

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: B. Arch
BRANCH: Architecture and Planning

SEMESTER : III
SESSION : MO/2025

SUBJECT: AR201 - CLIMATOLOGY

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
 5. Support your answers with neat, labelled sketches wherever applicable.
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		CO	BL
Q.1(a)	Differentiate between weather and climate with suitable examples.	[2] 1	1
Q.1(b)	Explain the role of climatic analysis in building design, citing examples from contrasting regions such as Mumbai and Shimla.	[3] 1	3
Q.2(a)	Define Global Climate Change. Mention any two greenhouse gases responsible for it.	[2] 1	1
Q.2(b)	Explain the importance of solar radiation and ambient temperature as climatic factors affecting human comfort.	[3] 1	2
Q.3(a)	Write short notes on humidity and precipitation, highlighting their significance in climatology.	[2] 2	2
Q.3(b)	Discuss the effect of wind and sky condition on building design and indoor comfort.	[3] 2	3
Q.4(a)	Define microclimate. Give one example of how topography or vegetation can influence local climate.	[2] 2	3
Q.4(b)	What is an Urban Heat Island (UHI)? Explain its causes and impacts on city climate.	[3] 2	4
Q.5(a)	State the modes of heat transfer relevant to building design.	[2] 2	3
Q.5(b)	Explain the concept of Daylight Factor and its importance in sustainable design.	[3] 2	4

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