

AV – 2731

Fourth Semester B. Arch. (CGS) Examination

APPLIED CLIMATOLOGY-II

Paper – 04 AR 04

(USC – 10031)

P. Pages : 2

Time : Three Hours]

[Max. Marks : 80

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

1. Explain with sketches the planning, design materials and techniques used in traditional structures with respect to climate. 16
2. Explain with sketches the climatic factor's which are responsible to generate Micro and Macro climatic conditions from Regional level to House level. 16

OR

3. (a) Explain the concept of water bodies provided at city level and its purpose. 8
(b) Explain the solar passive techniques and its purpose. 8
4. Explain the thermal properties of traditional and modern building materials to create comfort levels in Hot and Dry climate. 16

OR

5. (a) Explain with diagram the purpose of Reverse stack effect. 8
(b) Explain with diagram the purpose of orientation of fenestration and Built up form. 8

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6. Design and draw a shading device which will cast complete shadow on an opening measuring 3m x 2.4 m from floor level facing towards south-East on 15th March at a latitude of 20°N location. Explain the various options of orientation and fenestration. 16

OR

7. (a) Explain the process to find the angle of incidence on particular location. 8
(b) Explain the solar chart is purposes ? 8
8. (a) Explain with diagram the purpose of Horizontal and vertical shadow angles. 10
(b) Explain the Passive cooling techniques in traditional architecture ? 6

OR

9. (a) Explain how natural ventilation systems enhanced the comfortable living space. 8
(b) Explain the Day light factor concept with diagram. 8

