



Enrolment No. _____

HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL
MID SEMESTER EXAMINATION, SEPTEMBER-2016

Subject Code: 2130601
Subject Name: SURVEYING
Time: 10:00 TO 10:50

Date: 26-09-2016
Sem : 3RD CIVIL
Total Marks: 20

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

QUE.1 (A) Objective Type Questions: 3

1. The Principle of Plane Table is _____.
(a) Triangulation (b) Traversing, (c.) Parallelism
2. Fine adjustment in a theodolite is done by _____.
(a) Tangent Screw (b) Clamp Screw (c) Foot Screw
3. The combined correction for earth's curvature and refraction in linear measurement is given by _____.
(a) $0.0673D^2$ (b) $0.0785 D^2$ (c) $0.0112D^2$

(B) Define 3

1. Transiting
2. Line of Collimation
3. Swinging the telescope

QUE.2 (A) Derive the equation to find out the elevation of the object, if the Base of The Object is Inaccessible, the instrument stations and elevated object are in the same vertical plane and instrument axes are at the same level. 3

(B) 4

Enlist Various methods of Plane table surveying and explain any one method with neat sketch.

OR

(B) Draw sketch of Transit Vernier theodolite and mention component parts. 4

QUE.3 (A) Explain Temporary adjustment of theodolite and also write uses of theodolite. 3

(B) The following are the lengths and bearings of the lines of a traverse ABCD. Calculate consecutive coordinates of points of a traverse and also find out the closing error and its direction. 4

Line	Length (m)	Bearings
AB	235.10	$338^{\circ}20'$
BC	317.40	$82^{\circ}22'$
CD	215.00	167°
DA	281.60	$259^{\circ}40'$

OR

(A) What are the different sources of errors in plane table survey? How are they eliminated? 3

(B) An Instrument was setup at A and the angle of elevation of the top of an electrical pole BC was $31^{\circ}20'$. The horizontal distance between A and B, the foot of the pole was 378.80 m. Determine the RL of top of the pole C, if the staff reading held on BM (RL 180.0) was 3.145 m. with telescope in horizontal plane. 4

***** ALL THE BEST *****