

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

**CLASS: MTECH AND PRE PHD
BRANCH: REMOTE SENSING**

**SEMESTER : II
SESSION : SP/2023**

SUBJECT: RS523 PHYSICAL METEOROLOGY

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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		CO	BL
Q.1(a)	Describe the composition of the atmosphere.	[2] 1	1
Q.1(b)	What is the structure of the atmosphere and how it varies with temperature?	[4] 2	1
Q.1(c)	Explain adiabatic and isothermal processes in detail.	[4] 1	2
Q.2(a)	What are T-grams and what are they used for? Give an example.	[5] 2	2
Q.2(b)	Elaborate CAPE and CINE in thunderstorm development.	[5] 3	3
Q.3(a)	What do you understand by absorption, emission and scattering in the atmosphere.	[4] 3	1
Q.3(b)	Explain Earth's energy budget in detail with diagram.	[6] 3	3
Q.4(a)	Explain the difference between weather and climate.	[2] 1	3
Q.4(b)	Elaborate temperature and rainfall distribution during the four seasons.	[4] 4	3
Q.4(c)	What is CCN? What do you understand by homogeneous and heterogeneous nucleation?	[4] 4	1
Q.5(a)	Write short notes on Indian Ocean Dipole moment and Hadley Circulation.	[6] 5	1
Q.5(b)	Differentiate between El Nino and La Nina. How do they affect the Indian Monsoons?	[4] 5	4

:26/04/2023:E