

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

CLASS: B.Sc MLT
BRANCH: MLT

SEMESTER : IV
SESSION : SP/2025

SUBJECT: BOE405 INSTRUMENTAL METHOD OF ANALYSIS

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)	What is the principle of UV-Spectrophotometer.	[2]	1 2
Q.1(b)	Discuss various modes, uses and applications of UV-Spectrophotometer.	[3]	1 2
Q.2(a)	Mention about the strength and limitations of UV-Vis spectrophotometer.	[2]	1 2
Q.2(b)	Discuss briefly about instrumentation of UV-Spectrophotometer.	[3]	1 2
Q.3(a)	Mention principle of IR-Spectrophotometer.	[2]	2 1
Q.3(b)	Enlist basic components of IR-Spectrophotometer. Draw the diagram of IR-Spectrophotometer	[3]	2 2
Q.4(a)	Why we can't use glass cell holders for IR Spectrometry.	[2]	2 3
Q.4(b)	Discuss various types detectors used in IR-Spectrophotometer.	[3]	2 2
Q.5(a)	Define chromatography. Enlist types of chromatography.	[2]	3 1
Q.5(b)	Discuss theories of adsorption and partition chromatography.	[3]	3 2

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