Dr Ashish

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T1- EXAMINATION (Summer Semester – June 2018)
B. Tech. (V- SEM.)

COURSE CODE: 10B11CE412 MAX. MARKS: 50
COURSE NAME: Surveying
COURSE CREDIT: 4 MAX. TIME: 2 HRS

Note: Attempt all questions. Assume suitable data if required. Carrying of mobile phone during examinations will be treated as case of unfair means

Q1. **(a)** Explain the fundamental principles of surveying. **[3]**

(b) Differentiate between plane surveying and geodetic surveying with their salient features. **[3]**

(c) The length of a line measured with a chain of 50 m was found to be 1000 m. If the chain is 25 cm too short, find the true length of the line. **[2]**

Q2. To measure a base line, a steel tape 30 m long standardized at 15 °c with a pull of 100 N was used. Find the correction per tape length if the temp at the time of measurement was 20 °c and pull exerted was 160 N. Weight of 1 cm^3 of steel = 0.0786 N, Weight of the Tape = 8 N, E = 2.1 x 10^7 N/cm^2. , α = 7.1 x 10^{-7} per °c. **[8]**

Q3. How will you perform a chaining operation if a large river interrupts the chaining operation? **[5]**

Q4. **(a)** Differentiate between WCB and RB. **[2]**

(b) The following are the bearings taken on a closed compass traverse ABCDE. Compute the interior angles. **[7]**

Line	F B	B B
AB	150°15′	330°15′
BC	20°30′	200°30′
CD	295°45′	115°45′
DE	218°00′	38°00′
EA	120°30′	300°30′

Q5. What is the main principle of plane tabling? What is three point problems? Explain the procedure of solving this by tracing paper method with neat sketch. **[10]**

Q6. The following readings were taken with a level and 4 m staff. The level was shifted after 4th, 7th and 10th . Draw up a level book page and reduce the levels by the Rise and fall method.

0.578 B.M.(= 60.200 m), 0.933, 1.768, 2.450, 2.005 and 0.65, 1.88, 1.18, 3.679, 0.612, 0.705, 1.810. **[10]**