MODEL QUESTION PAPER

BSC4

III Semester B.TECH Examination, August 2011
SURVEYING

Time: 3 Hours   Max. Marks: 75

GROUP A : Answer any three questions.

Q.1   What are the accessories required for a plane table surveying.

Q.2   Write a short notes on.
   (a) Refraction correction   (b) Combined correction
   (c) Dip of Horizon   (d) Visible Horizon distance.

Q.3   Several lines of levels are run over different routes different routes from BM. In order to set BM_2 and establish its elevations the lengths of these routes and the value of the elevations determined are shown below. Determine the most probably elevation of BM_2.

Route	Length	Measured elevation (miles) of BM_2 (ft)
a	1	291.16.
b	3	291.42
c	7	291.54
d	12	291.02

Q.4   In testing dumpy level, the reading on two pegs A & B 100m. Apart were 2.00 & 1.780m respectively & the instrument was midway between pegs A & B. The level is then shifted & setup at C in line AB 25 m from A. The point C is between A & b & the staff reading on A & B were 1.900m & 1.600m respectively. Calculate the correct reading on A & B when the instrument was at C in order to give horizontal line of sight.

Q.5   The consecutive coordinates of a line PQ are-647.3 and +457.2 with reference to the magnetic meridian. Calculate the coordinates of the same line with respect to the true meridian. The magnetic declination is given as $10^{o}08'$ east.

GROUP B : Answer any three questions.

Q.6   Define leveling? What are the different types of instruments used for leveling?

Q.7   Explain how would you take bearing of a line by a transit. Give reasons for this bearing being more accurate than that observed by a prismatic compass.

Q.8   Explain the methods of calculating Latitude & departure.

Q.9   Describe any two methods of locating the details in theololite traversing.

Q.10 Explain temporary and permanent adjustments of levels? Also explain elimination of parallax?

GROUP C : All Questions are Compulsory.

Q.11 Fill in the blanks

(i) The process of turning the telescope over its supporting axis through 180^0 in a vertical plane is called _____.

(ii) B.S is called_____ sight & F.S is called _____ sight.

(iii) _____ is the method of surveying in which field work and plotting work are done simultaneously.

(iv) _____is an arbitrary surface with reference to which the elevations of points are measured.

(v) The true bearing of line is called._____.

Q.12 Multiple choice question.

(i) The point which is to be set up at a given elevation is known as_____.
(a) Mean sea level   (b) R.L.
(c) Station   (d) B.S

(ii) The size of theodolite is defined according to.
(a) Diameter of gradated horizontal circle.
(b) Length of telescope.
(c) Height of telescope.
(d) All the above.

(iii) The vertical distance above or below the datum is called ___
(a) U.R.L   (b) R.L
(c) TBM   (d) R.P.M

(iv) The line joining the intersection of cross-hairs to the optical contre of the object glass and its continuation is
(a) Line of collimation   (b) Elimination of parallax
(c) height of instrument   (d) Datum line

(v) _____ attached in plane table for centering the plane table.
(a) Rod   (b) Allidade
(c) U-Fork   (d) Spirit level

Q.13 True or false

(i) Balancing of traverse is done according to Primoidial rule.

(ii) Mean sea level is an arbitrary surface with reference to which the elevations of points are measured.

(iii) Dumpy level is most widely used for measuring the vertical and horizontal angles.

(iv) Abbreviation of G.T.S is geological trignometical survey.

(v) The graduation on the leveling staff are marked to an accuracy of $\pm$ 1mm.

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