

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATION- 2025

B.Tech-III Semester (CE)

COURSE CODE (CREDITS): 25B11CE312 (3)

MAX. MARKS: 15

COURSE NAME: Surveying

COURSE INSTRUCTORS: Ashish Kumar

MAX. TIME: 1 Hour

*Note: (a) All questions are compulsory.**(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

Q.No	Question	CO	Marks
Q1(a)	Why hypotenusal allowance is provided in measurement of distance on sloping ground? If a chain of 20 m length was used to measure the distance on sloping ground with angle of slope 20° , Calculate the hypotenusal allowance.	1	2
Q1 (b)	Differentiate between plane surveying and geodetic surveying.	1	1
Q1 (c)	How do we measure offsets along a chain line? How many offsets you will prefer for a road crossing (i) vertical to chain line and (ii) obliquely a chain line? show with neat diagram.	1	2
Q1 (d)	How will you distinguish between a hill and depression of a terrain by studying the nature of contour?	1	1
Q2	A survey line was measured with by a 20 m chain which was accurate before the starting of day's work. After chaining 1000 m, the chain was checked for any error and it was observed that chain is now 5 cm too long. After chaining a total distance of 2500 from the start of work, the chain was found to be 7 am too long. Find out the correct distance of the chain line.	2	3
Q3	Explain the term magnetic declination with neat diagram. The magnetic bearing of a survey line is $140^\circ 30'$. What will be true bearing if declination is $5^\circ 15' W$.	2	2
Q4 (a)	Differentiate between whole circle bearing and Reduced Bearing with suitable example.	2	1
Q4 (b)	During a survey, three chain lines are drawn with following details. Compute the internal angle of the triangle formed by these three chain lines. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div>Line</div> <div>FB</div> <div>BB</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>AB</div> <div>$60^\circ 30'$</div> <div>$240^\circ 30'$</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>BC</div> <div>$150^\circ 15'$</div> <div>$330^\circ 15'$</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div>CA</div> <div>$280^\circ 30'$</div> <div>$100^\circ 30'$</div> </div>	2	3