

CARE COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

ODD SEMESTER 2021-2022 TIME TABLE – UNITTEST- I (04.09.2021 TO 07.09.2021)

DATE	SESSION	IV YEAR		II YEAR	
04.09.2021	FN 10:00 AM TO 10.45 AM	CE8701	ESTIMATION, COSTING AND VALUATION ENGINEERING	CE839	ENGINEERING GEOLOGY
	AN 3:00 P.M TO 3.45 P.M	CE8702	RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	CE8301	STRENGTH OF MATERIALS -I
06.09.2021	FN 10:00 AM TO 10.45 AM	EN8591	MUNICIPAL SOLID WASTE MANAGEMENT	MA8353	TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS
	AN 3:00 P.M TO 3.45 P.M	CE8703	STRUCTURAL DESIGN AND DRAWING	CE8351	SURVEYING
07.09.2021	FN 10:00 AM TO 10.45 AM	OEN751	GREEN BUILDING DESIGN	CE8302	FLUID MECHANICS
	AN 3:00 P.M TO 3.45 P.M	****	*****	CE8391	CONSTRUCTION MATERIALS


EXAM CELL


Principal

CARE COLLEGE OF ENGINEERING

II YEAR - ODD SEMESTER (2021-2022) TIME TABLE – CYCLE TEST- I (23.09.2021 TO 25.09.2021)

DATE	SESSION	CIVIL	CSE	ECE	MECH	AI & DS
23.09.2021	FN 10.00 AM TO 11.30 AM	CE8392 - ENGINEERING GEOLOGY	MA8351 - DISCRETE MATHEMATICS	EC8392 - DIGITAL ELECTRONICS	CE8394 - FLUID MECHANICS AND MACHINERY	MA8351 - DISCRETE MATHEMATICS
	AN 2.30 P.M TO 4.00 P.M	CE8301 - STRENGTH OF MATERIALS -I	EC8395 - COMMUNICATION ENGINEERING	EC8391 - CONTROL SYSTEMS ENGINEERING	ME8351 - MANUFACTURING TECHNOLOGY - I	AD8301 - INTRODUCTION TO OPERATING SYSTEMS
24.09.2021	FN 10.00 AM TO 11.30 AM	MA8353 - TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS	CS8351 - DIGITAL PRINCIPLES AND SYSTEM DESIGN	MA8352 - LINEAR ALGEBRA AND PARTIAL DIFFERENTIAL EQUATIONS	MA8353 - TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS	AD8302 - FUNDAMENTALS OF DATA SCIENCE
	AN 2.30 P.M TO 4.00 P.M	CE8351 - SURVEYING	CS8391 - DATA STRUCTURES	EC8351 - ELECTRONIC CIRCUITS- I	EE8353 - ELECTRICAL DRIVES AND CONTROLS	AD8351 - DESIGN AND ANALYSIS OF ALGORITHMS
25.09.2021	FN 10.00 AM TO 11.30 AM	CE8302 - FLUID MECHANICS	CS8392 - OBJECT ORIENTED PROGRAMMING	EC8352 - SIGNALS AND SYSTEMS	ME8391 - ENGINEERING THERMODYNAMICS	CS8392 - OBJECT ORIENTED PROGRAMMING
	AN 2.30 P.M TO 4.00 P.M	CE8391 - CONSTRUCTION MATERIALS	----	EC8393 - FUNDAMENTALS OF DATA STRUCTURES IN C	----	----


 EXAM CELL


 Principal

CARE COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

ODD SEMESTER 2021-2022 TIME TABLE – UNITTEST- II (12.10.2021 TO 16.10.2021)

DATE	SESSION	IV YEAR		II YEAR	
12.10.2021	FN 10:00 AM TO 10.45 AM	CE8701	ESTIMATION, COSTING AND VALUATION ENGINEERING	CE8392	ENGINEERING GEOLOGY
	AN 3:00 P.M TO 3.45 P.M	CE8702	RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	CE8301	STRENGTH OF MATERIALS -I
13.10.2021	FN 10:00 AM TO 10.45 AM	EN8591	MUNICIPAL SOLID WASTE MANAGEMENT	MA8353	TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS
	AN 3:00 P.M TO 3.45 P.M	CE8703	STRUCTURAL DESIGN AND DRAWING	CE8351	SURVEYING
16.10.2021	FN 10:00 AM TO 10.45 AM	OEN751	GREEN BUILDING DESIGN	CE8302	FLUID MECHANICS
	AN 3:00 P.M TO 3.45 P.M	****	*****	CE8391	CONSTRUCTION MATERIALS


EXAM CELL


Principal

CARE COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

ODD SEMESTER 2021-2022 TIME TABLE – CYCLE TEST- II (08.11.2021 TO 10.11.2021)

DATE	SESSION	IV YEAR		II YEAR	
08.11.2021	FN 10:00 A.M TO 11.30 A.M	CE8701	ESTIMATION, COSTING AND VALUATION ENGINEERING	CE8392	ENGINEERING GEOLOGY
	AN 02:15 P.M TO 3.45 P.M	CE8702	RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	CE8301	STRENGTH OF MATERIALS -I
09.11.2021	FN 10:00 A.M TO 11.30 A.M	EN8591	MUNICIPAL SOLID WASTE MANAGEMENT	MA8353	TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS
	AN 02:15 P.M TO 3.45 P.M	CE8703	STRUCTURAL DESIGN AND DRAWING	CE8351	SURVEYING
10.11.2021	FN 10:00 A.M TO 11.30 A.M	OEN751	GREEN BUILDING DESIGN	CE8302	FLUID MECHANICS
	AN 02:15 P.M TO 3.45 P.M	****	*****	CE8391	CONSTRUCTION MATERIALS


EXAM CELL


Principal

CARE COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

ODD SEMESTER 2021-2022 TIME TABLE – MODEL EXAMINATION (22.11.2021 TO 27.11.2021)

DATE	SESSION	IV YEAR		II YEAR	
22.11.2021 (MON)	AN 01:00 P.M TO 04.00 P.M	CE8701	ESTIMATION, COSTING AND VALUATION ENGINEERING	CE8392	ENGINEERING GEOLOGY
23.11.2021 (TUE)	AN 01:00 P.M TO 04.00 P.M	CE8702	RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	CE8301	STRENGTH OF MATERIALS -I
24.11.2021 (WED)	AN 01:00 P.M TO 04.00 P.M	EN8591	MUNICIPAL SOLID WASTE MANAGEMENT	MA8353	TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS
25.11.2021 (THU)	AN 01:00 P.M TO 04.00 P.M	CE8703	STRUCTURAL DESIGN AND DRAWING	CE8351	SURVEYING
26.11.2021 (FRI)	AN 01:00 P.M TO 04.00 P.M	OEN751	GREEN BUILDING DESIGN	CE8302	FLUID MECHANICS
27.11.2021 (SAT)	AN 01:00 P.M TO 04.00 P.M	****	*****	CE8391	CONSTRUCTION MATERIALS


EXAM CELL


Principal

Roll Number							
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CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	: II B.E CIVIL	MAX MARKS	: 40
SEMESTER:	: III	DURATION	: 01.30 Hrs
SUBJECT:	: SURVEYING	CODE	: CE 8351
COURSE NO	: C351	DATE	:
ACADEMIC YEAR	: 2021 – 22 (ODD)	EXAM	: Unit Test I

