

31283 - CLIMATOLOGY

DETAIL SYLLABUS

UNIT I INTRODUCTION

Introduction to Climatology- Movement of earth around sun-Different elements of climate like: Wind, temperature, humidity, precipitation and pressure-Different climatic zones- Effect of climate on man and shelter- Orientation of building with respect to above mentioned elements of Climate

UNIT II RELATION OF CLIMATE AND COMFORT

Macro-micro climatic effects - Concept of comfort zone and bio-climatic chart - Climatic evaluation by season

UNIT III SUN CONTROL AND SHADING DEVICES

Solar Chart (sun path diagram) - Orientation for sun - Internal and external sun protection devices - Natural lighting - Introduction and objectives of Solar Passive Design - Passive solar heating and cooling

UNIT IV WIND CONTROL

Orientation for wind - Effect of wind on climate - Wind protection devices

UNIT V USE OF BUILDING MATERIALS WITH RESPECT TO CLIMATE

Concrete – Brick – Tiles – Glass – Wood – Plastics – Stone – Insulating materials

REFERENCES

1. O.H.Koenigsberger and others, Manual of Tropical Housing and Building – Part I – Climatic Design, Longmans, London, 1980.
2. M.Evans - Housing, Climate and Comfort - Architectural Press, London, 1980.
3. B.Givoni, Man, Climate and Architecture, Applied Science, Banking, Essex, 1982.
4. Donald Watson and Kenneth Labs., Climatic Design - McGraw Hill Book Company- New York -1983