AMID27 ENVIRONMENTAL CONTROL-II

UNIT-1 INTRODUCTION

1.1 Climate and built form interaction. Global climatic factors, elements of climate,
1.2 Impact and issues of climatic balance in traditional and contemporary built environments,
1.3 Issues of ecological balance, implications of climatic forces in nature of spaces and forms.
1.4 Patterns of organization and elements of built form at individual building.

UNIT-2 THERMAL COMFORT AND HEAT FLOW

2.1 Thermal comfort factors, physiological aspects.
2.2 Body heat balance.
2.3 Building climatological site analysis, application of comfort diagrams, introduction to basic thermal units, theory of heat flow, heat transmission, thermal properties of materials, human heat balance.
2.4 Physiological comfort, outdoors and indoors, heat flow within buildings, steady state conditions and periodic flow, thermal performance of building elements.

UNIT-3 SUN AND DESIGN PROCESS

3.1 Solar charts, sun angles and shadow angles, orientation for sun, sun control,
3.2 Design of shading devices, radiation, glare, solar energy and its technical applications.
3.3 Climate and material choices, color and texture choices for interior spaces.

Reference Books:

1. Koeinsberger, O.H. and others, Manual of Tropical Housing and Building. Orient Longman, Chennai, 2003.Konya Allan, Design for Hot Climates.
2. Kukreja. C.P. Tropical Architecture. Tata McGraw Hill Pub. Co. Ltd. New Delhi, 1978.
3. Markus, T.A and Morris. E.N. Buildings. Climate and Energy, Pitman Pub Ltd., London, 1980