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Question Paper Code: 43106

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Civil Engineering

14UCE306 - SURVEYING - I

(Regulation 2014)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The Gunter or Surveyor's Chain is
(a) 100 *ft* (b) 33 *ft* (c) 66 *ft* (d) 10 *m*
2. In chain surveying, tie lines are primarily provided
(a) to check the accuracy of the survey (b) to take offsets for detail survey
(c) to avoid long offsets from chain lines (d) to increase the number of chain
3. Radiation, intersection, traversing and resection are the four methods of
(a) Compass surveying (b) Plane table surveying
(c) Chain surveying (d) Compass traversing
4. The bearing of a line measured in the direction of the progress of the survey is called
(a) Back bearing (b) Whole Circle bearing
(c) Fore bearing (d) Quadrantal bearing
5. The last reading taken before shifting the instrument to a new station is said to be
(a) Back sight (b) Fore sight
(c) Intermediate sight (d) Change point

6. For true difference in elevations between two points A and B, the level must be set up
- (a) Near the point B (b) Near the point A
(c) At the exact midpoint of A and B (d) At any point between A and B
7. The bench mark established by Survey of India through out the country is called
- (a) Permanent bench mark (b) GTS bench mark
(c) Temporary bench mark (d) Arbitrary bench mark
8. The total volume of excavation multiplied by average haul distance is said to be
- (a) Mass haul (b) Free haul
(c) Haul (d) Over haul
9. The diaphragm of a stadia theodolite is fitted with two additional
- (a) horizontal hairs (b) vertical hairs
(c) horizontal and two vertical hairs (d) none of these
10. One of the tacheometric constants is additive, the other constant, is
- (a) Subtractive constant (b) Dividing constant
(c) Multiplying constant (d) Indicative constant

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. What is meant by ranging a line? Explain the procedure of ranging a line by in direct method. (8)
12. The following fore-bearings and back-bearings were observed while traversing with compass. Calculate the interior angles and correct for observational errors. (8)
13. Determine the corrections due to (a) curvature and (b) refraction if the length of sight is (i) 1200m and (ii) 1800m. (8)
14. Write about the characteristics of contours and their uses. (8)
15. What are the possible sources of errors while using a theodolite? (8)