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

CLASS: B.Tech **SEMESTER : IV/ADD**
BRANCH: Civil Engineering **SESSION : SP/2025**

SUBJECT: CE208 SURVEYING

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**

			CO	BL
Q.1(a)	The length of a survey line measured with a 30 m chain was found to be 631.5 m. When the chain was compared with a standard chain, it was found to be 0.10 m too long. Find the true length of survey line.	[2]	1	2
Q.1(b)	The following bearings were taken in a closed traverse ABCD.	[3]	1	3

Line	Fore bearing	Back bearing
AB	45^0 15’	225^0 15’
BC	123^0 15’	303^0 15’
CD	181^0 00’	1^0 00’
DA	289^0 30’	109^0 30’

Calculate the interior angles of the traverse.

Q.2(a)	Explain about Local attraction.	[2]	1	2
Q.2(b)	Describe the “Radiation method” of plane table surveying.	[3]	1	2
Q.3(a)	Describe the purpose of levelling.	[2]	2	2
Q.3(b)	Explain about different components of dumpy level.	[3]	2	2
Q.4(a)	Explain the uses of contours.	[2]	2	2
Q.4(b)	The following consecutive readings were taken with a dumpy level along a chain line at a common interval of 15 m. RL of the first point was 98.085 m. The instrument was shifted after the fourth and ninth readings. Calculate RL of other points by Height of Instrument method. Staff readings are: 3.150, 2.245, 1.125, 0.860, 3.125, 2.760, 1.835, 1.470, 1.965, 1.225, 2.390, 3.035.	[3]	2	3
Q.5(a)	Explain about summit curve and valley curve.	[2]	3	3
Q.5(b)	Explain about types of horizontal curves.	[3]	3	3

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