

[Total No. of Pages : 3 Roll No \_\_\_\_\_

1(CCE - M)4

GEOLOGY -II

[11]

Maximum Marks : 300

Time : 3 Hours

**INSTRUCTIONS**

- i) *Answers must be written in English.*
- ii) *The number of marks carried by each question is indicated at the end of the question.*
- iii) *The answer to each question or part there of should begin on a fresh page.*
- iv) *Your answer should be precise and coherent.*
- v) *The part/parts of the same question must be answered together and should not be interposed between answers to other questions.*
- vi) *Candidates should attempt question No :1 which is compulsory and any four more from the remaining questions.*
- vii) *If you encounter any typographical error, please read it as it appears in the text book.*
- viii) *Candidates are in their own interest advised to go through the General Instructions on the back side of the title page of the Answer Script for strict adherence.*
- ix) *No continuation sheets shall be provided to any candidate under any circumstances.*

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(1)

[Turn Over

- x) Candidates shall put a cross (X) on blank pages of answer Script.  
xi) No blank page be left in between answer to various questions.  
xii) No programmable Calculator is allowed.  
xiii) No stencil (with different markings) is allowed.

1. Give an elaborate note for the following: (80)
- a) Hexagonal system
  - b) Deccan basalts
  - c) Bowen's reaction series

OR

What is regional metamorphism? Discuss the conditions and mineral assemblages of granulite facies of rocks.

2. Explain the following: (55)
- a) Isomorphism, polymorphism and pseudomorphism
  - b) Optical properties, chemical composition and paragenesis of amphibole group of minerals.
  - c) Pleochroism, extinction and Twinning
3. Discuss the following with suitable illustrations: (55)
- a) Heavy minerals and their significance
  - b) Sedimentary structures
  - c) Sedimentary environments

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(2)

4. Discuss in detail the following: (55)
- a) Water table/groundwater management
  - b) Aquifers
  - c) Schlumberger method of ground water exploration
5. Give a detailed account of geological and geographical distribution of oil and natural gas fields of India. (55)
6. Write detailed notes on the following with suitable examples and illustrations. (55)
- a) Siting of reservoirs
  - b) Landslides
  - c) Dams
7. Discuss in Detail about metallogenic epochs and provinces of India in relation to plate tectonic settings. (55)
8. Define the term "texture". Describe various types of textures of igneous rocks with neat diagrams and examples of related rocks. (55)



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(3)