No. of Printed Pages : **3 + Drawing Sheet**

BCE-031

00492

DIPLOMA IN CIVIL ENGINEERING DCLE(G)

Term-End Examination

December, 2012

BCE-031 : ADVANCED SURVEY

Time : 2 hours *Maximum Marks : 70*

Note : *Question No.1 is* ***compulsory****. Attempt* ***any four*** *questions from the remaining. All questions carry* ***equal*** *marks.*

1. Write short notes on **any seven** of the following : **7x2=14**

(a) Line of collimation

(b) Swinging of telescope

(c) Transiting

(d) Degree of curve

(e) Super elevation or cant

(f) Transition curve

(g) NAVSTAR

(h) E.D.M.

(i) Total station

(j) Closing error

2. (a) Explain temporary adjustments of theodolite. 6

(b) The field measurements of a closed traverse ABCDE are reproduced in the following table. Fill in the blanks. 8

Line	AB	BC	CD	DE	EA
Length (m)	278.60	376.40	318.40	212.60	?
Bearing WCB	117°-19′	57°-36′	312°-52′	271°-13′	?

3. (a) What are the method of designating a curve ? Derive relationship between the degree of curve and its radius. 6

(b) Explain the elements of a simple circular curve making neat sketch. 8

4. Two tangents having deflection angle of 60° are to be joined by a 375m radius curve. Calculate the necessary data if it is intended to set out a curve by offset from chord produced. Change of point of intersection is 1250 m and peg interval is 30m. 14

5. (a) Define the following terms : 1x4=4

(i) Latitude

(ii) Departure

(iii) Compound curve

(iv) Summit curve

(b) Explain the basic principles of traverse survey ? Explain type of traverse. 10

6. (a) Explain the basic principles of GPs. Also describe segments of GPs. 7

(b) Describe principle and working of electronic distance measuring equipment. 7

7. (a) What are constants of a Tacheometer ? How they are determined ? 7

(b) What are various method of Tacheometric surveying ? Explain any one method. 7