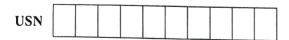
## CBCS SCHEME



(20 Marks)



humid climate.

## Third Semester B.Arch. Degree Examination, July/August 2021 Climatology

Tim	ie: 3	hrs. Max. Ma	arks:100
Note: 1. Answer any FIVE full questions. 2. Draw neat labeled sketches wherever necessary mandatorily.			
1	a.	List the major and subzones of tropical climate. Explain with sketches the various instruments and measuring units of different e climate.	(05 Marks) lements of (15 Marks)
2	a. b.	Explain Thermal comport scale.  Describe the following with relevant sketches  i) Kata thermometer ii) Bio climatic chart iii) Globe thermometer.	(05 Marks) (15 Marks)
3	a. b.	Explain with sun path diagram, its components and methods of computing solar a azimuth for given date and time.  Explain the concept of Sol-Air temperature and solar gain factor.	
4		Explain the heat exchange processes of a building with the outside environment.	(20 Marks)
5		Explain steady state, periodic heat flow, time lag and decrement factor.	(20 Marks)
6		Calculate 'U' value of a given composite wall. Assume a wall of a wester exposure, consisting of the following : $114mm  \text{Engineering brickwork}  K = 1.150 \text{W/mdeg C} \\ 50mm  \text{Cavity} \qquad \qquad R_c = 0.076 \text{m}^2 \text{deg C/W} \\ 100mm  \text{Dense concert block} \qquad K = 1.440 \text{W/m deg C} \\ 25mm  \text{Wood wool slab} \qquad K = 0.093 \text{ W/m deg C} \\ 12mm  \text{plastering} \qquad K = 0.461 \text{ W/m deg C} \\ 1/f_1 = 0.123 \text{ m}^2 \text{deg C/W} \\ \qquad $	ly, normal
7	a.	What are the shading devices? Explain the different types of shading device buildings.	es used in (10 Marks)
8	b. a. b.	What are the functions of natural ventilation and air movement?  What is stack effect?  Discuss internal airflow pattern with respect to location of opening, external fewind direction.	(10 Marks) (10 Marks) eatures and (10 Marks)
9		What is "Day light Factor"?  Describe how "Day light Factor" can be useful in functional architectural spaces.	(05 Marks) (15 Marks)
10		Illustrate with sketches 'design principle' for building in hot dry as compared	with warm

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