

GEOLOGY BLUEPRINT FORMAT FOR MODEL QUESTION PAPER FOR 80 MARKS FOR THE YEAR 2023-2024

SUJECT CODE-37

Sl.No	Objectives	Marks Alloted	Percentage
1	Remember	41	37.96
2	Understanding	32	29.63
3	Application	24	22.22
4	HOTS	11	10.19
Total		108	100

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)	05/05	05/05
4. Very short answer - VSA (1 marks each question)	05/05	05/05
5. Short answer – SA (2 marks each question)	07/09	14/18
6. Short answer – SA (3 marks each question)	07/10	21/30
7. Long answer – LA (5 marks each question)	05/08	25/40
Total	39/47	80/108

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	05	04		1			1				1							
2. Igneous rocks	25	22	2	1	2		2			1				1				
3. Sedimentary rocks	10	10	1	1			1	1					1		1			
4. Metamorphic rocks	15	14	1			1	1		2						1			
5. Structural geology	25	22	1		2	1	1				1			1			1	
6. Stratigraphy	15	14						1			1	1	1		1			1
7. Palaeontology	25	22	2	3			1			2			1					
Total	120	108	7	12	12	10	7	4	6	15	3	2	9	10	3		3	5

PUC - II
MODEL QUESTION PAPER
2023-24
GEOLOGY (37)

Duration: 3hrs 15min

Maximum marks: 80

Note:

- All the parts are compulsory.
- Draw neat & labelled diagrams wherever necessary.
- Write correct question numbers.

PART – A

I. Answer all the following questions

(5 X 1 = 5)

1. Rock type: i) Igneous rock ii) Sedimentary rock iii) Metamorphic rock

Example: a) Limestone b) Schist c) Syenite

Above are the name of rock types and their examples. Match the rock type with their correct example by selecting an option below.

a. i - c, ii - b, iii - a

b. i - a, ii - b, iii - c

c. i - b, ii - a, iii - c

d. i - c, ii - a, iii - b

2. • Rock gets formed either by magma or lava

- The process involved is cooling and consolidation
- It is also found in Karnataka

Based on the above characteristics identify the rock

a. Sedimentary rock

b. Igneous rock

c. Metamorphic rock

d. Mechanical rock

3. Sediments: Sand, gravel, clay and silt.

Arrange the sediments in their increasing grain size order.

a. Gravel → sand → silt → clay

b. Clay → silt → sand → gravel

c. Silt → sand → gravel → clay

d. Sand → silt → gravel → clay

4. Assertion (A): The rocks occurring in the epizone are slate and chlorite schist.

Reason (R): Because epizone occurs near the earth's surface and is characterized by low temperature and strong shear stress.

a. (A) is true, but (R) is false

b. (A) is false, but (R) is true

- c. Both (A) and (R) are true and (R) is the correct explanation of (A)
- d. Both (A) and (R) are true, but (R) is not the correct explanation of (A)

5. Suppose a person was sent for a geological mapping of a particular area and was told to identify the oldest rock formation in that area. How would he proceed?

- a. Identifying the sequence of rock deposition
- b. Identifying the structural changes
- c. Identifying the grain size variation
- d. Identifying the mineral composition

II. Fill in the blanks by selecting the correct answer given below (5 X 1 = 5)

(Answer: Granulose, Paleontology, Igneous, Joint, Clastic, Metamorphic)

- 6. Gneiss is an example of _____ type of rocks.
- 7. Mechanically formed sedimentary rocks are also called as _____ rocks.
- 8. Marble shows _____ structure.
- 9. Fracture in a rock along which there is no displacement is called _____
- 10. The branch of geology which deals with the study of fossils is called _____

III. Match the following (5 X 1 = 5)

- | | |
|-------------------|--------------------------|
| 11. Sill | a) Agent of metamorphism |
| 12. Limestone | b) Highest point of fold |
| 13. Temperature | c) Plant fossil |
| 14. Crest | d) Sedimentary rock |
| 15. Ptillophyllum | e) Concordant |
| | f) Discordant |

IV. Answer all the following questions (5 X 1 = 5)

- 16. Difference between lava and magma.
- 17. Which lava has high viscosity?
- 18. Mention one difference between true dip and apparent dip.
- 19. Given below is the figure of rock bed's deposition. Identify the older rock bed and younger rock bed based on the sequence of bed deposition.



