

**SAINT CLARET COLLEGE, ZIRO**  
**B. A. (GEOGRAPHY)**  
**SYLLABUS AS PER RGU SEMESTRAL SCHEME**  
(Subjected to syllabus enrichment by SCCZ for Claretines)

**Semester VI**

**GEOGCT 352: CLIMATOLOGY**

Breakup of marks with time	Questions to be set for End term Examination
Total marks: 100 (Theory)	
End term Exam: 80 (3 hrs)	3 (three) questions to be set from each unit, 2 (two) to attempt i.e 2x8marks= 16 (5 units x 16 = 80)
Internal Exam : 20 (1 hr)	20 marks: Average of best two passed Internal Exams

**Objectives:**

- a. *Explain with suitable diagrams the structure of atmosphere and its properties.*
- b. *Describe the atmospheric moisture and its characteristics.*
- c. *Explain the atmospheric system and its components.*
- d. *Explain the airmass and its dynamic.*
- e. *Discuss the global climate system and the impacts on the climate.*

**Unit 0- Baseline Analysis:** Course objectives and goal setting, fundamentals of weather and climate, Temperature and Pressure system.

**Unit I: The Atmosphere**

- a. Nature and Scope of Climatology
- b. Thermal and barometric properties of atmospheric layers
- c. Insolation and lapse rates
- d. Heat Budget and heat balance

**Unit II: The Atmospheric Moisture**

- a. Evaporation and evapotranspiration
- b. Humidity: relative, absolute and specific
- c. Condensation and Precipitation
- d. Cloud and its types

**Unit III: Atmospheric Wind Circulation**

- a. Hedley, Ferrel and polar cells
- b. Planetary Winds
- c. Monsoon
- d. Jet Streams

**Unit IV: Airmass and fronts**

- a. Air Masses: formation , types
- b. Fronts and its types
- c. Tropical Cyclones
- d. Temperate Cyclones

## **Unit V: Global climate system**

- a. Koeppen's Classification of Climate
- b. Thronthwaite's Classification of Climate
- c. Climate Change: causes and impact
- d. Climate and wellbeing

**Unit 100- Advanced Skills:** Open discussion, Class test and seminar, Remedial classes, Library hours and Peer teaching.

### **Suggested books:**

Bunnett, R. B. (1965). Physical Geography in Diagrams, New Delhi: Orient Longman Ltd.

Critchfield, H.J. (2012). General Climatology, New Delhi: PHI Learning Private Limited.

Deka, P. (2003). Geography: Physical and Human, New Delhi: New Age International (P) Limited.

Hess, D. (2011). Physical Geography: A Landscape Appreciation, New Delhi: PHI Learning Private Limited.

Lal, D. S. (2003). Climatology, Allahabad: Sharda Pustak Bhawan.

Lal, D. S. (2018): Climatology and Oceanography, Allahabad: Sharda Pustak Bhawan.

Singh, S. (2003). Physical Geography, Allahabad: Prayag Pustak Bhawan.

Tikka, R. N. (1981). Physical Geography, Meerut: Kedarnath, Ramnath and Co.

Whittow, B. J. (2000). Dictionary of Physical Geography, London: Penguin Books Limited.