

3221
BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL - 2019
*** DIPLOMA IN CIVIL ENGINEERING**
SURVEYING-II
THIRD SEMESTER EXAMINATION

Time: 3 Hours

Total Marks: 80

PART - A (10 x 3 = 30 Marks)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Mention any six uses of a Theodolite.
2. What is a Theodolite? When do you call it as a transit Theodolite?
3. What do you mean by omitted measurements in theodolite survey?
4. What is trigonometric levelling? When trigonometric levelling is used?
5. What do you mean by Stadia Tacheometry?
6. State any three disadvantages of Tangential Tacheometry.
7. Define the following (i) Point of commencement (ii) Back tangent
8. List the different angular methods of curve setting.
9. List the basic principles of terrestrial Photogrammetry?
10. Write short notes on G.P.S.

PART - B (5 x 10 = 50 Marks)

Note 1: Answer any five questions and each question carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain measurement of horizontal angle by the method of Reiteration?
12. Explain briefly the sources of errors in theodolite survey.
- * 13. In order to ascertain the elevation of the top of a signal Q on a hill, observations were made from two instrument stations P and R at a horizontal distance of 100 m apart, the stations P and R being in line with Q. The angles of elevation of Q at P and R were $28^{\circ}42'$ and $18^{\circ}06'$ respectively. The staff readings upon the Bench mark of elevation 287.28m were respectively 2.870m and 3.750m when the instrument was at P and R, the telescope being horizontal. Determine the elevation of the foot of the signal, if the height of the signal above its base is 3 m.
14. a) Explain how you will obtain constants of a Tacheometer in the field.
 b) Two distances of 50 and 75 meters were accurately measured on a fairly level ground. The intercept on the staff held vertical were 0.495 and 0.745 meters respectively. Calculate the tacheometric constants of the instrument.
15. Two straights intersect at chainage 2417 m. The deflection angle is 11° . Calculate radius of the curve, chainage at first tangent point and second tangent point. Assume 2° curve.

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16. If the tangents to a circular curve having 500 m radius intersect at angle of 120° and the chainage of point intersection is 1520.5 m. Calculate
- Tangent distance
 - Degree of the curve
 - Length of long chord
 - Length of the curve
17. a) Explain briefly Raster and Vector data representation in GIS.
b) State any five applications of G.I.S. in transport planning.
18. a) What is the principle used in EDM instruments?
b) State any five advantages of Total station ?

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