BCV302

Model Question Paper-1/2 with effect from 2022-23 (CBCS 2022 Scheme)

USN | | | | | | | | | | |

Third Semester Civil Engineering B.E. Degree Examination

ENGINEERING SURVEY

TIME: 03 Hours **Max. Marks: 100**

NOTE: 1.Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

		Module -1	*Bloom's Taxonomy Level	COs	Marks
Q.01	a	Explain classification of surveying in detail	L2	CO1	8
	b	Explain principles of surveying in detail	L2	CO1	6
	c	Distinguish between plane and geodetic surveying	L1	CO1	6
		OR			
Q.02	a	What is surveying. Write the importance of surveying for civil engineers?	L1	CO1	4
	b	Explain the various types of tapes in detail.	L2	CO1	10
	c	Write a short note on. i)Electronic Distance Measurement ii)Global Positioning System	L1	CO1	6
		Module-2			
Q. 03	a	what are the advantages and disadvantages of plane table surveying	L1	CO2	4
	b	Explain differential leveling with a neat sketches	L2	CO2	6
	c	The following staff readings were observed successively with a level, the instrument having been moved after third, sixth, and eighth readings. Calculate the R.L of points by H.I method. If first reading was taken with a staff held on B.M=432.384m. The staff readingare,2.228,1.606,0.988,2.090,2.864,1.262,0.602,1.982,1.044,2.684.	L3	CO2	10
		OR			
Q.04	a	Define the following terms 1. Vertical axis 2. Plate Level 3.Transiting 4.Changing face 5.Collimation error 6.Swinging	LO1	CO2	6
	b	Explain the temporary and permanent adjustments of the theodolite	LO2	CO2	8
	c	List out the accessories and advantages of Total Station	LO1	CO2	6
		Module-3			
Q. 05	a	Explain characteristic of contours with neat sketches	LO2	CO3	10
	b	Explain the method of contouring by dumpy level, theodolite and total station	LO2	CO3	10
		OR			
Q. 06	a	Explain the Measurements of coordinates using total station.	LO2	CO3	6
	b	Explain in detail how do you creating job files, importance of back sight data, coordinate data recording in total station.	LO2	CO3	8
	c	Define Longitudinal and cross sectioning level and write a note on importance of Longitudinal and cross sectioning in surveying	LO1	CO3	6
		Module-4			
Q. 07	a	List out the elements of a simple curve with neat sketches	LO2	CO4	6

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<tr><td></td><td>b</td><td>Calculate the necessary data for setting out a simple curve of radius 600m to connect two straights intersecting at a chainage of 3605.00m by Rankin's method, using theodolite of one second accuracy. Consider the deflection angle 30° and peg interval 30m</td><td>LO3</td><td>CO4</td><td>8</td></tr>
<tr><td></td><td>c</td><td>Explain the Setting out of Horizontal curve by Theodolite (Rankine's method)</td><td>LO2</td><td>CO4</td><td>6</td></tr>
<tr><td colspan="3">OR</td><td></td><td></td><td></td></tr>
<tr><td>Q. 08</td><td>a</td><td>Explain the Various types of vertical curves and its applications</td><td>LO2</td><td>CO4</td><td>6</td></tr>
<tr><td></td><td>b</td><td>What is transition curve with aid of figure? list out necessities of transition curves</td><td>LO1</td><td>CO4</td><td>4</td></tr>
<tr><td></td><td>c</td><td>Arailway embankment 400m long is 12m wide at the formation level and has side slopes 2 to 1. The ground levels at every 100m long the centre are as under
<table>
<tr><td>Distance(m)</td><td>0</td><td>100</td><td>200</td><td>300</td><td>400</td></tr>
<tr><td>R.L(m)</td><td>204.8</td><td>206.2</td><td>207.5</td><td>207.2</td><td>208.3</td></tr>
</table>
The formation level at zero chainage is 207.00 and embankment has a rising gradient of 1in 100. The ground is level across centre line. Calculate the volume of earth work by
i)trapezoidal rule ii)prismoidal rule</td><td>LO3</td><td>CO4</td><td>10</td></tr>
<tr><td colspan="3">Module-5</td><td></td><td></td><td></td></tr>
<tr><td>Q. 09</td><td>a</td><td>What is remote sensing? List out the various application of remote sensing</td><td>LO1</td><td>CO5</td><td>6</td></tr>
<tr><td></td><td>b</td><td>Explain various types of drones and sensors used in surveying</td><td>LO2</td><td>CO5</td><td>8</td></tr>
<tr><td></td><td>c</td><td>Explain about GPS and Absolute , Differential positioning with GPS</td><td>LO2</td><td>CO5</td><td>6</td></tr>
<tr><td colspan="3">OR</td><td></td><td></td><td></td></tr>
<tr><td>Q. 10</td><td>a</td><td>Explain briefly the various Types of GPS Receivers</td><td>LO2</td><td>CO5</td><td>6</td></tr>
<tr><td></td><td>b</td><td>Explain the terms i)Spatial data ii)Raster iii)vector iv)Geocoding used in GIS</td><td>LO2</td><td>CO5</td><td>8</td></tr>
<tr><td></td><td>c</td><td>Mention the various Applications and advantages of drones in civil engineering works</td><td>LO1</td><td>CO5</td><td>6</td></tr>
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*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.