

**M.A. 1st Semester Examination, 2019**

**GEOGRAPHY**

**PAPER—GEO-103**

*Full Marks : 40*

*Time : 2 hours*

*The figures in the right-hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

*Illustrate the answers wherever necessary*

**Write the answers to questions of each Paper in separate books wherever necessary**

GEO-103.1

( *Climatology* )

GROUP — A

( Turn Over )

1. Answer any *one* of the following : 8 × 1

- (a) Discuss the theoretical developments in understanding the mechanism of Indian Monsoon.
- (b) What is sea surface temperature ? Discuss the coupled factors for contrasting sea surface temperature between the Bay of Bengal and the Arabian Sea.

GROUP – B

2. Answer any *two* of the following : 4 × 2

- (a) How does the intertropical convergence influence the rainfall pattern of wet equatorial climatic zone.
- (b) How is the spatial dimension of atmospheric phenomena related to their duration ? Give examples.
- (c) How is El Nino Southern Oscillation related to Indian monsoon ?
- (d) Discuss the geological evidence of past climate change.

( 3 )

GROUP – C

3. Answer any *two* of the following : 2 × 2
- (a) What is 'squall line' ?
  - (b) Distinguish between climatology and meteorology.
  - (c) What is thermocline line ?
  - (d) Why is  $O_{16}/O_{18}$  ratio considered as a decisive factor to infer the thermal state of the depositional environment ?

GEO-103.2

( *Soil and Agricultural Geog.* )

GROUP – A

4. Answer any *one* from the following : 8 × 1
- (a) Elucidate the significance of geomorphic surfaces and surface morphometry in soil landscape analysis.

- (b) Explain how the production of GM crops induces agricultural hazards and affects food production in India.

GROUP – B

5. Answer any *two* from the following : 4 × 2

- (a) Briefly explain the ecological approach in Agricultural Geography.
- (b) How are soil colour and soil pH related to soil fertility ?
- (c) What are the roles of hydrology in catenary differentiation along hill slopes.
- (d) Justify the dominance of local factors in modification of soil organic matter.

GROUP – C

6. Answer any *two* from the following : 2 × 2

- (a) What are the premises of soil Geomorphology ?

- (b) What are the structural varieties of soil clay ?
  - (c) What is soil chromosequence ?
  - (d) What are the sources of soluble salts in the soil ?
-