

**2010**

**M.Sc**

**1st Semester Examination**

**GEOGRAPHY AND E.M.**

**PAPER—GEO-103**

*Full Marks : 40*

*Time : 2 Hours*

*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.*

**Write the answers of each Unit in separate books.**

**Unit—V**

**(Climatological Processes)**

[Marks : 20]

**Group—A**

1. Answer any one question : 1×8
- (a) Explain the conditions for stability and instability of the atmosphere. 8
- (b) How is global atmospheric circulation instrumental in transferring heat and westerly angular momentum across the latitudes? 8

(Turn Over)

**Group—B**

2. Answer any two questions : 2×4
- (a) The atmosphere is heated chiefly by reradiation from Earth's surface, rather than directly by solar radiation."  $\frac{1}{4}$  Explain briefly. 4
- (b) Explain the relationship between temperature of a radiating body and the wavelengths it emits. Give examples. 4
- (c) Describe the characteristics of Rossby waves in relation to general circulation of the atmosphere.
- (d) How is La Nina different from El Nino ?

**Group—C**

3. Answer any two questions : 2×2
- (a) Define '*Bowen Ratio*.'
- (b) Why is saturation vapour pressure above ice crystals lower than above super cooled water droplets ?
- (c) How does a gradient wind maintain its circular pathway ?
- (d) Differentiate between '*anafont*' and '*Katafront*'.
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**Unit—VI**  
**(Population Geography)**

[Marks : 20]

**Group—A**

1. Answer any *one* question : 1×8
- (a) Explain how different traits of population affect the stages of development.
  - (b) Give an account of evolution and development of the discipline of population geography as a systematic branch of human geography.

**Group—B**

2. Answer any *two* questions : 2×4
- (a) Discuss the factors affecting fertility.
  - (b) Specify the significance of population equilibrium.
  - (c) Write the role of technology and innovation in changing the limit of carrying capacity over time.
  - (d) Bring out the differential nature of sex ratio in Indian population.

**3. Answer any two questions :**

**2×2**

- (a) What do you understand by Cohort fertility rate?
  - (b) State the significance of logistic population growth.
  - (c) Distinguish between absolute and relative over population.
  - (d) Specify the importance of exogenetic factors that determine the mortality patterns.
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