

2009
GEOLOGY - I (Optional)

100073

Standard : Degree**Total Marks : 200****Nature : Conventional****Duration : 3 Hours****Note :**

- (i) Answers must be written in **English**.
- (ii) Question No. 1 is **Compulsory**. Of the remaining questions, attempt **any four** selecting one question from **each section**.
- (iii) Figures to the **RIGHT** indicate marks of the respective question.
- (iv) Number of optional questions upto the prescribed number in the order in which they have been solved will only be assessed. Excess answers will not be assessed.
- (v) Credit will be given for orderly, concise and effective writing.
- (vi) Candidate should not write roll number, any name (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise he/she will be penalised.
- (vii) For each slab of 10 and 15 marks, the examinee is expected to write answers in 125 and 200 words respectively.

1. Answer **any four** of the following questions : 40
- (a) Internal Structure of the Earth.
 - (b) Introduction to GIS and GPS.
 - (c) Geological Time Scale.
 - (d) Properties and Characters of Important Building Stones.
 - (e) Types of Volcanoes.

SECTION-A

2. Answer the following sub-questions :
- (a) Important theories of Origin of Solar System. 15
 - (b) Concept of Plate tectonics and types of Plate boundaries. 15
 - (c) Depositional Work of Glaciers. 10

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| 3. Answer the following sub-questions : | |
| (a) What are Meteorites ? Give their characters and classification. | 15 |
| (b) Describe in brief the mountain building processes. | 15 |
| (c) Erosional work of wind. | 10 |

SECTION-B

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| 4. Answer the following sub-questions : | |
| (a) Enumerate the Salient Geomorphic Features of Maharashtra. | 15 |
| (b) Concept of Remote Sensing. | 10 |
| (c) What are Joints ? Give their classification and types. | 15 |
| 5. Answer the following sub-questions : | |
| (a) Enumerate the various weathering processes and soil formation. | 15 |
| (b) Describe the importance of MSS bands giving their properties and characters. | 10 |
| (c) What are faults ? Describe in brief the various recognition criterias of faults in field. | 15 |

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SECTION-C

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| 6. Answer the following sub-questions : | |
| (a) Highlighting the important characters, give the sequence of Precambrian Stratigraphy of Peninsular India. | 15 |
| (b) Describe in brief the morphology and geological distribution of Lamellibranchs. | 15 |
| (c) What are microfossils ? Give their importance in Petroleum exploration. | 10 |
| 7. Answer the following sub-questions : | |
| (a) Gondwana supergroup. | 15 |
| (b) Modes of Preservation of Fossils. | 15 |
| (c) Evolution of Man. | 10 |

SECTION-D

8. Answer the following sub-questions :

- (a) Hydrologic cycle. 15
- (b) Concept of Watershed Management. 15
- (c) Engineering geological aspects related to mitigation of landslides and earthquakes. 10

9. Answer the following sub-questions :

- (a) What are Aquifers ? Describe in brief the important rock types as aquifers. 15
- (b) Highlight the important methods of artificial groundwater recharge. 15
- (c) Engineering geological aspects related to mitigation of coastal erosion and Tsunamis. 10

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