Vivekananda College of Engineering & Technology, Puttur
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08	Rev 1.11	Civil	25/8/22

CONTINUOUS INTERNAL EVALUATION - 3

Dept:Civil	Sem / Div: 4	Sub:Advanced Surveying	S Code:18CV45
Date:2/9/22	Time: 9:30-11:00	Max Marks: 40	Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

QN	Questions	Marks	RBT	CO's
	PART A			
1 a	Define degree of a curve. Establish the relationship between degree of curve and its radius.	6	L2	CO2
b	Two tangents AB and BC intersect at point B at chainage 150.50m. Calculate all the necessary data for setting out a circular curve of radius 100m and deflection angle of 30° by the method of offsets from the long chord.	9	L3	CO2
c	Two straight intersect at a chainage 1190m. The deflection angle is 36°. Calculate all the data necessary for setting out a circular curve with radius 300m by deflection distance method (Chord produced).	10	L2	CO2
	OR			
2 a	Explain the elements of simple curve with neat sketch.	6	L2	CO2
b	Calculate the necessary data for setting out the curve by Rankine's method. Two tangents intersect at chainage (59+60), the deflection angle being 50° 30'. Radius of the curve 15 chains, peg interval 100 links of chain being 20m(100 links). Theodolite least count is 20".	10	L2	CO2
c	Two straights BA and AC are intersected by a line EF.	9	L2	CO2

The angles BEF and EFC are 140^0 and 145^0 respectively. The radius of the first arc is 600m and that of second arc 400m. Find the chainage of the tangents points and the point of compound curvature given that the chainage of intersection point A is 3415m.

PART B

3	a	Derive an expression for relief displacement on a vertical photograph?	10	L2	CO3
	b	On an aerial photograph taken with a camera having a focal length of 150mm and 1800m long line, PQ had a length of 125mm. The average elevation of the line PQ was 290m. Find the scale of another area if the same photograph with an average elevation of 950m.	9	L3	CO3
	c	What are the advantages and Disadvantages of Aerial Photograph.	6	L2	CO3

OR

4	a	Write a note on overlap and mosaic in vertical photograph	10	L2	CO3
	b	Explain the procedure of Aerial Survey.	6	L2	CO3
	c	Two points P and Q have elevations of 600m and 300m respectively. The photographic coordinate of P and Q where measured as P(35,25) and Q920,15) in cm. The phograph was taken with a camera having a focal length of 210mm and an altitude of 2500m. Find the length of line PQ.	9	L2	CO3

Prepared by: Sunleh

HOD