PART – A (6 X 2 = 12 Marks)					
I	ANSWER ALL QUESTIONS			BT level	CO
	1.	Define surveying.		K1	C351.1
	2.	Discuss the term bearings and its types.		K1	C351.1
	3.	List out the types of levelling instruments.		K1	C351.1
	4.	Define Benchmark and give its types.		K1	C351.1
	5.	Evaluate is reduction in leveling? Name the methods.		K1	C351.1
	6.	Discuss the applications of Surveying.		K2	C351.1

PART – B (1 X 13 = 13 Marks)						
II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
	07.	(a)	(i) What are the basic principles of surveying? Describe it. (ii) Discuss about the different sources of error in chain surveying.	13	K3	C351.1

(OR)

		(b)	Show which stations are affected by local attraction. Workout the correct bearing of closed traverse ABCDEA. Fore Bearing Back Bearing Line AB 190° 30' 17°0' BC 73°30' 250° 30' CD 36° 15' 214° 30' DE 266° 45' 84° 45' EA 234°15'57°0'	13	K3	C351.1
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III	ANSWER ALL QUESTIONS			Marks	BT Level	CO
PART – C (10 X 1 = 10 Marks)						
	8 to 22	Multiple Choice Questions https://forms.gle/xP9oa3M2M7GqRNDw7		15		

CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	50
SEMESTER:	:	III	DURATION	:	01.30 Hrs
SUBJECT:	:	SURVEYING	CODE	:	CE8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 - 22 (EVEN)	EXAM	:	Cycle Test I

PART - A (7 X 2 = 14 Marks)

I	ANSWER ALL QUESTIONS			BT level	CO
1.	What is a Dumpy Level?			K1	C351.1
2.	Define gauge			K1	C351.1
3.	Define Bench mark.			K2	C351.1
4.	What are the advantages of Tacheometric surveying over other methods?			K2	C351.2
5.	Define Stadia Diaphragm.			K1	C351.2
6.	What is a Tangential Tacheometer?			K2	C351.2
7.	Define Contouring.			K2	C351.2

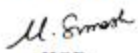
PART - B (2 X 13 = 26 Marks)

II	ANSWER ALL QUESTIONS			Marks	BT Level	CO									
8	(a)	Explain the function of Surveyor's Compass and Prismatic Compass.		13	K3	C351.1									
(OR)															
8	(b)	Define Levelling and Explain the procedure of Levelling.		13	K3	C351.1									
9	a)	What is Contour Gradient? How will you locate it on the ground and on the map?		13	K3	C351.2									
(OR)															
9	b)	<p>A tacheometer is used to obtain the difference of levels between two points A and B. The instrument is set up at another station C, and the following observations were taken:</p> <table border="0" style="width: 100%;"> <tr> <td>Staff at</td> <td>Vertical Angle</td> <td>Stadia Readings</td> </tr> <tr> <td>A</td> <td>-60°3'</td> <td>3.500, 2.815, 2.130</td> </tr> <tr> <td>B</td> <td>-8°30'</td> <td>1.870, 0.990, 0.110</td> </tr> </table> <p>If the R.L. of A is 100.000, determine the R.L. of B. Also determine the horizontal distance of A from C. Take $k=50$ and $C=0.50$</p>		Staff at	Vertical Angle	Stadia Readings	A	-60°3'	3.500, 2.815, 2.130	B	-8°30'	1.870, 0.990, 0.110	13	K3	C351.2
Staff at	Vertical Angle	Stadia Readings													
A	-60°3'	3.500, 2.815, 2.130													
B	-8°30'	1.870, 0.990, 0.110													

III	ANSWER ALL QUESTIONS		Marks	BT Level	CO
PART – C (10 X 1 = 10 Marks)					
1 to 10	Multiple Choice Questions Link https://forms.gle/MajMur2urXMuefop7	10			

Blooms Levels: K1 - Remember, K2 – Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 – Create


Faculty In-charge


HOD


Principal

CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	40
SEMESTER:	:	III	DURATION	:	01.30 Hrs
SUBJECT:	:	SURVEYING	CODE	:	CE 8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 - 22 (ODD)	EXAM	:	Unit Test II

PART - A (6 X 2 = 12 Marks)

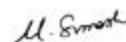
I	ANSWER ALL QUESTIONS			BT level	CO
1.	What is Temporary Bench mark?			K1	C351.1
2.	Define Horizontal and Vertical Control.			K1	C351.1
3.	What are the Types of Bench Mark?			K1	C351.1
4.	Define Reduction to Centre:			K1	C351.1
5.	Define Laplace Station			K1	C351.1
6.	Define Extension of baseline:			K2	C351.1

PART - B (2 X 13 = 13 Marks)

II	ANSWER ALL QUESTIONS			Marks	BT Level	CO												
07.	(a)	Explain in detail the procedure of Control Surveying.		13	K3	C351.1												
(OR)																		
	(b)	Find the most probable values of angles A,B @ C from the following observations at station P:		13	K3	C351.1												
		<table border="1"> <thead> <tr> <th>Angles</th> <th>Weights</th> </tr> </thead> <tbody> <tr> <td>A = 38°25'20"</td> <td>1</td> </tr> <tr> <td>B = 32°36'12"</td> <td>1</td> </tr> <tr> <td>A+B = 71°01'29"</td> <td>2</td> </tr> <tr> <td>A+B+C = 119°10'43"</td> <td>1</td> </tr> <tr> <td>B+C = 80°45'28"</td> <td>2</td> </tr> </tbody> </table>	Angles	Weights	A = 38°25'20"	1	B = 32°36'12"	1	A+B = 71°01'29"	2	A+B+C = 119°10'43"	1	B+C = 80°45'28"	2				
Angles	Weights																	
A = 38°25'20"	1																	
B = 32°36'12"	1																	
A+B = 71°01'29"	2																	
A+B+C = 119°10'43"	1																	
B+C = 80°45'28"	2																	
III	ANSWER ALL QUESTIONS			Marks	BT Level	CO												
PART - C (10 X 1 = 10 Marks)																		
8 to 22		Multiple Choice Questions		15														
		https://forms.gle/xP9oa3M2M7GqRNDw7																

Blooms Levels: K1 - Remember, K2 - Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 - Create


Faculty In-charge


HOD


Principal

CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	50
SEMESTER:	:	III	DURATION	:	01.30 Hrs
SUBJECT:	:	SURVEYING	CODE	:	CE8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 - 22 (EVEN)	EXAM	:	Cycle Test II

PART - A (7 X 2 = 14 Marks)

I	ANSWER ALL QUESTIONS			BT level	CO
1.	Name the equipment used for base line measurement.			K1	C351.3
2.	Define most probable value			K1	C351.3
3.	What is Hydrographic Survey?			K2	C351.4
4.	What is Mean Sea level?			K1	C351.4
5.	Describe the term Azimuth.			K2	C351.4

PART - B (2 X 13 = 26 Marks)

