) Holocene
 - b) Jurassic
 - c) Eocene
 - d) Miocene

55. In crystallography angles such as 30, 45, 60, 90, 120 are called as
- a) Special angle
 - b) General angle
 - c) Face angle
 - d) Crystal angle
56. The Deccan traps belong to the
- a) Plateau basalt
 - b) Normal cone basalt
 - c) Flood basalt
 - d) Pillow basalt
57. The age of the Lower gondwana system
- a) Up. Jurassic to Lr. Cretaceous
 - b) Up. Carboniferous to Lower Triassic
 - c) Up. Triassic to Lr. Jurassic
 - d) Lr. Triassic to Up. Triassic
58. In Brachiopods, two valves joined at a margin on the posterior side is known as
- a) Hinge area
 - b) Cardinal area
 - c) Hinge line
 - d) Cardinal line
59. What is El Nino?
- a) Cold current
 - b) An abnormally warm current in the coast of Peru
 - c) Cyclones crossing the sea surface
 - d) Tides with minimum tidal range
60. The Soil containing mixture of clay and sand is called
- a) Marl
 - b) Clayey sand
 - c) Sandy clay
 - d) Loam

ANSWER SHEET — PART — A

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E

21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E
27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E
40	A	B	C	D	E

41	A	B	C	D	E
42	A	B	C	D	E
43	A	B	C	D	E
44	A	B	C	D	E
45	A	B	C	D	E
46	A	B	C	D	E
47	A	B	C	D	E
48	A	B	C	D	E
49	A	B	C	D	E
50	A	B	C	D	E
51	A	B	C	D	E
52	A	B	C	D	E
53	A	B	C	D	E
54	A	B	C	D	E
55	A	B	C	D	E
56	A	B	C	D	E
57	A	B	C	D	E
58	A	B	C	D	E
59	A	B	C	D	E
60	A	B	C	D	E

GEOLOGY

PART – B

(Descriptive Type)

Answer **any eight** questions.

(8 × 5 = 40 Marks)

1. Describe Nebular hypothesis of origin of the Earth.
2. Discuss Mass wasting and its types.
3. Explain environmental pollution with reference to Kerala state.
4. Distribution of coral reefs.
5. Write about e-learning in Geoscience Applications.
6. Write an account of Normal monoclinic system.
7. Discuss physical properties of Minerals.
8. Describe mechanics of fault and how its recognition in the field. Explain.
9. Discuss concept of Plate tectonics.
10. Write the stratigraphic classification and units.
11. Discuss Albite - Anorthite crystallisation.
12. Brief about Mineral resources of Kerala.

