GOVERNMENT OF KARNATAKA
KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD
MODEL QUESTION PAPER - 02 2024-25

GEOLOGY (37)

Duration: 3.00 hour **Max. Marks: 80**

Instructions:

1. *All parts are compulsory.*
2. *Draw neat labelled diagrams wherever necessary.*
3. *Write correct question numbers.*
4. *For part A questions only first written answers will be considered for evaluation.*

Part A

I. Answer all of the following questions. (5X1=5)

1. During the rock cycle, how can sedimentary rock become igneous rock.

a. Sedimentary rock directly transformed into an igneous rock.

b. By being eroded into sediment and form new rock after deposition.

c. By directly exposed to atmosphere and solar radiations.

d. By transforming into metamorphic and subsequently melt followed by solidification to form igneous rocks

2. How does lithification contribute to the formation of sedimentary rock?

a. Involves cooling and consolidation of cooling magma followed by the formation of sedimentary layer through precipitation.

b. Includes consolidation of sediments where sediment layer turn into solid rock.

c. Involves the metamorphism of existing sedimentary rocks into igneous rocks.

d. Process where sediments are weathered and eroded into smaller particles.

3. Which of the following scenarios best illustrates the principles of uniformitarianism.

a. The rapid formation of mountains.

b. The eruption of lava forming younger rocks.

c. Formation of dessert due to asteroid impact.

d. Sudden emergence of island over few days.

4. Which of the following characteristics would most likely distinguished a rock that formed through contact metamorphism.

a. Occurrence of non-foliated texture such as marble.

b. Presence of schistosity such slate.

c. Development of large mineral crystal.

d. Formation of rock at great depth such as gneiss.

5. Match the correct periods with respective eras in geological time scale.

A. Cambrian	**B. Maastrichtian**	**C. Mesozoic**	**D. Phanerozoic**
i. Age	**ii. Eon**	**iii. Period I**	**v. Era**

a. A-ii, B-iv, C-iii, D-iv b. A-iii, B-iv, C-ii, D-ii

i. A-iii, B-i, C-iv, D-ii d. A-i, B-iv, C-iii, D-ii

II. Fill in the blanks (5x1=5)

(Fault line, Outcrop, Gneiss, Euhedral, Sediment, Hinge)

6. _____ is the example of metamorphic rock.
7. The fracture formed by a fault on the surface is known as_____.
8. _____ mineral grain shows perfect crystal outline.
9. Particles that form a sedimentary rock by accumulation are called_____.
10. _____ is an exposure of a rock on the surface of the earth.

III. Match the following (5X1=5)

11.

A	**B**
a. Umbo	I. Fold
b. Glabella	II. Trilobite
c. Limb	III. Brachiopod
d. Sandstone	IV. Coelenterate
e. Syenite	V. Sedimentary
	VI. Igneous rocks

IV. Answer all of the following questions (5X1=5)

12. What is pedicel opening?
13. Define theca.
14. Define joint.
15. What is sediment grain size of arenaceous rocks?
16. Give an example of igneous rock.

V. Answer any seven of the following questions (7X2=14)

17. Write about the zone where slate rocks are formed.
18. Define rock cycle.

19. How vesicles are formed in vesicular structure?
20. Write the any two difference in volcanic and hypabyssal rock.
21. What is poikilitic texture?
22. Where sedimentary rocks do usually formed?
23. What are clastic rocks?
24. Write the properties of charnoklite?
25. What is epizone?
26. What is oblique joint?
27. Define stratigraphy.

VI. Answer any seven of the following questions (7X3=21)

28. Write the relationship between dip and strike of the rock beds.
29. With neat labelled diagram explain normal fault.
30. Draw a neat labelled diagram of plunge of a fold.
31. Explain columnar structure.
32. Write a note on fabric of grains.
33. Describe formation of mud cracks.
34. Write a note on metamorphism.
35. Explain non-metallic deposit of archeans.
36. Write your views on fauna of Paleozoic era.
37. Give suitable environmental conditions responsible for mummification.
38. Write a note on plant fossils.

VII. Answer any five of the following questions (5X5=25)

39. How does the principles of stratigraphy help in determine the relativeage of rocks and understanding in the evolution of life?
40. Differentiate between brachiopod and gastropod.
41. Discuss the significance of igneous rocks.
42. Write the properties of Granite and Syenite.
43. With neat labeled diagram explain granulose structure.
44. Briefly explain the working principle of Brunton compass and its uses.
45. Describe types of unconformity.
46. Write morphological features of Trilobite.
47. Explain conditions for the preservation of fossils.