Q.6 A Tacheometer with analytic laws having multiplying constant 100 was used to take reading on station A and then transitted to sight station B. Calculate distance AB and difference of level Between A and B.

Staff Point	Vertical Angle	Staff Reading
A	-6°	1.30,2.00,2.70
B	-12°	1.00,1.80,2.50

Q.7 Two straights are to be connected by using simple circular curve of 400m radius. The deflection Angle is 100°. Calculate:

(i) Tangent length

(ii) Length of curve

(iii) Apex distance

(iv) Mid ordinate

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4th Sem. / Civil/ BT/ CM/ HE

Subject : Serveying-II

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Contouring

b) Intrapolation of contouring.

c) Direct contouring.

d) Transiting a Theodolite.

e) Horizontal Axis of Theodolite.

f) Line of collimation.

g) Northing.

h) Tacheometry.

i) Degree of curve.

j) Latitude.

k) Tangent points of curve.

l) Transition curve.

m) Mid ordinate of curve.

n) Planimeter.

o) EDM.

p) Valley curve.

q) Ceylon Ghat Tracer.

r) Forward Tangent.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

Q.2 i) Explain Indirect method of contouring.

ii) What are the uses of contour lines?

iii) Explain about Abney Level.

iv) What is Planimeter? What are its uses?

v) What are the various lines in Theodolite?

vi) Explain Reiteration method for measuring horizontal Angle.

vii) How you will use a Theodolite for measuring vertical Angle?

viii) How theodolite can be used for prolonging a line?

ix) What is the difference between a Theodolite and a Tacheometer?

x) Explain the working of Tangent clinometer.

xi) What is Degree of curve? Derive its relationship with radius.

xii) What is Transition curve? Why is it needed before circular curve?

xiii) What is the classification of vertical curves?

xiv) How will you calculate super elevation for a circular curve?

xv) What is GIS?

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 How the contour maps can be used for Drawing x section and computing earth work.

Q.4 Explain the Angular Method for setting out circular curve.

Q.5 What are the elements of a Transition curve? Give relationships.