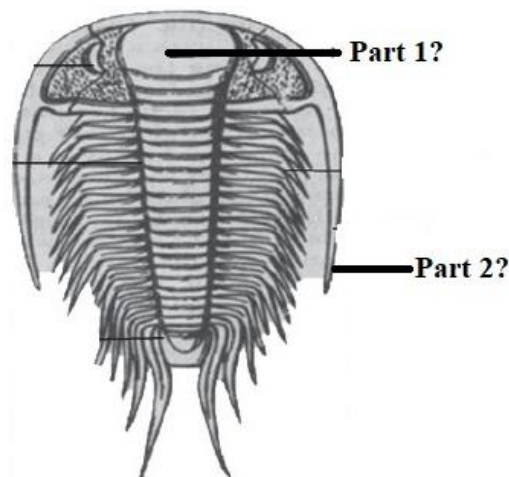
20. What do you call the vertical plates extending from margin towards the center in corals?

PART – B

V. Answer any seven of the following questions

(7 X 2 = 14)

21. What is a rock? Give one example of rock.
22. Name the two forms of intrusive igneous rocks.
23. What is stratification?
24. What is diagenesis?
25. What is fold axis?
26. B. Rama Rao gave a new classification of the Dharwarians in Karnataka State. These Archaeans were divided into five major distinct zones or groups
 - Based on the above passage name the 5 five major distinct zones or groups into which the archeans of Karnatakawhere classified by B Rama Rao as he is hinting in the passage.
27. What are muscular impressions?
28. Give two uses of fossils.
29. Based on the figure given below, name the part 1 and part 2 of the specimen shown.



PART – C

VI. Answer any seven of the following questions

(7 X 3 = 21)

30. What is dyke?

31. What is batholith?

32. Below are the images of rock specimens given:

- Name the rock shown in figure 1 and figure 2.
- What does the shape of clasts or fragments in both the figures indicate about transportation.



Figure 1?



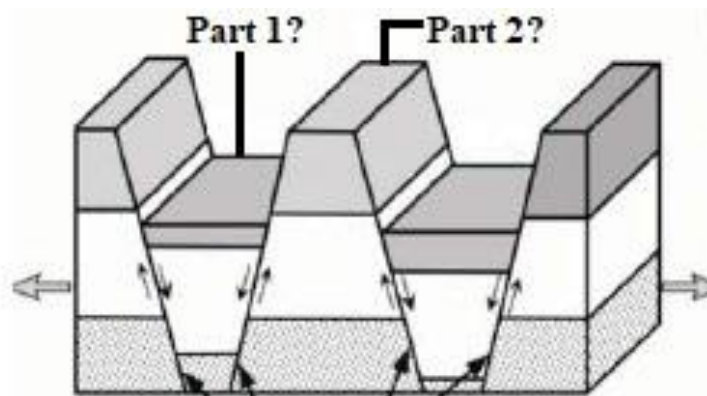
Figure 2?

33. Discuss dynamothermal metamorphism.

34. Explain schistose structure.

35. Based on the figure given below:

- Identify the type of fault at part 1 and part 2.
- Explain the fault identified at part 1 and part 2?



36. What is normal fault and reverse fault?

37. Read the passage given below and answer the following:

The broadest division of Geologic time is the **Eon**. There are two Eons, the Pre-Phanerozoic or **Precambrian** and **Phanerozoic**. The **Precambrian** stretches from the formation of the Earth 4.5 billion years ago until the start of the Phanerozoic Eon, about 560 million years ago. There are many fossils in Pre-Phanerozoic rocks, but they are almost all microscopic. Phanerozoic means "visible life." The rocks of the Phanerozoic Eon, which covers about the last 600 million years (M.a) of Earth history, are characterized by abundant visible fossils.

- Name the eras of Pre-cambrian eon.
- Name the eras of Phanerozoic eon.
- How is the life different from Pre-cambrian eon and Phanerozoic eon.

