

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: B.ARCH  
BRANCH: ARCHITECTURE**

**SEMESTER: III  
SESSION: MO/2023**

**SUBJECT: AR201 CLIMATOLOGY**

**TIME: 3 Hours**

**FULL MARKS: 50**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q.1(a)	Classify Tropical climate and describe different climate zones of India as per NBC.	[5]	1
Q.1(b)	Define green house effect & global warming. Discuss the adverse effect of these on global climate.	[5]	1
Q.2	Write short notes of the following (any three) a) Daylight Factor b) Wind rose diagram. c) Light shelves d) Building orientation & building configuration	[10]	2
Q.3(a)	Describe & illustrate Stack effect & Venturi effect highlighting the relevance in ventilation in warm humid climate.	[5]	3
Q.3(b)	State the function of ventilation. Elaborate with necessary sketches the wind flow pattern surrounding a building.	[5]	3
Q.4(a)	What are the dominating climate elements in hot-dry-desert areas? traditional shelter in Hot Dry Desert climate.	Describe [5]	4
Q.4(b)	Define sun path diagram & sun shading devices. Explain the relevance of sun path diagram in designing the sun shading devices.	[5]	2
Q.5(a)	Differentiate between Urban & Rural climate with reference to topography, surroundings, vegetation.	[5]	4
Q.5(b)	How to design a climate balanced Architecture in warm humid climate ? Explain the technology to be followed to achieve this.	[5]	4

::: 21/11/2023 :::