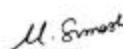
II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
6	(a)	Write down the various laws of weight. Explain it.		13	K3	C351.3
(OR)						
6	(b)	(i)How the triangulation systems are classified? (ii)Calculate sag correction for 30 m steel under a pull of 100 N in three equal spans of 10 m each. Weight of one cubic cm of steel =0.078N. Area of cross-section of tape =0.08 sq.cm		13	K3	C351.3
7	a)	What is a three-point problem in hydrographic surveying? List the various solutions for the problem? Explain in detail.		13	K3	C351.4
(OR)						
7	b)	Estimate the hour angle and declination of a star from the following data.		13	K3	C351.4
		Altitude of the star	21° 30'			
		Azimuth of the star	140° E			
		Latitude of the observer	48° N.			
III	ANSWER ALL QUESTIONS			Marks	BT Level	CO

PART – C (1 X 14 = 14 Marks)

8	a.	Enumerate the various investigations involved in hydrographic Surveying	14	K3	C351.4
(OR)					
8	b	Briefly explain the applications of remote sensing.	14	K3	C351.4

Blooms Levels: K1 - Remember, K2 – Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 – Create


Faculty In-charge


HOD


Principal

Reg Number																			
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CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	100
SEMESTER:	:	III	DURATION	:	3 Hours
SUBJECT:	:	SURVEYING	CODE	:	CE8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 – 22 (EVEN)	EXAM	:	Model

PART – A (10 X 2 = 20 Marks)

I	ANSWER ALL QUESTIONS			BT level	CO
1.	Define surveying.			K1	C351.1
2.	Discuss ranging. Mention its types.			K1	C351.1
3.	Define transit.			K2	C351.2
4.	Compare theodolite and tacheometer.			K1	C351.2
5.	State the principle of least square.			K2	C351.3
6.	Distinguish the sag correction and temperature correction			K1	C351.3
7.	Define Sounding.			K2	C351.4
8.	Conclude about lunar and solar tides.				C351.4
9.	Define GPS				C351.5
10.	Distinguish between Space and User segment?				C351.5

PART – B (5 X 13 = 65 Marks)

II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
11.	(a)		The following staff readings were observed successively with a level, the instrument having been moved after third, sixth and eighth readings 2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters. Enter the above readings in a page of a level book and evaluate the R.L. of points if the first reading was taken with a staff held on a bench mark of 432.384 m.	13	K3	C351.1
(OR)						
11.	(b)		Find out the station affected by the local attraction and work out the corrected bearing of the lines the following are the observed bearing of the lines of a traverse ABCDEA with a compass in a place where local attraction was suspected. Line AB BC CD DE EA	13	K3	C351.1

			FB 191°45' 22°15' 22°15' 242°45' 330°15' BB 39°30' 222°30' 200°30' 62°45' 150°45'																		
12.	a)		<table border="1"> <thead> <tr> <th>Instrumentation Station</th> <th>Reading in BM</th> <th>Angle of elevation</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.862</td> <td>18° 36'</td> <td>RL of BM=421.380m</td> </tr> <tr> <td>B</td> <td>1.222</td> <td>10° 12'</td> <td>Distance B=50m</td> </tr> </tbody> </table> <p>(i) Collect the elevation of the top of a chimney from the following data. Stations A and B and top of chimney are in the same vertical plane. ii) Describe the temporary adjustments of theodolite.</p>	Instrumentation Station	Reading in BM	Angle of elevation	Remarks	A	0.862	18° 36'	RL of BM=421.380m	B	1.222	10° 12'	Distance B=50m	13	K3	C351.2			
Instrumentation Station	Reading in BM	Angle of elevation	Remarks																		
A	0.862	18° 36'	RL of BM=421.380m																		
B	1.222	10° 12'	Distance B=50m																		
(OR)																					
12.	b)		Explain the different between tangential and stadia tachometry. How will you determine the stadia constants?	13	K3	C351.2															
13.	a)		<p>Examine the most probable values of the angles A, B, C from the following observations at a station P.</p> <table border="1"> <tbody> <tr> <td>A = 38° 25' 20"</td> <td>Weight 1</td> </tr> <tr> <td>B = 32° 36' 12"</td> <td>Weight 1</td> </tr> <tr> <td>A+B = 71° 01' 29"</td> <td>Weight 2</td> </tr> <tr> <td>A+B+C = 119° 10' 43"</td> <td>Weight 1</td> </tr> <tr> <td>B+C = 80° 45' 28"</td> <td>Weight 2</td> </tr> </tbody> </table>	A = 38° 25' 20"	Weight 1	B = 32° 36' 12"	Weight 1	A+B = 71° 01' 29"	Weight 2	A+B+C = 119° 10' 43"	Weight 1	B+C = 80° 45' 28"	Weight 2	13	K3	C351.3					
A = 38° 25' 20"	Weight 1																				
B = 32° 36' 12"	Weight 1																				
A+B = 71° 01' 29"	Weight 2																				
A+B+C = 119° 10' 43"	Weight 1																				
B+C = 80° 45' 28"	Weight 2																				
(OR)																					
13.	b)		<p>After measuring the length of a base line, the correct length of the line is computed by applying various applicable corrections. Discuss the following corrections and provide expressions for</p> <ol style="list-style-type: none"> Correction for temperature. Correction for pull. Correction for sag Correction for absolute length Correction for slope 	13	K3	C351.3															
14.	a)		<p>Estimate the hour angle and declination of a star from the following data</p> <table border="1"> <tbody> <tr> <td>Altitude of the star</td> <td>21°30'</td> </tr> <tr> <td>Azimuth of the star</td> <td>140°E</td> </tr> <tr> <td>Latitude of the observer</td> <td>48°N</td> </tr> </tbody> </table>	Altitude of the star	21°30'	Azimuth of the star	140°E	Latitude of the observer	48°N	13	K3	C351.4									
Altitude of the star	21°30'																				
Azimuth of the star	140°E																				
Latitude of the observer	48°N																				
(OR)																					
14.	b)		<p>The lengths and bearings of lines of closed traverse ABCDE is given below. Examine the length and bearing of line EA.</p> <table border="1"> <thead> <tr> <th>Line</th> <th>Length, m</th> <th>Bearing</th> </tr> </thead> <tbody> <tr> <td>AB</td> <td>194.1</td> <td>85° 30'</td> </tr> <tr> <td>BC</td> <td>201.2</td> <td>15° 00'</td> </tr> <tr> <td>CD</td> <td>165.4</td> <td>285° 30'</td> </tr> <tr> <td>DE</td> <td>172.6</td> <td>195° 30'</td> </tr> </tbody> </table>	Line	Length, m	Bearing	AB	194.1	85° 30'	BC	201.2	15° 00'	CD	165.4	285° 30'	DE	172.6	195° 30'	13	K3	C351.4
Line	Length, m	Bearing																			
AB	194.1	85° 30'																			
BC	201.2	15° 00'																			
CD	165.4	285° 30'																			
DE	172.6	195° 30'																			

