

# **MODEL QUESTION PAPER**

**DSC3**

## **III Semester DIPLOMA Examination, August 2011 SURVEYING**

Time: 3 Hours

Max. Marks: 75

### **GROUP A : Answer any three questions.**

- Q.1 Define GPS and various components of GPS?  
Q.2 What is meant by profile leveling and Fly leveling?  
Q.3 A tachometer was set up at station C and the following reading were obtained on a staff vertically held.

Inst. Station	Staff Station	Vertical angle	Hair reading(m)	Remark
C	BM	$-5^{\circ} 20'$	1.150, 1.800, 2.450	RL of BM = 750.500M
C	D	$+8^{\circ} 12'$	0.750, 1.500, 2.250	

Calculate the horizontal distance CD and RL of D when the constants of instrument are 100 and 0.15.

- Q.4 What is difference between theodolite and tachometer? Also enlist the constants of tachometry.  
Q.5 Describe how would you setup a theodolite at a given station and measure horizontal angle by repetition.

### **GROUP B : Answer any three questions.**

- Q.6 Define contour? Explain various characteristics of contour with the help of neat sketch.  
Q.7 What are face right and face left observations? Why should equal number of reading be taken for both the observation?  
Q.8 State the methods of ranging and explain any one in detail.  
Q.9 What is a simple curve? Describe with a neat sketch the notations used in radius of a simple curve for unit chord length of i) 20m and ii) 30m.  
Q.10 (i) Explain the mapping by GPS  
(ii) What are the types of MAP used in GPS?

### **GROUP C : All Questions are Compulsory.**

- Q.11 Fill in the blanks**

- (i) The lines connected by curves are tangential to it and are called as \_\_\_\_\_.
- (ii) \_\_\_\_\_ is a reference point of known elevation.
- (iii) \_\_\_\_\_ consists of a single arc connecting two straights.
- (iv) The total length of curve is equal to \_\_\_\_\_.
- (v) The process of turning the telescope through  $180^\circ$  in the vertical plane about its horizontal axis is called \_\_\_\_\_ & the process of turning the telescope in horizontal plane is called \_\_\_\_\_.

**Q.12 Multiple choice question.**

- (i) Method of \_\_\_\_\_ consists of measuring several angles successively and finally closing the horizon at the point of start
  - (a) Reiteration
  - (b) Repetition
  - (c) Deflection
  - (d) Vertical angles
- (ii) The bearing observed in the direction of progress of survey is called \_\_\_\_\_
  - (a) Back bearing
  - (b) Fore bearing
  - (c) Whole circle bearing
  - (d) Reduced bearing
- (iii) A \_\_\_\_\_ is an imaginary line on the ground joining the points of equal elevation.
  - (a) Curve
  - (b) Contour
  - (c) Simple curve
  - (d) Vertical cliff
- (iv) An axis about which the telescope can be rotated in horizontal plane is called \_\_\_\_\_.
  - (a) Horizontal axis
  - (b) Vertical axis
  - (c) Axis of the altitude bubble
  - (d) Axis of the telescope
- (v) When the whole circle bearing of a traverse is lies between  $90^\circ$  to  $180^\circ$ , then \_\_\_\_\_.
  - (a) The latitude is positive & departure is negative
  - (b) The departure is positive & latitude is negative
  - (c) Both latitude & departure are positive
  - (d) Both latitude & departure are negative

**Q.13 True or false**

- (i) The direction of the true meridian at a station is variable
- (ii) The line joining the two tangent points is known as the long chord.
- (iii) A simple curve consists of two arcs of different radii bending in the same direction and laying on the same side of their common tangent.
- (iv) Vernier theodolite cannot be used as a tachometer.
- (v) Level line is a line lying in a level surface.

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