Code No: 153BV

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year I Semester Examinations, March - 2022
SURVEYING AND GEOMATICS
(Civil Engineering)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions
Each Carries Equal Marks
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1.a) Differentiate between Prismatic compass and Surveyor's compass with reference to reading and tripod.
b) What do you understand by closing error? Show how can it be adjusted by graphical method. [8+7]

2.a) Convert the whole circle bearing into reduced bearing: 50^0, 176^0, 210^0, 232^0, 150^0, 76^0, 310^0, 242^0.
b) Explain the principle on which chain survey is based. [8+7]

3. The following consecutive readings were taken with a level and 5 meter leveling staff a continuously sloping ground on a common interval of 20 meters. 0.385; 1.030; 1.925; 2.825; 3.730; 4.685; 0.625; 2.005; 3.1101; 4.485 the R.L of the first point was 208.125 m. Rule out a page of level book and enter the readings. Calculate the R.L'S of the points by rise and fall method. [15]

4.a) State the determination of capacity of reservoir.
b) Explain the various methods for computation of areas along irregular boundaries? [8+7]

5.a) The lengths and bearings of the four lines of a closed traverse ABCDE. Determine the length and bearing of the fifth line EA.

Line	Length	Bearing
AB	194.1 m	85^0
BC	201.2 m	15^0
CD	165.4 m	285^0 30′
DE	172.6 m	195^0 30′
EA	?	?

b) Write the permanent adjustments in theodolite. [8+7]

6.a) How do you measure horizontal angle between two points with the help of a theodolite by repetition method?
b) Write the temporary adjustments in theodolite. [8+7]

7. A Simple circular curve is to have a radius of 573m. The tangents intersect at chain age 1060 m and the angle of intersection is 120. Find: a) Tangent distance b) Chain age at beginning and end c) Length of long chord d) Degree of curve e) Number of full and sub-chords. [15]

8.a) How would you explain about the photomaps and mosaics?
b) Mention the reasons for the overlap of the photographs. [8+7]

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