

Instruction: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

NB:

- 1) Question No. 1 is compulsory.
- 2) Out of remaining questions, attempt any 3 (three) questions.
- 3) In all four questions to be attempted.
- 4) All questions carry equal marks.
- 5) Answer to each new question to be started on a fresh page.
- 6) Figures in brackets on the right hand side indicate full marks.
- 7) Assume Suitable data if necessary

1.	Answer any <u>4</u> from the following:	20
a.	What do you mean by the terms "fracture pattern of mineral" and "cleavage of a mineral"?	5
b.	Describe the shelled structure of the Earth with a diagram.	5
c.	What do you mean by poikilitic texture?	5
d.	How are mushroom rocks formed?	5
e.	What are aquifers? Differentiate between confined and unconfined aquifers.	5
f.	Diagrammatically describe different types of normal faults.	5
g.	Describe the formation of hanging valleys.	5
2.		20
a.	Describe a few branches of geology that are useful in civil engineering.	10
b.	What are Moraines? In your opinion, what kind of building material would be moraines?	5
c.	Draw a typical synformal fold and label the different parts.	5
3.		20
a.	Differentiate between recumbent and isoclinal folds.	5
b.	Explain how the elements of structural geology can be useful in civil engineering.	10
c.	Describe the artesian well.	5
4.		20
a.	Describe the feldspar group of minerals.	10
b.	Write a note on the origin and occurrence of coal deposits.	10
5.		20
a.	Describe textures of sedimentary rocks.	10
b.	Differentiate between sorting and packing in sedimentary rocks.	5
c.	What are the factors that affect metamorphism?	5

6.	Write short notes on any five.	20
a.	Amphibole Minerals	4
b.	Barchan Dunes	4
c.	Gravity method of exploration	4
d.	Cone of Depression	4
e.	Geological structures that affect dam construction	4
f.	Angular unconformity	4
g.	Lopolith and laccolith	4

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