

[Total No. of Printed Pages-3

Roll No. _____

1(CCE-M)6

GEOLOGY - II

[11]

Time Allowed -3 Hours

Maximum Marks-300

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 six questions in all. The question no. 1 is compulsory.***
- 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 sheet shall be provided to any candidate under any circumstances.*
- x) *Candidates shall put a cross(X) on blank pages of the answer script.*
- xi) *No blank page be left in between answer to various question.*
- xii) *No programmable calculator is allowed.*
- xiii) *No stencil(With different markings) is allowed.*
- xiv) *In no circumstances help of scribe will be allowed.*

1. Write a short note on any three of the following with neat sketches and examples: **(3×25=75)**
 - a) Various crystal systems
 - b) Optical properties of minerals
 - c) Nesosilicate and inosilicate
 - d) Low and high grade metamorphic facies.
2. Write a brief note on twinning and explain various types of twinning with examples and neat sketches. **(45)**
3. Define the magmatic differentiation and metasomatism? Describe various processes that bring out differentiation of magma. **(45)**
4. Write a brief note on polarized and cross polarized lights and their behavior with suitable examples. **(45)**

5. Discuss the following with suitable examples and illustrations:
 - a) AFM diagram and its application.
 - b) Paragenesis of Pyroxene minerals.
 - c) Isomorphism in olivine minerals. **(3×15=45)**
6. What is the importance of remote sensing in geology? How aerial photographs in geological investigation plays a significant role even today? **(45)**
7. Write a note on any 3 questions of the following.
 - a) Confined and unconfined aquifer.
 - b) Causes of Landslides.
 - c) Structures of Igneous rocks.
 - d) Formation of sedimentary rocks and their fundamental properties. **(3×15=45)**
8. Write notes on any 3 questions:
 - a) Path finder elements.
 - b) Metallogenic provinces.
 - c) Magnetometric survey and types.
 - d) Geo-botanical surveying techniques. **(45)**

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