[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) Metallogenetic provinces.

c) Magnetometric survey and types.

d) Geo-botanical surveying techniques. **(45)**

⊖⊖⊖