38. Write a note on geology of Karnataka.

39. Identify the types of fossilizations shown in figure a, figure b and figure c.

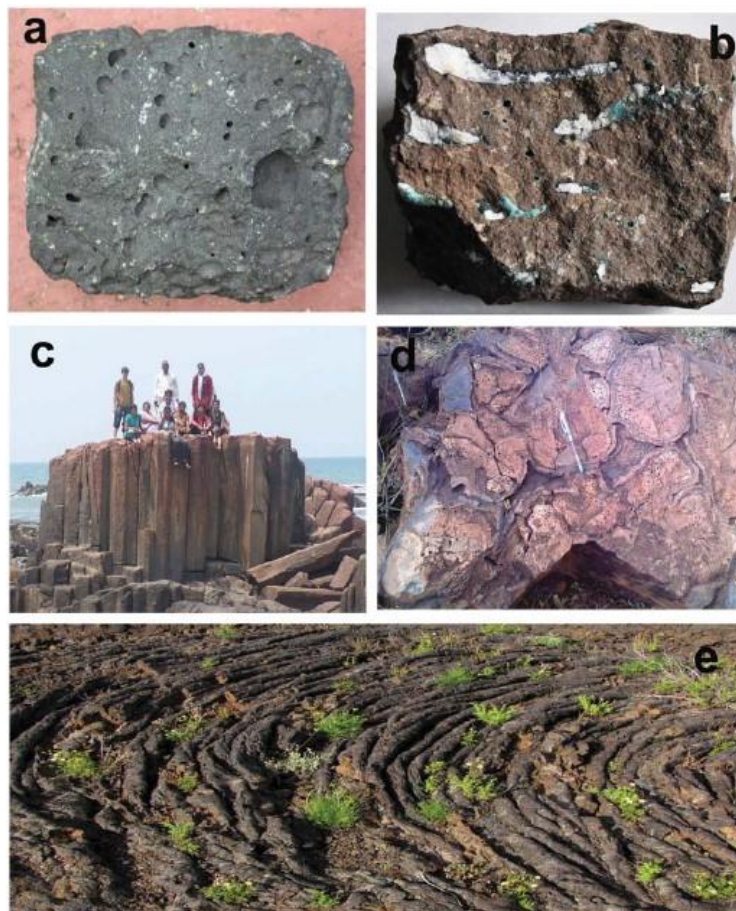


PART - D

VII. Answer any five of the following questions

(5 X 5 = 25)

40. Given below is the picture of various structures:



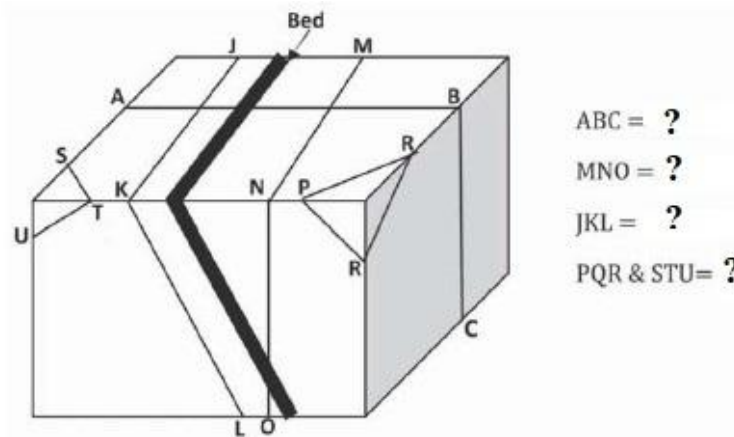
- Name the structure shown in picture a, b, c, d and e.
- Explain the structures shown in picture a, b, c, d and e.

41. Explain the classification of igneous rocks based on mode of occurrence.

42. Explain the different kinds of metamorphisms.

43. Explain Brunton compass with a neat labelled diagram.

44. Given below is the sketch of types of joints:



• From the sketch above name the type of joint shown at ABC, MNO, JKL, PQR and STU?

- Explain the joint seen at ABC, MNO, JKL, PQR and STU.

45. Differentiate between palaeozoic and mesozoic era.

46. With a neat labelled diagram explain the morphology of glossopteris.

47. With a neat labelled diagram explain the morphology of gastropods.