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FOR MEGHALAYA CLASS 12 PREPARATION

MBOSE Class 12 Sample Question Paper 2027 Geology

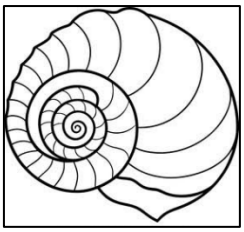
EXAM	YEAR	TYPE	SUBJECT
Meghalaya Class 12	2027	Sample Paper	Geology

Sample Question Paper
Subject GEOLOGY
Class XII

Full Marks: 70 Time Allotted: 30

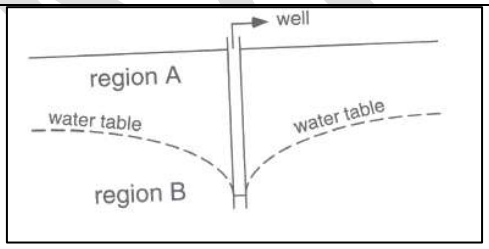
1. This question paper contains 34 questions. All questions are compulsory.
2. This question paper is divided into five sections-sections A, B, C, D and E.
3. **Section A** - Questions No 1 to 16 are Multiple Choice Type Questions carrying 1 mark each.
4. **Section B** - Questions number 17 to 22 are very short answer type questions carrying 2 marks each.
5. **Section C** - Questions number 23 to 26 are short Answer (SA) Type questions carrying 3 marks each.
6. **Section D** - questions number 27 to 29 are long Answers (LA) type questions carrying 4 marks each.
7. **Section E**- Question number 30 to 32 is are long Answers (LA) type questions carrying 6 marks each.
8. There is no overall choice given in the question paper. However, an internal choice has been provided in a few questions.

Q. No.		Marks
	Section A	
	Choose and write the correct answer	1x16=16
1.	An example of an argillaceous rock is a) Sandstone b) Clay c) Fine sandstone d) Mudstone	1
2	Which process is NOT involved in the formation of sedimentary rocks? a) Weathering b) Consolidation c) Metamorphism e) Deposition	1
3	There are two statements marked as Assertion (A) and Reason (R). mark your answer as per the codes provided below. **Assertion (A):** Sedimentary rocks are called primary rocks. **Reason (R):** Sediments are compressed and hardened to form sedimentary rocks. a) Both (A) and (R) are true but (R) is not the correct explanation of (A) b) Both (A) and (R) are true and (R) is the correct explanation of (A)	1

	c) (A) is true but (R) is false d) (A) is false but (R) is true.	
4	 The above picture is of_____ a) Lamellibranch b) Gastropod c) Cephalopod d) Brachiopod	1
	The following question is **for visually impaired candidates in lieu of Question No. 4.** Mollusks typically with a single, often coiled shell are known as_____ a) Lamellibranch b) Gastropod c) Cephalopod d) Brachiopod	1
5	The hinge of the Lamellibranchia posterior to the beak is called the a) Adductor Impression b) Lunule c) Escutcheon d) Cardinal Area	1
6	Match the following: List I: A. Petrification — List II: i. A thin, dark layer of carbon left behind by compressed leaves or fish B. Mold — ii. An empty cavity in a rock that shows the exact shape of an organism. C. Cast — iii. Organic material is completely replaced by minerals like silica or calcite. D. Carbonization — iv. Minerals fill an empty cavity to create a 3D replica of the organism. Options: a) A-ii, B-iii, C-i, D-iv	1

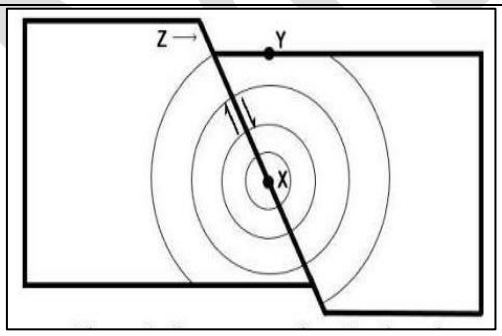
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	b) A-iii, B-ii, C-iv, D-i c) A-iv, B-i, C-iii, D-ii d) A-i, B-iii, C-ii, D-iv	
7	Vertebraria has similar appearance as a) Animal teeth b) Animal vertebral column c) Animal hoops d) Animal antlers	1
8	You observe a stack of undisturbed sedimentary rock layers. According to the principle of superposition, where would you expect to find the oldest fossils? a) In the top layer b) In the middle layer c) In the bottom layer d) Scattered randomly throughout all layers	1
9	The Correct sequence from older to younger in the Tertiary rocks of Upper Assam is: a) Barail – Surma – Tipam – Dupitila – Dihing b) Dihing – Dupitila – Tipam – Surma c) Barail – Dupitila – Surma – Tipam d) Barail – Tipam – Surma – Dupitila	1
10	The massive commercial limestone deposits mined in Cherrapunji and Jaintia Hills belong to which stratigraphic unit? a) Surma Group b) Shillong Group c) Shella Formation (Jaintia Group) d) Sylhet Traps	1
11	Match List I with List II List I: A. galena; B. bauxite; C. magnetite; D. chalcopyrite List II: i. aluminium; ii. copper; iii. lead; iv. iron Options: a) A-ii, B-iii. C-i, D-iv b) A-i, B-ii. C-iv, D-iii c) A-iii, B-ii. C-iv, D-i d) A-iii, B-i. C-iv, D-ii	1