15.	a)		List out the various measurements of GPS. Explain them.	13	K2	C351.5																	
(OR)																							
15.	b)		The following bearing were observed with a compass. Workout the local attraction? Find the correct bearing.	13	K3	C351.5																	
			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Line</th> <th style="width: 30%;">Fore Bearing</th> <th style="width: 30%;">Back Bearing</th> </tr> </thead> <tbody> <tr> <td>AB</td> <td>74° 0'</td> <td>254°0'</td> </tr> <tr> <td>BC</td> <td>91°0'</td> <td>271° 0'</td> </tr> <tr> <td>CD</td> <td>166° 0'</td> <td>343° 0'</td> </tr> <tr> <td>DE</td> <td>177° 0'</td> <td>0° 0'</td> </tr> </tbody> </table>	Line	Fore Bearing	Back Bearing	AB	74° 0'	254°0'	BC	91°0'	271° 0'	CD	166° 0'	343° 0'	DE	177° 0'	0° 0'					
Line	Fore Bearing	Back Bearing																					
AB	74° 0'	254°0'																					
BC	91°0'	271° 0'																					
CD	166° 0'	343° 0'																					
DE	177° 0'	0° 0'																					
III ANSWER ALL QUESTIONS																							
				Marks	BT Level	CO																	
PART – C (1 X 15 = 15 Marks)																							
16.	a.		In order to ascertain the elevation of the top Q of the signal on a hill, observations were made from two instrument stations P and R at horizontal distance 100 meters apart, the stations P and R being in line with Q. The angles of elevation of Q at P and R were 28°42' and 18°06' respectively. The staff readings upon the benchmark of elevation 287.280 were 2.870 m and 3.750 m respectively when the instrument was at P and at R, the telescope being horizontal. Determine the elevation of the foot of the signal, if the height of the signal above its base is 3 meters.	15	K3	C351.1																	
(OR)																							
16.	b		Explain in detail the procedure of Control Surveying.	15	K3	C351.4																	

Blooms Levels: K1 - Remember, K2 – Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 – Create


Faculty In-charge


HOD


Principal

I

Part - A.

1. Surveying

The practice of measuring angles and distances on the ground so that they can be accurately called on a map.

2. The term bearing and its types:

Bearings are mechanical assemblies that consist of rolling elements and usually inner and outer races which are used for rotating or linear shaft applications, and there are several different types of bearings, including ball and roller bearings, linear bearing, as well as versions that may use either rolling.

3. types of levelling instruments:

- * Dumpy level. Dumpy level is the most commonly used instrument in levelling.
- * Y level: Y level or wye-level consists of Y-shaped frame which supports the telescope.

PART-A

1. Surveying

1. Surveying :-

The practice of measuring angles and distances on the ground so that can be accurately placed on map.

2. Bearing :-

Bearings are mechanical assemblies that consist of rolling elements and usually inner and outer races which are used for rotating or linear shaft applications.

Bearing types :-

* ball bearing

* roller bearing

UNIT TEST - 3

II - Year
06.09.2021

PART - A

1) Surveying:

Surveying based on instrument used. The practice of measuring areas and distances on the ground so that they can be accurately based on the map.

2) Bearings and its types:

Bearings are mechanical assemblies that consist of rolling elements and usually inner and outer races which are used for rotating or linear shaft applications, and there are several different types of bearings, including ball and roller bearings, linear bearings, as well as mounted versions that may use either rolling.

3) Types of Levelling Instruments:

* Dumpy Level: Dumpy level is the most commonly used instrument in leveling.

* Y level: Y level or Wye-level consists of y-shaped frame which supports the telescope.

* Cushing's level.

* Tilting level.

* Cooke's Reversible Level.

* Automatic level.

CODE: CE8351, Cycle Test. 1

IPART - "A"

1. Dumpy level.

A dumpy level (also known as a Builder's level) is an optical instrument used to establish or check points in the same horizontal plane. The level head comprises an eyepiece, bullseye spirit level, three leveling screws and a focus for the telescope lens. The base also incorporates a 360 degree compass.

2

SURVEYING

Part - A.

I.

1) Dumpy Level:

The dumpy level consists of a telescope, generally of the internal focusing type, fixed on a vertical spindle. The telescope tube and vertical spindle are cast as one piece. The spindle revolves in the socket of the leveling head. The leveling head consists of two parallel plates held apart by three leveling screws.

2) Gauge:

An instrument that measures and gives a visual display of the amount, level or contents of something.

The thickness, size, or capacity of something especially as a standard measure.

3) Bench mark:

Bench marking involves gathering and comparing quantitative data. performance benchmark is usually the first step organization take to identify performance gaps.

Ex: measures or key performance indicators.

Department of civil Engineering

Name: V. Kaviya

Surveying

Reg NO: 810720103006

Cycle Test -I

Sub code: CE8351

Date: 24.09.2021

Part -A

1. Dumpy Level:

A dumpy level is an optical instrument used to establish or check points in the same horizontal plane.

This is also known as a Builder's level.

2. Gauge:

A device used to measure the distance between two opposing sides of an object.

It is used as a reference for the setting of measuring equipment used in machine shops. such as micrometers, Calipers etc.,

NAME: MO HAMED ISA MASEETH
Part-A

Page: 8/07/2023

1) Temporary benchmark

These are established temporarily whenever required. These are generally chosen close to the day work and to start the next day points on the roots, walls, basements etc

2) Types of benchmark

* Great trigonometric Survey bench
-mark

* Permanent bench mark

* Arbitrary bench/marks

* Temporary bench mark

3) Reduction to centre

if the true station were occupied by computing the corrections and apply them algebraically to the observed values is generally known as reduction of centre

4) Laplace station

At certain station, astronomical observations for azimuths and longitude are also made on the station is called as Laplace station.

PART - B.

① TEMPORARY BENCH MARK

A temporary Bench mark (TBM) fixed point with a known elevation used for level control during construction works and surveys. 2 In levels, or marks on channel are commonly used as temporary bench mark.

② HORIZONTAL CONTROL

The horizontal control consists of a mark of site plan position, from which 2 setting points or design structure may be set out, for lines structure. The primary control points are station, the secondary control points are 2 to primary control station.

③

The vertical control consists of establish or 2 easurance of known height relative to some special. If it levels 2 at the side due to the road by, usually master to bench marks.

Regno: 810720103305 Name: K. Mohammed Ayyas

Subject Code: CE335

Temporary

PART-A

1. Bench Mark.

2 These are established temporarily when as required. These are generally chosen to close the days work and to start the next days points on roots walls, basements etc

2. Horizontal and vertical control:

* Horizontal and vertical control are developed to create a frame work around which other surveys can be adjusted:

2 * These control surveys are used for accurate mapping projects in the construction of underground utility system, roadways, power lines, tunnels, many other high precision projects

3. Types of Bench mark

* Great trigonometric survey benchmark

* Permanent Bench mark

* Arbitrary Bench mark

* Temporary Bench mark

4

Reduction to centre:

2 If the true station were occupied by computing the corrections and apply them algebraically to the observed value is generally known as reduction to centre

Date: 13/10/21

Page no: 1

Studentsign:
K. Md. AYYAS

MODEL EXAMINATION

Reg. No :

8 1 0 7 2 0 1 0 3 0 1 1

College Code Name	CARE COLLEGE OF ENGINEERING		
Student Name	S. SUBRAMANIAM	Semester	III
Degree / Branch	B.E / CIVIL	Date & Session	11/
Subject Code	CE8351	No. of Pages used	25/1/2021
Subject Title	SOIL MECHANICS		

S. Subramaniam
Chief Superintendent's Signature/ Facsimile

All Particulars given are verified
[Signature]
M. Vigneshwara
Name of the Hall Superintendent

Do not write the Register Number, Roll Number, College Code and the Name in any other part of the Answer Book
Instruction to the Candidate. Put (✓) for the questions attended in the tick mark column against each question

