

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code		LO Code		Format No.
					C 0 3				1		1		4
COURSE NAME		Advance survey											
CO Description		Apply basics of contouring and prepare contour map.											
LO Description		Explain basics of contouring.											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1.	Definitions – Contour, contour interval, Horizontal equivalent. Characteristics of contours .	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students; teacher will conduct a quiz and give assignments to practice their knowledge.	02	00	Text book, video lectures, chalk board.	NIL						
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External /Internal								
1.	Paper pen test	Students will be asked to explain basics of contouring.	10	Test paper, assignments + rating scale	Internal								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													



Progressive test 1

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		1	2	4
COURSE NAME	Advance survey										
CO Description	Apply basics of contouring and prepare contour map.										
LO Description	Describe methods of contouring and uses of contour.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Method of locating contours. Interpolation of contours. Establishing grade contours. Uses of Contour Maps. Calculation of reservoir capacity by contour map by trapezoidal and prismoidal formula. Interpretation of Typical Contour Sheets.	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.	04	00	Text book, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal				
1.	End term exam	Students will be asked to explain methods of contouring, interpolation of contour and uses of contour map.			10	Question paper, assignments + rating scale	External				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
NIL											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code		LO Code		Format No.
					C			0			1		3		4
COURSE NAME		Advance survey													
CO Description		Apply basics of contouring and prepare contour map.													
LO Description		Perform contour survey and plot contour map.													
SCHEME OF STUDY															
S. No.	Learning Content			Teaching –Learning Method		Description of T-L Process				Teach Hrs.	Pract. /Tut Hrs.	LRs Required		Remarks	
1.	1. Block contouring for a block of 100x150m. With spot level at 10x10m., plotting the contour.			Lab demonstration, hands on practice, lab assignments		Teacher will explain the contents and provide handout to students. Students will learn through practice.				00	12	Handouts, chalk board, PPT, manual, virtual lab		NIL	
SCHEME OF ASSESSMENT															
S. No.	Method of Assessment			Description of Assessment						Maximum Marks		Resources Required		External /Internal	
1.	Observation of Experiments performed			Students will be asked to perform above exercise on field.						-		Lab record / rating scales		Internal	
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)															
Part of Lab Work															



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code		LO Code		Format No.	
					C			0			3		2		1	4
COURSE NAME		Advance survey														
CO Description		Perform theodolite traversing.														
LO Description		Explain components and basis terminology of theodolite and measurement of angle by different methods.														
SCHEME OF STUDY																
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks									
1.	Components of Transit Theodolite and Their functions. Technical terms used. Temporary adjustments of Transit Theodolite. Swinging the telescope, Transiting, Changing the face. Measurement of Horizontal angle, method of Repetition ,errors eliminated by method of repetition. Measurement of Deflection angle. Measurement of Vertical angle. Measurement of magnetic bearing of a line by Theodolite. Prolonging a Straight line. Sources of errors in Theodolite Surveying. Permanent adjustment of transit Theodolite (only relationship of different axes of Theodolite.)	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.	05	00	Text book, video lectures, chalk board.	NIL									
SCHEME OF ASSESSMENT																
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External /Internal											
1.	End term exam	Students will be asked to Explain components and basis terminology of theodolite and measurement of angle by different methods.	08	Question paper, assignments + rating scale	External											
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)																



Nil



Edit with WPS Office

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.	
					C	0	3			2	2	4
COURSE NAME	Advance survey											
CO Description	Perform theodolite traversing.											
LO Description	Compute the coordinates by theodolite traversing.											
SCHEME OF STUDY												
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks					
1.	Traversing with Theodolite – Method of included angles, locating details, checks in closed traverse, Calculation of bearings from angles. Traverse Computation - Latitude, Departure Consecutive Co-ordinates error of Closure, Distribution of a angular error, balancing the traverse by Bowditch rule and Transit Rule, Gale’s traverse table. simple problems on above topic.	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.	05	00	Text book, charts, video lectures, chalk board.	NIL					
SCHEME OF ASSESSMENT												
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal					
1.	End term exam	Students will be asked to explain theodolite traversing			12	Question paper, assignments + rating scale	External					
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)												
NIL												



