

Ex/SC/GEOG/UG/SEC/11/101/2025

BACHELOR OF SCIENCE EXAMINATION, 2025

(1st Year, 1st Semester)

GEOGRAPHY

COURSE CODE : SEC

PAPER : Surveying and Leveling

Time : Four Hours

Full Marks : 40

Answer **all** questions

1. Measure the dip amount and direction at five field locations using a clinometer. Plot these measurements on paper with proper labelling of the dip amount, direction and strike for each location. Determine the apparent dip of an inclined bedding plane when the true dip is 45° and the angle between the true and apparent dip is 30° . 5+5=10
2. Make an open traverse survey using Prismatic Compass to measure the fore bearing and back bearing of the 5 points with equal intervals on the given 'XY' line and plot the line with the corrected magnetic bearing. 10
3. Make a Dumpy Level Survey along the given 'AB' line to obtain the reduced level of the 5 stations at equal intervals and compute the reduced levels with Benchmark at 'A' point being 10 meters above the mean sea level. Draw a longitudinal profile with a suitable scale. 10+5=15

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[Turn Over]

(2)

4. How does a cadastral map differ from a topographic map in terms of its properties and purpose and discuss the advantages and limitations of cadastral maps over other mapping systems. 5

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