Q	✓	C	B	Marks	I				II				III				Total Marks	Grand Total					
					Q	✓	C	B	T	Marks	✓	C	B	T	Marks	✓		C	B	T	Marks	CO 1	CO 2
1	✓	1	1	0	11	a												0	-	-	5	6	
2	✓	1	1	0		b													CO 6	CO 7	CO 8	CO 9	CO 10
3					12	a													-	-	-	-	
4						b	✓	2	3	0													
5					13	a																	
6						b																	
7					14	a	✓	4	3	5													
8						b																	
9	✓	5	1	0	15	a	✓	5	5	6													
10	✓	5	1	0		b																	
					16	a	✓	1	3	0													
						b																	
Total				0	11												11		<div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 11 100 </div>				

Declaration by the Examiner: Verified that all the questions attended by the student are valued and the total is found to be correct

1/12/21. Date of Valuation	K. Vetri Name of the Examiner	K. Vetri Signature of the Examiner
-------------------------------	----------------------------------	---------------------------------------

Statement of student stating all Comments/ Corrections noted	<div style="border: 1px solid black; border-radius: 50%; width: 50px; height: 50px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> X </div> Signature of the Candidate
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Reg Number																			
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CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	100
SEMESTER:	:	III	DURATION	:	3 Hours
SUBJECT:	:	SURVEYING	CODE	:	CE8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 – 22 (EVEN)	EXAM	:	Makeup test -I

PART – A (10 X 2 = 20 Marks)					
I	ANSWER ALL QUESTIONS			BT level	CO
1.	Define surveying.			K1	C351.1
2.	Discuss ranging. Mention its types.			K1	C351.1
3.	Calculate the reduced bearing values for the whole circle bearings 150° and 270°.			K2	C351.2
4.	Compare theodolite and tacheometer.			K1	C351.2
5.	State the principle of least square.			K2	C351.3
6.	Distinguish the sag correction and temperature correction			K1	C351.3
7.	Define Sounding.			K2	C351.4
8.	Conclude about lunar and solar tides.				C351.4
9.	Define GPS				C351.5
10.	Distinguish between Space and User segment?				C351.5

PART – B (5 X 13 = 65 Marks)						
II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
11.	(a)	The following staff readings were observed successively with a level, the instrument having been moved after third, sixth and eighth readings 2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters. Enter the above readings in a page of a level book and evaluate the R.L. of points if the first reading was taken with a staff held on a bench mark of 432.384 m.		13	K3	C351.1
(OR)						

11.	(b)	The following consecutive readings were taken with a levelling instrument at intervals of 20 m. The readings are 2.375, 1.730, 0.615, 3.450, 2.885, 2.070, 1.835, 0.985, 0.435, 1.630 2.255, and 3.630 m. The instrument was shifted after fourth and eighth readings. The last reading was taken on a BM of RL 110.200 m. Find the RL of all the points,	13	K3	C351.1															
12.	a)	<p>The following bearing were observed with a compass. Workout the local attraction? Find the correct bearing.</p> <table border="1"> <thead> <tr> <th>Line</th> <th>Fore Bearing</th> <th>Back Bearing</th> </tr> </thead> <tbody> <tr> <td>AB</td> <td>74° 0'</td> <td>254° 0'</td> </tr> <tr> <td>BC</td> <td>91° 0'</td> <td>271° 0'</td> </tr> <tr> <td>CD</td> <td>166° 0'</td> <td>343° 0'</td> </tr> <tr> <td>DE</td> <td>177° 0'</td> <td>0° 0'</td> </tr> </tbody> </table>	Line	Fore Bearing	Back Bearing	AB	74° 0'	254° 0'	BC	91° 0'	271° 0'	CD	166° 0'	343° 0'	DE	177° 0'	0° 0'	13	K3	C351.1
Line	Fore Bearing	Back Bearing																		
AB	74° 0'	254° 0'																		
BC	91° 0'	271° 0'																		
CD	166° 0'	343° 0'																		
DE	177° 0'	0° 0'																		

(OR)

12.	b)	<p>On a closed compass traverse surveyPQRST, following are the observation made with a suspicion of local attraction.</p> <table border="1"> <thead> <tr> <th>Line</th> <th>Fore Bearing</th> <th>Back Bearing</th> </tr> </thead> <tbody> <tr> <td>PQ</td> <td>147° 3'</td> <td>26° 45'</td> </tr> <tr> <td>QR</td> <td>74° 30'</td> <td>253° 00'</td> </tr> <tr> <td>RS</td> <td>41° 30'</td> <td>222° 45'</td> </tr> <tr> <td>ST</td> <td>312° 15'</td> <td>132° 45'</td> </tr> <tr> <td>TP</td> <td>219° 15'</td> <td>39° 15'</td> </tr> </tbody> </table> <p>Identify the station affected with local attraction, included angles and the corrected bearings</p>	Line	Fore Bearing	Back Bearing	PQ	147° 3'	26° 45'	QR	74° 30'	253° 00'	RS	41° 30'	222° 45'	ST	312° 15'	132° 45'	TP	219° 15'	39° 15'	13	K3	C351.1
Line	Fore Bearing	Back Bearing																					
PQ	147° 3'	26° 45'																					
QR	74° 30'	253° 00'																					
RS	41° 30'	222° 45'																					
ST	312° 15'	132° 45'																					
TP	219° 15'	39° 15'																					

13.	a)	The top (Q) of a chimney was sighted from two stations P and R at very different levels, the stations P and R being in line with the top of the chimney. The angle of elevation from P to the top of the chimney was 38° 21' and that from R to the top of the chimney was 21° 18'. The angle of the elevation from R to a vane 2m above the foot of the staff held at P was 15 11 The heights of instrument at P and R were 1.87m and 1.64m respectively. The horizontal distance between P and R was 127 m and the reduced level of R. wan 112.78 m. Find the RL of the top of the chimney and the horizontal distance from P to the chimney	13	K3	C351.2
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(OR)

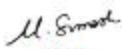
13.	b)	<table border="1"> <thead> <tr> <th>Instrument Station</th> <th>Reading in BM</th> <th>Angle of Elevation</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.862</td> <td>18° 36'</td> <td>RL of BM=421.380m</td> </tr> <tr> <td>B</td> <td>1.222</td> <td>10° 12'</td> <td>Distance B=50m</td> </tr> </tbody> </table>	Instrument Station	Reading in BM	Angle of Elevation	Remarks	A	0.862	18° 36'	RL of BM=421.380m	B	1.222	10° 12'	Distance B=50m		K3	C351.2
Instrument Station	Reading in BM	Angle of Elevation	Remarks														
A	0.862	18° 36'	RL of BM=421.380m														
B	1.222	10° 12'	Distance B=50m														

