

Code No.

J – 2276

**Entrance Examination for Admission to the P.G. Courses in the Teaching
Departments, 2020**

**CSS
GEOLOGY**

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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								

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**PART – A
(Objective Type)**

Choose appropriate answer from the options in the questions. **One mark each.**

(60 × 1 = 60 marks)

1. Isostasy term was first used by
 - a) Airy
 - b) Wagner
 - c) Dutton
 - d) Pratt

DO NOT WRITE HERE

2. Which of the following mineral has highest specific gravity?

- a) Wolframite
- b) Pyrite
- c) Magnetite
- d) Haemetite

3. Which of the following is an amorphous mineral?

- a) Opal
- b) Cat's Eye
- c) Topaz
- d) Lapid Lazuli

4. Which of the following is a living fossil?
- a) Arca
 - b) Cardita
 - c) Lingula
 - d) Trigonia
5. How much time does the Sun's light takes to reach the Earth?
- a) 8 minutes and 20 seconds
 - b) 8 hours and 20 minutes
 - c) 8 seconds
 - d) 8 hours and 8 minutes
6. Density of water is
- a) 1 g/m^3
 - b) 10 kg/m^3
 - c) 1 g/cm^3
 - d) 100 kg/m^3
7. Biotite belongs to
- a) Dioctahedral group
 - b) Trioctahedral group
 - c) Octahedral group
 - d) Triclinic
8. Source rocks of petroleum are
- a) Shales and limestones
 - b) Sandstones
 - c) Conglomerates
 - d) Fractured Shales
9. Which element is most abundant in earth crust?
- a) O
 - b) Si
 - c) Al
 - d) Ca
10. The most abundant element present in the outer core is
- a) either S or O
 - b) either S or Al
 - c) K
 - d) (D)Na
11. The age of oldest rock in present day ocean basin
- a) Devonian
 - b) Jurassic
 - c) Eocene
 - d) Permian

12. Ankaleshwar is famous for
- a) Gold mining
 - b) Petrochemical industry
 - c) Manufacturing industry
 - d) Wheat production
13. Pyroxenes belong to
- a) Single chain structure (Inosilicate)
 - b) Double chain structure (Inosilicate)
 - c) Nesosilicate
 - d) Sorosilicate
14. Mica belongs to
- a) Nesosilicate
 - b) Sorosilicate
 - c) Phyllosilicate
 - d) Inosilicate
15. The Monazite sands of Kerala are rich in
- a) coal
 - b) uranium
 - c) thorium
 - d) platinum
16. Maximum depth of continental slope is in meters is
- a) 70–200
 - b) 200–1000
 - c) 200–500
 - d) 1000–4000
17. Point bar deposit is associated with
- a) Braided river
 - b) Estuary
 - c) Meandering river
 - d) Beach
18. Example of antecedent river is
- a) Yamuna
 - b) Brahmaputra
 - c) Ganga
 - d) Godavari

19. The process by which soft and loose sediments are converted into hard and firm rocks is called
- a) Lithification
 - b) Sedimentation
 - c) Diagenesis
 - d) Precipitation
20. Half life period of C14 is
- a) 1130 yr.
 - b) 12 yr.
 - c) 40 yr.
 - d) 5730 yr.
21. The youngest folded mountain in India is
- a) Vindhyas
 - b) Nilgiris
 - c) Aravallis
 - d) Siwaliks
22. Which of these is young folded mountain?
- a) The Himalayas
 - b) The Nilgiris
 - c) The Vindhyas
 - d) The Western Ghats
23. Which of the following time unit is in chronological order?
- a) Triassic-Jurassic-Cretaceous
 - b) Cretaceous-Jurassic-Triassic
 - c) Triassic-Cretaceous-Jurassic
 - d) Jurassic-Triassic-Cretaceous
24. The number of hydrous minerals in the Moh's scale of hardness is
- a) 3
 - b) 4
 - c) 2
 - d) 5
25. Instrument which detect and record earthquake waves is known as
- a) Seismograph
 - b) Seismogram
 - c) Both
 - d) Gravimeter

26. Atmospheric pressure exerted on earth is due to
- a) rotation of earth
 - b) revolution of earth
 - c) gravitational pull
 - d) uneven heating of earth
27. Which one of them is a type of shear zone deposits?
- a) Sheeted vein
 - b) Gossans
 - c) Saddle reef
 - d) Composite vein
28. The Deccan traps belong to the
- a) Plateau basalt
 - b) Normal cone basalt
 - c) Flood basalt
 - d) Pillow basalt
29. _____ is a short time process that happens when a shock such as an Earthquake.
- a) Liquefaction
 - b) Fluidisation
 - c) Convolute bedding
 - d) Dish structure
30. 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
31. Choose the descending order of nomenclature among the following
- a) Kingdom – Division – Class – Order – Genus – Species
 - b) Division – Kingdom – Order – Class – Species – Genus
 - c) Kingdom – Phylum – Class – Order – Genus – Species
 - d) Kingdom – Class – Order – Division – Genus – Species
32. The half life period of the ^{238}U is
- a) 4.5×10^9 Years
 - b) 7.1×10^8 Years
 - c) 1.4×10^{10} Years
 - d) 4.99×10^{10} Years