12	There are two statements marked as Assertion (A) and Reason (R). mark your answer as per the codes provided below. **Assertion (A):** Mica is a non-metallic mineral. **Reason (R):** Mica mineral is the basic raw material for cement industry a) Both (A) and (R) are true but (R) is not the correct explanation of (A) b) Both (A) and (R) are true and (R) is the correct explanation of (A) c) (A) is true but (R) is false d) (A) is false but (R) is true.	1
13	Which of the following is not an abiotic component of the environment? a) River b) Rocks c) Microbes d) Sunlight.	1
14	Rain, snow, sleet, and hail are all forms of: a) Evaporation b) Infiltration c) Precipitation d) Transpiration	1
15	What is the most important geological consideration before constructing a dam? a) Soil fertility b) Rock type and structure c) Surface vegetation d) Proximity to roads	1
16	 In the above diagram, region A is the _____. a) discharge zone b) recharge zone c) saturated zone d) unsaturated zone	1
	The following question is **for visually impaired candidates** in lieu of	1

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	Question No. 16. The infiltration of water into the subsurface is the _____ . a) influent b) effluent c) discharge d) recharge	
	Section B	2x6=12
17	Differentiate between clastic and non-clastic rocks.	2
18	What is diagenesis? How is it different from metamorphosis?	1+1
19	'Gondwana flora served as key fossil evidence for continental drift'. How did Gondwana flora fossils help prove the theory of Continental Drift?	2
20	Mention any two uses of stratigraphic studies.	1+1
21	A) Name two fossils found in the Triassic rocks of Spiti. Or B) Which is the oldest oilfield in India? Oil in this oil field is found in which formation?	1+1 1+1
22	A) Why does clay have high porosity but very low permeability? Or B) What are aquifers? What are characteristics that make a rock a good aquifer?	2 2
	Section C	3x4=12
23	A) List three essential conditions required for the high-quality preservation of fossils. Or B) Define grain size and mention its importance in sedimentary rock classification.	1+2 1+2
24	Write a short note on palaeontologic correlation.	3
25	A) Which country has the largest reserves of Thorium in the world? Name its ore. Name one thorium reserve found in India?	1+1+1

	Or B) What is a "Cap Rock" or "Seal" in a petroleum system? Give two examples.	
26	A) An important mineral has been identified in your district. Which mining method would you suggest - open cast mining or underground mining? Give atleast three reasons to justify your choice. Or B) What three remedial measures would you suggest to mitigate landslides?	3 3
	Section D	4x3=12
27	A) The Jaintia Group belongs to which Era/Age? Name the Formations and the dominant rock types within this Group. Or B) Compare Glossopteris and Gangamopteris.	1+ 3 4
28	A) List any four non-conventional energy sources. Describe any one of them. Or B) With the help of schematic diagram, describe cross bedding and graded bedding.	2+2 2+2
29	 Based on the illustrated picture of earthquake, answer the following questions: i. Which is the point of origin of the earthquake- x, y or z? What is it known as? ii. What is point z known as?	1 1 2

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	iii. What is point y known as? Define it.	
	The following question are **for visually impaired candidates** in lieu of question No. 29. Answer the following question: i. Name the point inside the Earth where an earthquake originates. ii. Name the point on the Earth's surface directly above the point where an earthquake originates. iii. What is the name of the scale used to measure the magnitude of an earthquake? iv. What is the term for a large crack in the Earth's crust where earthquakes occur?	1x4=4
	Section E	6x3=18
30	A) Give a classification of sedimentary environments of deposition, including the main sub-environments. Write notes on any one of the sub- environments. Or B) Write the Tertiary stratigraphy of upper Assam in tabular form. Add brief petrographic notes of the rock unit.	4+2 6
31	A) Outline the morphology of a typical gastropod shell. Draw a neat labeled sketch. Or B) i. What are fossils? ii. What is the study of fossils known as? iii. Describe body fossil and trace fossil with suitable examples.	6 1 1 2+2
32	A) Give an account of origin and distribution of Bauxite in India Or B) As an intern in a construction company, you have been asked to assist in choosing a site for dam construction in a river. Describe the geological considerations that you will take into account in selecting the site. Give reasons for the same.	6 6

	Blueprint Geology Sample Paper Class XII							
Units	**Unit Name**	**Marks alloted**	**MCQ 1x16=16**	**SA-I 2x6=12**	**SA-II 3x4=12**	**LA-1 4x3=12**	**LA-II 6x3=12**	
I	**Sedimentology**	**13**	**1(3)**	**2(2)**	**3 ( )**	**4 ( )**	**6(1)**	**13 (6)**
II	**Palaeontology**	**15**	**1(4)**	**2(1)**	**3 (1)**	**4 ( )**	**6(1) 6 ( )**	**15 (7)**
III	**Stratigraphy**	**14**	**1(3)**	**2(2)**	**3 (1)**	**4 (1)**	**6 ( )**	**14 (7)**
IV	**Mineral and Energy Resources**	**15**	**1(2)**	**2( )**	**3 (1) 3 ( )**	**4 (1)**	**6 (1)**	**15 (5)**
V	**Engineering Geology**	**13**	**1(4)**	**2(1)**	**3 (1) 3 ( )**	**4 (1)**	**6 ( )**	**13 (7)**
		70	**16(16)**	**12(6)**	**12(4)**	**12(3)**	**18(3)**	**70 (32)**
Figures within brackets to indicate the number of questions and figures outside the brackets to indicate marks.								

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