			Collect the elevation of the top of a chimney from the following data. Stations A and B and top of chimney are in the same vertical plane.													
14.	a)		Examine the most probable values of the angles A, B, C from the following observations at a station P. <table border="1"> <tbody> <tr> <td>A = 38° 25' 20"</td> <td>Weight 1</td> </tr> <tr> <td>B = 32° 36' 12"</td> <td>Weight 1</td> </tr> <tr> <td>A+B = 71° 01' 29"</td> <td>Weight 2</td> </tr> <tr> <td>A+B+C = 119° 10' 43"</td> <td>Weight 1</td> </tr> <tr> <td>B+C = 80° 45' 28"</td> <td>Weight 2</td> </tr> </tbody> </table>	A = 38° 25' 20"	Weight 1	B = 32° 36' 12"	Weight 1	A+B = 71° 01' 29"	Weight 2	A+B+C = 119° 10' 43"	Weight 1	B+C = 80° 45' 28"	Weight 2	13	K3	C351.3
A = 38° 25' 20"	Weight 1															
B = 32° 36' 12"	Weight 1															
A+B = 71° 01' 29"	Weight 2															
A+B+C = 119° 10' 43"	Weight 1															
B+C = 80° 45' 28"	Weight 2															
(OR)																
14.	b)		Show the most probable value of the following. <table border="1"> <tbody> <tr> <td>A =</td> <td>28° 24' 27.4"</td> </tr> <tr> <td>B =</td> <td>32° 14' 16.3"</td> </tr> <tr> <td>C =</td> <td>51° 18' 18.8"</td> </tr> <tr> <td>A+B =</td> <td>60° 38' 45.6"</td> </tr> <tr> <td>B+C =</td> <td>83° 32' 28.2"</td> </tr> </tbody> </table>	A =	28° 24' 27.4"	B =	32° 14' 16.3"	C =	51° 18' 18.8"	A+B =	60° 38' 45.6"	B+C =	83° 32' 28.2"	13	K3	C351.3
A =	28° 24' 27.4"															
B =	32° 14' 16.3"															
C =	51° 18' 18.8"															
A+B =	60° 38' 45.6"															
B+C =	83° 32' 28.2"															
15.	a)		The following are the observed values of the angle A with the corresponding weights: <table border="1"> <tbody> <tr> <td>(i)</td> <td>51° 20' 30"</td> <td>Weight 2</td> </tr> <tr> <td>(ii)</td> <td>51° 20' 28"</td> <td>Weight 3</td> </tr> <tr> <td>(iii)</td> <td>51° 20' 29"</td> <td>Weight 3</td> </tr> </tbody> </table> <p>Examine the following terms:</p> <ol style="list-style-type: none"> the standard deviation the standard error of the weighted mean the probable error of single observation of weight The probable error of the weighted mean 	(i)	51° 20' 30"	Weight 2	(ii)	51° 20' 28"	Weight 3	(iii)	51° 20' 29"	Weight 3	13	K2	C351.3	
(i)	51° 20' 30"	Weight 2														
(ii)	51° 20' 28"	Weight 3														
(iii)	51° 20' 29"	Weight 3														
(OR)																
15.	b)		After measuring the length of a base line, the correct length of the line is computed by applying various applicable corrections. Discuss the following corrections and provide expressions for <ol style="list-style-type: none"> Correction for temperature. Correction for pull. Correction for sag Correction for absolute length Correction for slope 	13	K3	C351.3										
III	ANSWER ALL QUESTIONS				Marks	BT Level	CO									
PART – C (1 X 15 = 15 Marks)																
16.	a.		The following angles were measured at a station O so as to close the horizon:	15	K3	C351.3										

			$\angle AOB = 83^\circ 42' 28.75''$ weight 3 $\angle BOC = 102^\circ 15' 43.26''$ weight 2 $\angle COD = 94^\circ 38' 27.22''$ weight 4 $\angle DOA = 79^\circ 23' 23.77''$ weight 2 Adjust the angle by method of correlates																		
(OR)																					
16.	b		A tacheometer is set up at an intermediate point on a traverse course AB and the following observations are taken on a staff held vertically. The instrument is fitted with an anallatic lens and the multiplying constant is 100. The reduced level of A being given as 350.75 m, calculate the length of AB and the reduced to level B. <table border="1"> <thead> <tr> <th>Staff station</th> <th>Bearing</th> <th>Vertical angle</th> <th>Intercept</th> <th>Axial hair reading</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>$40^\circ 30'$</td> <td>$-4^\circ 24'$</td> <td>2.172</td> <td>1.562</td> </tr> <tr> <td>B</td> <td>$220^\circ 35'$</td> <td>$-5^\circ 12'$</td> <td>1.986</td> <td>1.806</td> </tr> </tbody> </table>	Staff station	Bearing	Vertical angle	Intercept	Axial hair reading	A	$40^\circ 30'$	$-4^\circ 24'$	2.172	1.562	B	$220^\circ 35'$	$-5^\circ 12'$	1.986	1.806	15	K3	C351.2
Staff station	Bearing	Vertical angle	Intercept	Axial hair reading																	
A	$40^\circ 30'$	$-4^\circ 24'$	2.172	1.562																	
B	$220^\circ 35'$	$-5^\circ 12'$	1.986	1.806																	

Blooms Levels: K1 - Remember, K2 – Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 – Create


Faculty In-charge


HOD


Principal

Reg Number																			
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CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	100
SEMESTER:	:	III	DURATION	:	3 Hours
SUBJECT:	:	SURVEYING	CODE	:	CE8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 – 22 (EVEN)	EXAM	:	Makeup Test -2

PART – A (10 X 2 = 20 Marks)

I	ANSWER ALL QUESTIONS			BT level	CO
1.	Name the instruments/accessories needed to carry out a chain surveying			K1	C351.1
2.	Discuss the term bearings and its types.			K1	C351.1
3.	Change the following whole circle bearing to reduced bearing $151^{\circ}20'$ & $332^{\circ}40'$.			K2	C351.2
4.	Describe about anallactic lens			K1	C351.2
5.	What is contour? State the uses of contour.			K2	C351.3
6.	List the errors which are eliminated in measurement of horizontal angles by repetition method.			K1	C351.3
7.	Discuss few points on contour gradient.			K2	C351.4
8.	State the principle of least square.				C351.4
9.	Summarize the specifications of first order triangulation.				C351.5
10.	Compare the systematic and accidental errors.				C351.5

PART – B (5 X 13 = 65 Marks)

II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
11.	(a)	The following staff readings were observed successively with a level, the instrument having been moved after third, sixth and eighth readings 2.228, 1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters. Enter the above readings in a page of a level book and evaluate the R.L. of points if the first reading was taken with a staff held on a bench mark of 432.384 m.		13	K3	C351.1

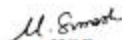
(OR)

