CBCS SCHEME

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

15ARC3.3

Third Semester B. Arch Degree Examination, Dec.2018/Jan.2019
Climatology

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing one full question from each module.***

Module-1

1 a. What is Psychrometric chart? Explain its components with the help of sketches. **(05 Marks)**

b. List major and sub-zones of tropical climate and explain any two in detail. **(15 Marks)**

OR

2 a. What is site climate? Explain the factors governing the site climate. **(12 Marks)**

b. Analyse the factors causing deviation of the urban climate from regional macro climate. **(08 Marks)**

Module-2

3 a. Explain thermal comfort and the factors affecting thermal comfort. **(10 Marks)**

b. Explain the process of thermo regulatory mechanism of human body. **(10 Marks)**

OR

4 a. Name the two angles that determine the position of the sum with respect to a given point on the surface of the earth. Draw sketches to explain. **(10 Marks)**

b. What are the thermal comfort indices? Explain any two in detail. **(10 Marks)**

Module-3

5 Explain the following :

a. U-value.

b. Time lag

c. Cavity walls

d. Thermal insulation. **(20 Marks)**

OR

6 Describe "Heat exchange process of a building with outdoor environment:, with respect to various types of heat flows and their formulae. **(20 Marks)**

Module-4

7 a. Explain stack effect due to thermal force and wind velocity. **(08 Marks)**

b. Explain the effect of size and position of openings on internal air circulation, with the help of sketches. **(12 Marks)**

OR

8 a. Describe different types of shading devices. **(08 Marks)**

b. Explain the procedure of selection of shading devices for a particular wall orientation using sunpath diagram. **(12 Marks)**

Module-5

9 a. What is Day-Light factor? **(05 Marks)**

b. With the help of literature study explain why there is a need for different day-lighting stratergies for warm-hummid climate and hot-dry climate? Explain with the help of plans, sections and views. **(15 Marks)**

OR

10 The traditional architecture of a region is an example of evolution in response to the climate of that region. Explain in detail with examples emphasizing planning principles building elements and selection of materials. **(20 Marks)**

* * * * *