Acharya's NRV School of Architecture LIBRARY Bangalore

CBCS SCHEME

USN | | | | | | | | | | |

18ARC33

Third Semester B.Arch. Degree Examination, July/August 2022
Climatology

Time: 3 hrs. Max. Marks: 100

Note: 1. ***Answer any FIVE full questions, choosing ONE full question from each module.***
2. ***Draw neat sketches, wherever necessary.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. Explain how weather conditions are recorded in Weather station. **(10 Marks)**
b. Explain the concept of application of effective temperature in Climate design. **(10 Marks)**

OR

2 a. Why is the study of climate and its elements important in building design? **(10 Marks)**
b. What is Thermal Comfort? Explain the indices of Thermal Comfort. **(10 Marks)**

Module-2

3 a. Explain the principle behind the making of Sun – path diagram. **(10 Marks)**
b. Workout the critical relationship between Thermal balance of Thermal comfort of Human body, highlighting the body's heat exchange mechanisms. **(10 Marks)**

OR

4 Explain in brief the thermal and physical properties of the building materials of their effect on indoor Environment. **(20 Marks)**

Module-3

5 What is Thermal Insulation? Explain the various methods of roof and wall insulation with sketches. **(20 Marks)**

OR

6 Elaborate on how each of the following help in Thermal Control in buildings :
a. Orientation
b. Special glass.
c. Cavity wall
d. Shading devices. **(20 Marks)**

Module-4

7 a. How can the incoming radiation through doors, windows and ventilators be controlled? **(10 Marks)**
b. Justify the requirements of Openings for Natural Ventilation in Buildings. **(10 Marks)**

OR

8 a. Explain the various components of day light factors. **(10 Marks)**
b. Explain the factors to be considered for achieving Natural Ventilation in buildings. **(10 Marks)**

Module-5

9 Design a Single Bedroom House in warm humid climate. Explain the strategies to create comfortable Environment in built space. **(20 Marks)**

OR

10 Explain the design considerations in design of Hot dry settlement with an example. **(20 Marks)**

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