11.	(b)		The following consecutive readings were taken with a levelling instrument at intervals of 20 m. The readings are 2.375, 1.730, 0.615, 3.450, 2.885, 2.070, 1.835, 0.985, 0.435, 1.630 2.255, and 3.630 m. The instrument was shifted after fourth and eighth readings. The last reading was taken on a BM of RL 110.200 m. Find the RL of all the points,	13	K3	C351.1												
12.	a)		<table border="1"> <thead> <tr> <th>Instrumentation Station</th> <th>Reading in BM</th> <th>Angle of elevation</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.862</td> <td>18° 36'</td> <td>RL of BM=421.380m</td> </tr> <tr> <td>B</td> <td>1.222</td> <td>10° 12'</td> <td>Distance B=50m</td> </tr> </tbody> </table> <p>(i) Collect the elevation of the top of a chimney from the following data. Stations A and B and top of chimney are in the same vertical plane. ii) Describe the temporary adjustments of theodolite.</p>	Instrumentation Station	Reading in BM	Angle of elevation	Remarks	A	0.862	18° 36'	RL of BM=421.380m	B	1.222	10° 12'	Distance B=50m	13	K3	C351.2
Instrumentation Station	Reading in BM	Angle of elevation	Remarks															
A	0.862	18° 36'	RL of BM=421.380m															
B	1.222	10° 12'	Distance B=50m															
(OR)																		
12.	b)		Explain the different between tangential and stadia tachometry. How will you determine the stadia constants?	13	K3	C351.2												
13.	a)		<p>Examine the most probable values of the angles A, B, C from the following observations at a station P.</p> <table border="1"> <tbody> <tr> <td>A =38° 25'20"</td> <td>Weight 1</td> </tr> <tr> <td>B=32° 36'12"</td> <td>Weight 1</td> </tr> <tr> <td>A+B =71° 01'29"</td> <td>Weight 2</td> </tr> <tr> <td>A+B+C =119° 10'43"</td> <td>Weight 1</td> </tr> <tr> <td>B+C =80° 45' 28"</td> <td>Weight 2</td> </tr> </tbody> </table>	A =38° 25'20"	Weight 1	B=32° 36'12"	Weight 1	A+B =71° 01'29"	Weight 2	A+B+C =119° 10'43"	Weight 1	B+C =80° 45' 28"	Weight 2	13	K3	C351.3		
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13.	b)		<p>After measuring the length of a base line, the correct length of the line is computed by applying various applicable corrections. Discuss the following corrections and provide expressions for</p> <ol style="list-style-type: none"> Correction for temperature. Correction for pull. Correction for sag Correction for absolute length Correction for slope 	13	K3	C351.3												
14.	a)		<p>Estimate the hour angle and declination of a star from the following data</p> <table border="1"> <tbody> <tr> <td>Altitude of the star</td> <td>21°30'</td> </tr> <tr> <td>Azimuth of the star</td> <td>140°E</td> </tr> <tr> <td>Latitude of the observer</td> <td>48°N</td> </tr> </tbody> </table>	Altitude of the star	21°30'	Azimuth of the star	140°E	Latitude of the observer	48°N	13	K3	C351.4						
Altitude of the star	21°30'																	
Azimuth of the star	140°E																	
Latitude of the observer	48°N																	
(OR)																		
14.	b)		The lengths and bearings of lines of closed traverse ABCDE is given below. Examine the length and bearing of line EA.	13	K3	C351.4												

			Line	Length, m	Bearing			
			AB	194.1	85° 30'			
			BC	201.2	15° 00'			
			CD	165.4	285° 30'			
			DE	172.6	195° 30'			
15.	a)		List out the various measurements of GPS. Explain them.			13	K2	C351.5
(OR)								
15.	b)		The following bearing were observed with a compass. Workout the local attraction? Find the correct bearing.			13	K3	C351.5
			Line	Fore Bearing	Back Bearing			
			AB	74° 0'	254° 0'			
			BC	91° 0'	271° 0'			
			CD	166° 0'	343° 0'			
			DE	177° 0'	0° 0'			
III	ANSWER ALL QUESTIONS					Marks	BT Level	CO
PART – C (1 X 15 = 15 Marks)								
16.	a.		In order to ascertain the elevation of the top Q of the signal on a hill, observations were made from two instrument stations P and R at horizontal distance 100 meters apart, the stations P and R being in line with Q. The angles of elevation of Q at P and R were 28°42' and 18°06' respectively. The staff readings upon the benchmark of elevation 287.280 were 2.870 m and 3.750 m respectively when the instrument was at P and at R, the telescope being horizontal. Determine the elevation of the foot of the signal, if the height of the signal above its base is 3 meters.			15	K3	C351.1
(OR)								
16.	b		Explain in detail the procedure of Control Surveying.			15	K3	C351.4

Blooms Levels: K1 - Remember, K2 - Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 - Create


Faculty In-charge


HOD


Principal


Unit, Cycle Test and Model Exam (IA) failed students Root Cause Analysis

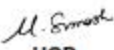
SUBJECT INFORMATION

PROGRAMME: Civil Engineering	DEGREE: B.E.
COURSE: Surveying	SEMESTER: III CREDITS: 03
COURSE CODE: CE8351 REGULATION: R 2017	COURSE TYPE: CORE
COURSE AREA/DOMAIN: Surveying	CONTACT HOURS: 5 hours/Week.
TOTAL NO. OF STUDENTS: - 19	AVERAGE NO OF FAILED STUDENTS IN ALL EXAMS: 07


S.no	Problems raised by the students & faculty perspective	Remedies taken by the department
1	The students were taught in online mode for the first 3 units and so they missed clarity in understanding the basic concepts and solving methodologies.	Upon arrival of the students to the college, the first three units were brushed up to reinforce the basic concepts and clarify the misinterpretations.
2	As the students missed the hands-on with laboratory equipment, they found it difficult to understand the working procedures.	Practical sessions were taken during theory hours for better understanding
3	As the syllabus had to be finished quickly, it was impossible to explain the minor theoretical concepts in detail.	Additional coaching classes were arranged and solved course materials were provided.
4	The students were using their own notes and common reference materials were missing.	Course materials, Solved Question papers, Explanatory videos and reference books were given.
5	Many students couldn't attend the classes regularly due to illness.	Based on the attendance, the students were classified and given coaching separately.
6	One lateral entry student was from mechanical department in UG.	Special coaching was given to him to reinforce the basic topics and concepts of civil engineering.

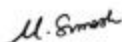
Note: The above said remedies have been implemented and some additional tests were conducted. Based on the results analysis of the additional tests, it was noticed that, the pass percentage has been enhanced. The evidences are attached in the criterion 1.1.1 & 1.1.2.


Faculty Incharge
[K.Vetri Aadithiya, AP, Civil]


HOD
Dr.m.Sumesh

CARE COLLEGE OF ENGINEERING, TRICHY							
DEPARTMENT : CIVIL ENGINEERING							
2020-2021 Odd Sem - Course Outcome Attainment (R2017)							
R2017: COURSE CODE & NAME: CE8351 SURVEYING							
FACULTY NAME: K.VETRI AADITHIYA							
	Direct					Indirect	CO attainment
	IA1	IA2	MODEL	Internal	Univ		
CO 1	0.1	0.1	0.1	0	3	3	2.58
CO 2	2	0.1	0.1	1	3	3	2.72
CO 3	0.1	0.1	0.1	0	3	3	2.58
CO 4	0.1	0.1	0.1	0	3	3	2.58
CO 5	0.1	0.1	0.1	0	3	3	2.58


Faculty In-charge
 [K Vetri Aadithiya, AP, Civil]


HOD
 Dr.M.Suresh

CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	40
SEMESTER:	:	III	DURATION	:	01.30 Hrs
SUBJECT:	:	SURVEYING	CODE	:	CE 8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 - 22 (ODD)	EXAM	:	Retest 2

PART - A (6 X 2 = 12 Marks)

I	ANSWER ALL QUESTIONS		BT level	CO
1.	What is Temporary Bench mark?		K1	C351.1
2.	Define Horizontal and Vertical Control.		K1	C351.1
3.	What are the Types of Bench Mark?		K1	C351.1
4.	Define Reduction to Centre:		K1	C351.1
5.	Define Laplace Station		K1	C351.1
6.	Define Extension of baseline:		K2	C351.1

PART - B (2 X 13 = 13 Marks)