33. The following reaction is most widely used for geologic age determination

- a) ^{40}K to ^{40}Ar
- b) $\text{Pb}^{207}/\text{Pb}^{204}$
- c) ^{238}U and ^{235}U
- d) ^{206}Pb and ^{207}Pb

34. Placer deposits at the foot of a slope are known as

- a) Alluvial placers
- b) Beach placers
- c) Eluvial placers
- d) Eolian placers

35. The “anticlinal” traps are classified as

- a) Concave traps
- b) Convex traps
- c) Non-concave traps
- d) Non-convex traps

36. The term Archaean was introduced by

- a) Holland
- b) Fermor
- c) Dana
- d) Lyell

37. Neotectonics referred to tectonic activity after _____ period.

- a) Holocene
- b) Jurassic
- c) Eocene
- d) Miocene

38. TIN can be created using

- a) Spot heights
- b) Aerial photos
- c) Satellite image
- d) River network

39. Fault stick-slip occurs

- a) At 5 km depth
- b) Between 5 km and 10 km
- c) Above 50 km
- d) At deeper depth

40. 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
41. What type of plate boundary is represented by a mid-ocean spreading ridge?
- a) Divergent
 - b) Convergent
 - c) Transform
 - d) Strike-slip
42. Faults where displacement is both vertical and horizontal are called as
- a) Radial faults
 - b) Complex faults
 - c) Slippery faults
 - d) Oblique faults
43. 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
44. The point within the Earth where seismic waves originate is known as
- a) Epicentre
 - b) Fault scarp
 - c) Origin
 - d) Focus
45. Which of the following is not a fold type?
- a) Syncline
 - b) Anticline
 - c) Dome
 - d) Thrust fold
46. Total number of crustal plates present in the earth surface are
- a) 25
 - b) 10
 - c) 20
 - d) 15

47. Which one of the following places is more likely to be affected by chemical weathering?
- a) Thar desert
 - b) Siwalik
 - c) Tibetan Plateau
 - d) Leh
48. Which of the following is a renewable resource?
- a) Iron ore
 - b) Coal
 - c) Crude oil
 - d) Bio fuel
49. The study of interaction in the environment is called
- a) Eschatology
 - b) Entomology
 - c) Epidemiology
 - d) Ecology
50. The two most common gases present in the Earth's atmosphere are
- a) Neon and oxygen
 - b) Oxygen and nitrogen
 - c) Nitrogen and helium
 - d) Argon and nitrogen
51. Tropical storm which occurs in the southern hemisphere is called
- a) Typhoon
 - b) Disturbance
 - c) Cyclone
 - d) Depression
52. The optical property of a water body depends on
- a) Absorption by the dissolved material
 - b) Absorption by the suspended particulate matter
 - c) Scattering by the suspended particulate matter
 - d) All the above
53. The changes in the reflectivity/emissivity with time is called
- a) Spectral variation
 - b) Spatial variation
 - c) Temporal variation
 - d) None of these

54. Seismic sea waves which approach the coasts at greater force are known as
- a) Tsunami
 - b) Current
 - c) Cyclone
 - d) Tides
55. Stereo viewing is possible in this satellites
- a) Indian remote sensing satellite
 - b) Landsat
 - c) SPOT
 - d) INSAT
56. Darcy's law is valid for
- a) Turbulent flow in Coarse grained sediments
 - b) Laminar flow in Coarse grained sediments
 - c) Laminar flow in Fine grained sediments
 - d) Turbulent flow in Fine grained sediments
57. In capillary zone
- a) The water defy gravity
 - b) Evaporation is high
 - c) Water is saturated
 - d) Water flow is laminar
58. Mass extinction was not happened during this period
- a) Silurian
 - b) Devonian
 - c) Triassic
 - d) Cretaceous
59. This is a neutral refractory
- a) Magnesite
 - b) Silica
 - c) Chromite
 - d) Periclase
60. The large volcano at Hawaii is classified as
- a) Cinder Cone
 - b) Composite Cone
 - c) Shield Volcano
 - d) Fissure Eruption

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. Discuss Nebular hypothesis.
2. What is weathering and brief its types.
3. Draw the Hydrologic cycle.
4. How the earthquake occurs and its effect.
5. Discuss isometric system.
6. Write note on Polymorphism and Pseudomorphism.
7. Write geometric classification of folds.
8. Discuss Plate Tectonics.
9. Explain stratigraphy of Kerala.
10. Discuss the structure of Igneous rocks.
11. Brief about Mineral resources of Kerala.
12. Describe physical properties of Minerals.

