10. Write notes on the following: 5+5+4=14

a) Surma Group of rocks deposited in the state of Tripura.

b) Geological history of Tripura..

c) Tectonics and structure of Cachar.

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PG ODD SEMESTER EXAMINATION, 2022
held in MARCH, 2023

EARTH SCIENCE

1st Semester

COURSE NO. ESSEC - 504

(Structural Geology (I) and Stratigraphy of NE India)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer any five questions, taking one from each unit

UNIT-I

1. a) Define inflection point of a folded layer Classify folds based on dip of axial surface and plunge of hinge line. 1+5=6

b) Discuss mechanisms of folding. Add a note on the first and second or higher order folding in multilayered rocks. 5+3=8

(Turn Over)

2. a) Discuss Ramsay's classification of folded layers with neat sketches. 5

b) Write briefly on, 3x3=9

i) Type 2 and 3 interference
ii) Orthogonal and flexure folds.
iii) Development of sheath folds.

UNIT-II

3. a) What is scissor fault? Illustrate the mechanism of folding. 1+6=7

b) Define transtension and transpression faults. Discuss classification of fault rocks in brittle and ductile regime. 2+5=7

4. a) Illustrate different modes of fractures. Add a brief note on imbricate and duplex structures. 6+4=10

b) Write short notes on the following: 2x2=4

i) Fault propagation fold

ii) Stylolites.

UNIT-III

5. a) Illustrate the structure and tectonics of Shillong platean. 7

b) Describe the cretaceous sedimentary successions of Meghalaya. 7

6. a) Discuss the magmatic activities within Shillong plateau. 8

b) Write a detailed account on mineral resources of Meghalaya. 6

UNIT-IV

7 a) Write a detailed account on tectono-sedimentary evolution of Assam Arakan basin. 8

b) Write briefly on, 3x2=6

i) Naga Schuppen belt

ii) Surma Group

8. a) Discuss in detail the statigraphy of upper Assam basin. 8

b) Write short notes on the following: 3x2=6

i) Mineral resources of Assam

ii) Barail and Jaintia Group.

UNIT-V

9. a) Write a descriptive note on the lithostratigraphy of the state of Mizoram. 8

b) Write a note on fossil occurrence and economic deposits of the state of Mizoram. 3+3=6

(Turn Over)