# BLUE PRINT FOR THE MODEL QUESTION PAPER- 01 2024-25

**Subject: GEOLOGY** **Class: PUC - II**

| Units | No. of Periods | Marks | Remember | | | | Understanding | | | | Application | | | | HOTS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Marks | | | | Marks | | | | Marks | | | | Marks | | | |
| | | | 1 | 2 | 3 | 5 | 1 | 2 | 3 | 5 | 1 | 2 | 3 | 5 | 1 | 2 | 3 | 5 |
| 1. Introduction | 5 | 5 | | 1 | | | 1 | | | | 1 | | | | 1 | | | |
| 2. Igneous rocks | 25 | 25 | 1 | 1 | 1 | | 2 | | 1 | 1 | | 2 | | 1 | | | | |
| 3. Sedimentary rocks | 10 | 10 | 1 | 1 | | | 1 | 1 | | | | | 1 | | 1 | | | |
| 4. Metamorphic rocks | 15 | 14 | | 1 | | 1 | 1 | | 1 | | | | | | 1 | 1 | | |
| 5. Structural geology | 25 | 25 | 2 | | 1 | 1 | 1 | 1 | | | 1 | | 1 | 1 | | | 1 | |
| 6. Stratigraphy | 15 | 15 | | | 1 | | | | | | 1 | 1 | 1 | | 1 | | | 1 |
| 7. Palaeontology | 25 | 25 | 2 | 2 | | | 1 | | | 2 | | | 1 | | | | | 1 |
| **Total** | **120** | **119** | **6** | **12** | **9** | **10** | **7** | **4** | **6** | **15** | **3** | **6** | **12** | **10** | **4** | **2** | **3** | **10** |

| Question type (Based on marks) | Number of questions | Total marks |
|---|---|---|
| 1. MCQ (1 marks each question) | 05/05 | 05/05 |
| 2. Fill in the blanks (1 marks each question) | 05/05 | 05/05 |
| 3. Match the following (1 marks each question) | 01/01 | 05/05 |
| 4. Very short answer - VSA (1 marks each question) | 05/05 | 05/05 |
| 5. Short answer – SA (2 marks each question) | 07/12 | 14/24 |
| 6. Short answer – SA (3 marks each question) | 07/10 | 21/30 |
| 7. Long answer – LA (5 marks each question) | 05/09 | 25/45 |
| **Total** | **35/47** | **80/119** |

| Sl. No | Objectives | Marks Allotted | Percentage |
|---|---|---|---|
| 1 | Remember | 37 | 31.09 |
| 2 | Understanding | 32 | 26.89 |
| 3 | Application | 31 | 26.05 |
| 4 | HOTS | 19 | 15.96 |
| **Total** | | **119** | **100** |

**GOVERNMENT OF KARNATAKA**
**KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD**
**MODEL QUESTION PAPER - 01 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.*

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## PART-A

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

**1. What process in the rock cycle is most responsible for turning an igneous rock into a sedimentary rock?**

a. Metamorphism, where igneous rock alters by heat and pressure.
b. Weathering and erosion followed by deposition and compaction.
c. Melting, when igneous rock melts and cools to form sedimentary rock.
d. Sublimation, where directly transformed into sedimentary rock.

**2. Which factor is most important in distinguishing between clastic and non-clastic sedimentary rocks?**

a. Rocks formed from pre-existing fragments.
b. The mineral composition of rocks.
c. The colour of rocks.
d. Precipitation of dissolved mineral.

**3. If a geologist observes a sequence of metamorphic rock from slate to schist and the gneiss then what can we conclude about metamorphic conditions.**

a. The rocks were subjected to lower temperature and pressure.
b. The rock underwent changed due to increase in temperature.
c. The rock experience metamorphic process primarily by chemical fluid.
d. The rock experiences high to low temperature and pressure environment.

**4. Match the correct sequence of various geological time units.**

| **A. Eon** | **B. Period** | **C. Age** | **D. Epoch** |
|---|---|---|---|
| **i. System** | **ii. Eonthem** | **iii. Series** | **iv. Stage** |

a. A-i. B-iii. C-iv. D-ii. b. A-ii. B-i. C-iv. D-iii.
c. A-ii. B-iv. C-i. D-iii. d. A-ii. B-i. C-iii. D-iv.

**5. Which of the following factor is not applicable for folding.**

a. Extension & bending c. Displacement
b. Stress d. Strain

**II. Fill in the blanks** **(5X1=5)**

**(Petrology, Pohoehoe, True dip, Triassic, Blocky lava, $CaCO_3$)**

6. _____is perpendicular to the strike direction.
7. The shell of gastropods is composed of _____
8. Ropy lava structure is also known as _____
9. _____ is the branch of geology which deals with the study of rocks.
10. _____ is the period of Mesozoic era.

**III. Match the following.** **(5X1=5)**

11.

| | | | |
|---|---|---|---|
| a. | Granite | I. | Gastropod |
| b. | Conglomerate | II. | Igneous rock |
| c. | Quartzite | III. | Sedimentary rock |
| d. | Plunge | IV. | Head |
| e. | Aperture | V. | Angle |
| | | VI. | Metamorphic rock |

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

12. Give an example of primary rock.
13. Define texture.
14. What is sediment?
15. Define strike.
16. What is calyx?

**PART-B**

**V. Answer any Seven of the following** **(7X2=14)**

17. Define secondary rock with example.
18. What is laccolith?
19. Write the characteristics of acidic lava.
20. Compare allotriomorphic and hypidiomoprphic texture.
21. What is diagenesis?
22. Draw neat labelled diagram of symmetrical ripple marks.
23. Mention the zone where dynamothermal metamorphism with example.
24. What is disconformity?
25. Write geochronological units of geological time scale.
26. Define index fossil.
27. Name any two plant fossil.
28. What is mesozone?

**VI. Answer any Seven questions from the following. (7X3=21)**

29. How would you use the attitude of beds to determine whether a sequence of sedimentary layer has been overturn?
30. Write the uses of Brunton compass.
31. Discuss how the texture of igneous rocks can be used to tell the cooling history rock.
32. Differentiate between conformable and unconformable layers.
33. Write the suitable condition for preservation of fossil as mold and cast.
34. With neat labelled diagram explain amygdaloidal structure.
35. With neat labelled diagram explain ophitic texture.
36. Write the properties of Marble.
37. Draw a neat labelled diagram of angular unconformity.
38. Explain metallic deposits of archeans.

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

39. Compare life in Paleozoic era to that of Cenozoic era and comment on evolution of life.
40. Differentiate between galssopteris and ptillophyllum.
41. Discuss the types of igneous rocks that are commonly associated as building material.
42. How structural features are helpful in mining, construction of dam, tunnel etc.?
43. Explain the distribution of trilobite in geological history.
44. Draw a neat labelled diagram of calceola.
45. With neat labeled diagram explain gneissose structure.
46. Discuss elements of fold.
47. Explain the properties of Pumice and Dolerite.