GEOLOGY (Optional)
भूशास्त्र (वैकल्पिक)

Time : 3 hours] [Maximum Marks : 200

Note :
(i) In all attempt Five questions.
(ii) Question No. 1 is compulsory.
(iii) Of the remaining questions, attempt Any Four by selecting one question from each section.
(iv) Numbers of optional questions upto the prescribed number in the order in which questions have been solved, will only be assessed and excess answers of the question/s will not be assessed.
(v) Candidate should not write roll number, any names (including his/her own), signature, address or any indication of his/her identity anywhere inside the answer book otherwise he/she will be penalised.

1. Answer any four of the following : 4x10=40
   (a) What is toposheet ? How can you interpretate, toposheet and geological maps ?
   (b) How fault in field can be recognised ? Write in brief criteria for recognition.
   (c) Explain formation, Geographic distribution and economic uses of coal of Maharashtra.
   (d) Explain role of engineering geology in civil construction.
   (e) Explain the supergene enrichment process of mineralisation.

SECTION - A

2. Answer the following sub-questions :
   (a) Explain in detail various continental drift theory, with reference to evidences. 20
   (b) What is Aerial photographs ? Explain in detail uses of Aerial photographs in mineral exploration.

3. Answer the following sub-questions :
   (a) Explain in detail different hypothesis regarding the origin of Earth. 20
   (b) What is GIS ? Explain Application of Geographic Information System in various field of Geology.

P.T.O.
SECTION - B

4. Answer the following sub-questions:
   (a) Define silicate structure? Explain various types of silicate structure of rock forming minerals.
   (b) How can you identify following rocks of Earth Crust: Granite, Basalt, Dolerite, Sandstone and Schist.

5. Answer the following sub-questions:
   (a) Explain various optical properties of minerals, under plane polarised and cross nicol.
   (b) Define metamorphism? Explain in detail, Agents and Kinds of metamorphism.

SECTION - C

6. Answer the following sub-questions:
   (a) Explain Geological Time Scale with subdivision.
   (b) Explain in brief uses of fossils.
   (c) Explain Geographic distribution and use of Iron in India.

7. Answer the following sub-questions:
   (a) Describe, classification, distribution and economic importance of Gondwana Supergroup.
   (b) Explain classification and morphology of hard part of Pelecypoda.
   (c) Give geographical distribution and uses of manganese.

SECTION - D

8. Answer the following sub-questions:
   (a) What is aquifer? Describe different types of Aquifers.
   (b) Describe in detail impact of volcanic activity on the environment.

9. Answer the following sub-questions:
   (a) What is Hydrological Cycle? Describe in detail various processes responsible for Hydrological Cycle.
   (b) What is Landslide? Which factors are responsible for landslides, and write their effect on life?

- o O o -