JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2023

B.Tech-III Semester (CE)

COURSE CODE(CREDITS): 18B11CE 312 (3)

COURSE NAME: SURVEYING

COURSE INSTRUCTORS: Ashish Kumar

MAX. MARKS: 15

MAX. TIME: 1 Hour

Note: (a)All questions are compulsory.

(b)Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems.

Q1. Answer the following briefly. [CO1]
(a) Explain the fundamental principles of surveying. [1]
(b) Differentiate between plane surveying and geodetic surveying with their salient features. [1]
(c) What do mean by RF? Provide an example of the same. [0.5]
(d) What do you understand by offsets? How many offsets you will prefer for wire fencing? [0.5]
(e) What do you understand by shrinkage factor in map? Explain with a suitable example. [1]

Q2. What do you understand by Ranging? How will you range a chain line if end stations are not inter-visible? Explain the procedure. [CO2]
[3]

Q3. What do you understand by compass traversing? Differentiate between whole circle bearing and Quadrantal bearing. [CO2]
[2]

Q4. A distance of 2000 m was measured by a 30 m chain. After on, it was detected that chain was 0.1 m too long. Another 500 m (total 2500 m) was measured and it was detected that the chain was 0.15 m too long. If the length of the chain in the initial stage was correct, determine the exact length that was measured. [CO6]
[2]

Q5. A steel tape 20 m long is standardized at 55°F with a pull of 25 Kg and used for measuring a base line. Find the correction per tape length, if the temperature at the time of measurement was 80°F and the pull executed was 38Kg. Unit weight of steel is 7.86 g/cc, weight of tape is 0.8Kg and Modulus of Elasticity $E = 2.11 \times 10^6$ Kg/cm². Coefficient of thermal expansion is 6×10^{-6} per °F. [CO6] [4]