MCC/22/M.Sc./Sem.-I/GEO/1

Total pages: 02

PG CBCS M.Sc. Semester-I Examination, 2022 **GEOGRAPHY** PAPER: GEO 101 (EARTH'S SURFACE PROCESSES)

Full Marks: 40

Write the answer for each unit in separate sheet

The figures in the right-hand margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

GEO 101.1: GEOTECTONICS

Marks: 20

GROUP-A

1. Answer any <u>ONE</u> question:

- a) Examine the significance of paleomagnetic information in understanding supercontinent cycle.
- b) Illustrate the origin of volcanic-arc system with reference to plate dynamics.

GROUP-B

2. Answer any TWO questions:

- a) How does dynamo effect explain the origin of earth's magnetic field?
- b) Discuss the role of fossils in relative dating of rocks.
- c) Explain how ridge push and slab pull influence the plate movement?
- d) Write about some indicators of neotectonism in India.

GROUP-C

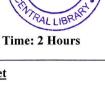
3. Answer any TWO questions:

- a) Mention the features of a neutron star.
- b) Write the principle of radioactive decay.
- c) Define geotectonic hot spot.
- d) What is flake tectonics?

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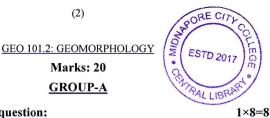
 $2 \times 2 = 4$

 $2 \times 4 = 8$

(2)

Marks: 20

GROUP-A



1. Answer any ONE question:

- a) Explain different concepts of equilibrium and their applications in geomorphology.
- b) Briefly discuss the scope of application of geomorphological knowledge in hydrological planning.

GROUP-B

2. Answer any TWO questions:

- a) Enumerate the factors that offset the balance between shear stress and shear strength along a slope.
- b) Elucidate the functional approach of landform studies.
- c) What are the major approaches to control flash flood in a mountainous area?
- d) Make a comparative assessment of the principles of uniformitarianism and catastrophism with suitable examples.

GROUP-C

3. Answer any <u>TWO</u> questions:

a) How is graded slope developed?

b) Define 'complex response'.

c) What is 'local base levels' of erosion?

d) Define angle of repose.

 $2 \times 2 = 4$

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