II	ANSWER ALL QUESTIONS		Marks	BT Level	CO												
07.	(a)	Explain in detail the procedure of Control Surveying.	13	K3	C351.1												
(OR)																	
	(b)	Find the most probable values of angles A,B @ C from the following observations at station P: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Angles</th> <th>Weights</th> </tr> </thead> <tbody> <tr> <td>A = 38°25'20"</td> <td>1</td> </tr> <tr> <td>B = 32°36'12"</td> <td>1</td> </tr> <tr> <td>A+B = 71°01'29"</td> <td>2</td> </tr> <tr> <td>A+B+C = 119°10'43"</td> <td>1</td> </tr> <tr> <td>B+C = 80°45'28"</td> <td>2</td> </tr> </tbody> </table>	Angles	Weights	A = 38°25'20"	1	B = 32°36'12"	1	A+B = 71°01'29"	2	A+B+C = 119°10'43"	1	B+C = 80°45'28"	2	13	K3	C351.1
Angles	Weights																
A = 38°25'20"	1																
B = 32°36'12"	1																
A+B = 71°01'29"	2																
A+B+C = 119°10'43"	1																
B+C = 80°45'28"	2																
III	ANSWER ALL QUESTIONS		Marks	BT Level	CO												
PART - C (10 X 1 = 10 Marks)																	
8 to 22	Multiple Choice Questions https://forms.gle/xP9oa3M2M7GqRNDw7		15														

Blooms Levels: K1 - Remember, K2 - Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 - Create


Faculty In-charge


HOD


Principal

CARE COLLEGE OF ENGINEERING, TRICHY

DEPARTMENT OF CIVIL ENGINEERING

CLASS:	:	II B.E CIVIL	MAX MARKS	:	40
SEMESTER:	:	III	DURATION	:	01.30 Hrs
SUBJECT:	:	SURVEYING	CODE	:	CE 8351
COURSE NO	:	C351	DATE	:	
ACADEMIC YEAR	:	2021 – 22 (ODD)	EXAM	:	Retest

PART – A (6 X 2 = 12 Marks)

I	ANSWER ALL QUESTIONS			BT level	CO
1.	Define surveying.			K1	C351.1
2.	Discuss the term bearings and its types.			K1	C351.1
3.	List out the types of levelling instruments.			K1	C351.1
4.	Define Benchmark and give its types.			K1	C351.1
5.	Evaluate is reduction in leveling? Name the methods.			K1	C351.1
6.	Discuss the applications of Surveying.			K2	C351.1

PART – B (1 X 13 = 13 Marks)

II	ANSWER ALL QUESTIONS			Marks	BT Level	CO
07.	(a)	(i) What are the basic principles of surveying? Describe it. (ii) Discuss about the different sources of error in chain surveying.		13	K3	C351.1

(OR)

	(b)	Show which stations are affected by local attraction. Workout the correct bearing of closed traverse ABCDEA. Fore Bearing Back Bearing Line AB 190° 30' 17°0' BC 73°30' 250° 30' CD 36° 15' 214° 30' DE 266° 45' 84° 45' EA 234°15'57°0'		13	K3	C351.1
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III	ANSWER ALL QUESTIONS			Marks	BT Level	CO
PART – C (10 X 1 = 10 Marks)						
8 to 22	Multiple Choice Questions https://forms.gle/xP9oa3M2M7GqRNDw7			15		

Blooms Levels: K1 - Remember, K2 – Understand, K3 - Apply, K4 - Analyze, K5 - Evaluate, K6 – Create

CARE

COLLEGE OF ENGINEERING

(Approved by AICTE and Affiliated to Anna University, Chennai)

27, Thayanur, Trichy - 620009

Dept of Civil Engineering
Special Coaching/ Remedial Class Schedule

II Year Civil (2021-2022 ODD)

Subject Name: CE 8351 - Surveying

Faculty In-charge: Mr.K.Vetri Aadithiya

Batch: 2020-2024

Timing: 4.00 pm-5.00 pm

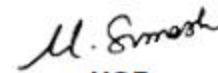
S. No.	Reg. No.	Student Name	20/12/2021	21/12/2021	22/12/2022
1	810720103001	Aakash S	THEODOLITE AND TACHEOMETRIC SURVEYING	CONTROL SURVEYING AND ADJUSTMENT	TOTAL STATION
2	810720103002	Gunalan S			
3	810720103003	Iyyappan R			
4	810720103005	Kavimani S			
5	810720103007	Lakshmikanth R			
6	810720103008	Nishanthini K			
7	810720103009	Praveenraj V			
8	810720103010	Rajmohan K			
9	810720103011	Siva Shanmugam S			
10	810720103302	Karthik Raja K			
11	810720103306	Suriya M			

Activities Planned During this Schedule:

- 1 Preparation Students with Previous Year University Questions - and How to write the Answer - explanation Given
- 2 Model Exam conducted After this Coaching Class on <28.12.2021>



Faculty In-Charge
[K.Vetri Aadithiya, AP, Civil]



HOD
Dr.M.Sumesh

CARE



COLLEGE OF ENGINEERING

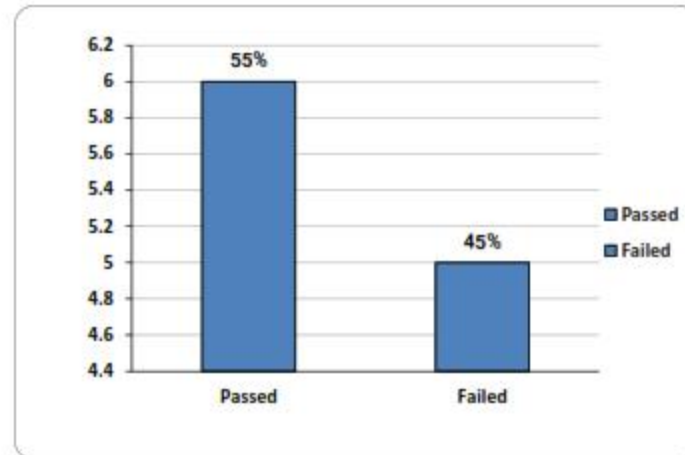
(Approved by AICTE and Affiliated to Anna University, Chennai)
27, Thayanur, Trichy - 620009

Department of Civil Engineering
Special Coaching/ Remedial Class Schedule
II Year Civil (2021-2022 ODD)
Subject Name: CE 8351 - Surveying
Faculty In-charge: Mr.K.Vetri Aadithiya

Batch: 2020-2024


S. No.	Reg. No.	Student Name	Result
1	810720103001	Aakash S	F
2	810720103002	Gunalan S	F
3	810720103003	Iyyappan R	P
4	810720103005	Kavimani S	P
5	810720103007	Lakshmikanth R	P
6	810720103008	Nishanthini K	P
7	810720103009	Praveenraj V	P
8	810720103010	Rajmohan K	P
9	810720103011	Siva Shanmugam S	F
10	810720103302	Karthik Raja K	F
11	810720103306	Suriya M	F

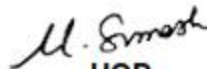
Passed 6
Failed 5
Pass Percentage 55%



Remarks to get the improved/ decreased results.

1	Totally 11 students were identified as slow learners, Conducted coaching classes
2	6 Students were passed and 5 students were failed after coaching class.
3	Again coaching classes will be conduct for failed students and improve their subject knowledge


Faculty In-Charge
[K.Vetri Aadithiya, AP, Civil]


HOD
Dr.M.Sumesh