

# CBCS SCHEME



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18ARC33

Third Semester B.Arch. Degree Examination, Jan./Feb. 2023

## 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.

### Module-1

- 1 a. List major and sub zones of tropical climate. (05 Marks)  
b. Explain any five elements of climate in detail. (15 Marks)

OR

- 2 Explain the design considerations of hot and dry desert climate. (20 Marks)

### Module-2

- 3 a. Explain any two thermal comfort indices in detail. (10 Marks)  
b. Explain thermal comfort and the factors affecting thermal comfort. (10 Marks)

OR

- 4 Explain various heat exchange process of a building with outdoor environment with respect to various types of heat flows. (20 Marks)

### Module-3

- 5 Write short notes on:  
a. U value (05 Marks)  
b. Cavity walls (05 Marks)  
c. Thermal capacity (05 Marks)  
d. Thermal conductivity (05 Marks)

OR

- 6 Explain periodic heat flow, time lag and decrement factor. (20 Marks)

### Module-4

- 7 Write short notes on:  
a. Wind catcher (05 Marks)  
b. Natural ventilation (05 Marks)  
c. Stack effect (05 Marks)  
d. Cross ventilation (05 Marks)

OR

- 8 What are the shading devices? Explain various types of shading devices used in the buildings. (20 Marks)

### Module-5

- 9 Describe with sketches the problems and solutions of day lighting in hot dry and warm humid climates. (20 Marks)

OR

- 10 Explain the design considerations for warm humid climate using a case study as an example. Draw relevant sketches. (20 Marks)

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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.