

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)

CLASS: IMSc.
BRANCH: PHYSICS

SEMESTER : IV
SESSION : SP/2025

SUBJECT: SEC405 WEATHER FORECASTING

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
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Q.1(a)	Draw the density and pressure profile of the atmosphere.	[2]	1	2
Q.1(b)	In which layer of atmosphere ozone is present at what height? Draw the atmospheric temperature profile.	[3]	1	2
Q.2(a)	What do you understand by atmospheric lapse rate?	[2]	1	2
Q.2(b)	Describe the two instruments used to measure the temperature.	[3]	1	2
Q.3(a)	At what wind speed wind is called calm. Also mention its Beaufort scale number.	[2]	2	1
Q.3(b)	Draw the major pressure belt and wind system on the globe.	[3]	2	2
Q.4(a)	Name the instrument which can be used to measure the wind speed and direction both.	[2]	2	2
Q.4(b)	What is jet stream? Which are the prominent jet stream present in global circulation?	[3]	2	3
Q.5(a)	What are the different names of the Cyclone depending on location?	[2]	3	2
Q.5(b)	What are the necessary conditions for formation of Cyclones?	[3]	3	2

::::::03/03/2025::::::E