

B.Arch. Fourth Semester (Architecture) (CGS)
10031 : Applied Climatology - II : 04 AR 04

P. Pages : 1

Time : Three Hours



AU - 2615

Max. Marks : 80

- Notes :
1. Question No. 1 is compulsory.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Illustrate your answer necessary with the help of neat sketches.
 5. Solar chart is permissible.
 6. Use of pen Blue/Black ink/refill only for writing the answer book.

1. Explain with sketches the impact of Micro & Macro climatic conditions to generate planning & Design features in tropical climatic zones ? 16
2. Explain with sketches the planning and design features in traditional structures with respect to climate ? 16

OR

3. a) Explain the concept of courtyard & its purpose ? 8
- b) Explain with diagram the reverse stack effect ? 8
4. a) Explain the importance of thermal properties of different materials. 6
- b) Explain the terms which are related to calculate the thermal properties of building materials. 10

OR

5. a) Explain with diagram the Horizontal & Vertical Shadow angles ? 10
- b) Explain with diagram the shadow angle protractor ? 6
6. a) What is Heliodon ? Explain the process to use Heliodon ? 8
- b) Explain the day light factor & its importance ? 8

OR

7. a) Explain with diagram to find the angle of incidence ? 8
- b) Explain with diagram the purpose of solar chart ? 8
8. Design and draw a shading device which will cast complete shadow on an opening measuring 1.8 m x 1.8 m facing towards south on 15th May at a latitude of 20°N location. Explain various options of orientation and sizes ? (Use of solar chart is permissible). 16

OR

9. a) Orientation of fenestration with respect to hot & dry climate ? 8
- b) Ventilation system and its purpose ? 8