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code		LO Code		Format No.	
					C 0 3						2		3		4	
COURSE NAME		Advance survey														
CO Description		Perform theodolite traversing.														
LO Description		Measure angle and coordinates by different methods using theodolite.														
SCHEME OF STUDY																
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks									
1	<ol style="list-style-type: none"> 1. Understanding the components of Theodolite and their functions, reading the vernier and temporary adjustments of theodolite. Measurement of Horizontal angle by transit theodolite. 2. Measurement of Horizontal angle by method of Repetition. 3. Measurement of vertical angles by theodolite. 4. Measurement of Magnetic bearing of a line using theodolite. 5. Measurement of deflection angle by taking open traverse of 4 –5 sides. 6. Theodolite traverse survey for a closed traverse of 5-6 sides for a small area, compute the co-ordinates by Gale's traverse table and plot the traverse. 	Lab demonstration, hands on practice, lab assignments	Teacher will explain the contents and provide handout to students. Teacher will demonstrate the components in lab. Students will learn through practice		24	Handouts, chalk board, PPT, manual, charts, video film, models, virtual lab.	NIL									
SCHEME OF ASSESSMENT																
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal									
1.	Observation of Field performance and submission.	Students will be asked to Measure angle and coordinates by different methods using theodolite on field.			-	Lab record / rating scales	Internal									



ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Part of Lab Work



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code	CO Code	LO Code	Format No.
					C	0	3		3	1	4
COURSE NAME	Advance survey										
CO Description	Measure height and distance by tachometer.										
LO Description	Explain techniques of Techometric survey to calculate height and distances.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Principle of Tacheometry. Essential requirements of Techeorneter. Use of Theodolite as a Tacheometer with staff held in vertical and fixed hair method (No derivation). Determination of tacheometric constants, simple numerical problems on above topics	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge..	10	00	Text book, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal				
1.	End term exam	Students will be asked to explain techniques of Techometric survey to calculate height and distances.			14	Question paper, assignments + rating scale	External				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
Part of progressive test II											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		3	2	4
COURSE NAME	Advance survey										
CO Description	Measure height and distance by tachometer.										
LO Description	Measure height and distances using Techometer.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	<p>1. To find Reduced levels and horizontal distances using theodolite as a Tacheometer.</p> <p>2. To find constants of a given Tacheometer.</p>	Lab demonstration, hands on practice, lab assignments	Teacher will explain the contents and provide handout to students. Teacher will demonstrate the components in lab. Students will learn through practice	00	06	Handouts, chalk board, PPT, manual, virtual lab.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External /Internal						
1.	Observation of Field performance and submission.	Students will be asked to Measure height and distances using Techometer on field.	-	Lab record / rating scales	Internal						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
Part of Lab Work											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		4	1	4
COURSE NAME	Advance survey										
CO Description	Develop skills to set out simple circular curve on the field.										
LO Description	Explain basics of curves, components and types.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Types of curves used in road and railway alignments. Notations of simple circular curve. Designation of curve by radius and degree of curves	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct quiz and give assignments to practice their knowledge.	03	00	Text book, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External / Internal				
1.	Paper pen test	Students will be asked to explain Explain basics of curves, components and types.			10	Test paper, assignments + rating scale	Internal				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
NIL											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		4	2	4
COURSE NAME	Advance survey										
CO Description	Develop skills to set out simple circular curve on the field.										
LO Description	Describe various methods of setting out of simple circular curves.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Method of Setting out curve by offset from Long chord method and Rankine’s method of deflection. angles. Simple Numerical problems on above topics.	Interactive classroom teaching, assignments, quiz, presentation.	Teacher will explain the contents and provide handouts to the students; teacher will conduct a quiz and give assignments to practice their knowledge.	06	00	Text book, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal				
1.	End term exam	Students will be asked to Describe various methods of setting out of simple circular curves.			14	Question paper, assignments + rating scale	External				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
Nil											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		4	3	4
COURSE NAME	Advance survey										
CO Description	Develop skills to set out simple circular curve on the field.										
LO Description	Set out simple circular curves on field and plot it.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	1. Setting out simple circular curve by rainkine’s method and plot it.	Lab demonstration, hands on practice, lab assignments	Teacher will explain the contents and provide handout to students. Teacher will demonstrate the components in lab. Students will learn through practice.	00	06	Handouts, chalk board, PPT, manual, charts, video film, models, virtual lab	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External /Internal						
1.	Observation of Field performance and submission	Students will be asked to Set out simple circular curves on field and plot it.	-	Lab record / rating scales	Internal						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
Part of Lab Work											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code	CO Code	LO Code	Format No.
					C	0	3		5	1	4
COURSE NAME	Advance survey										
CO Description	Study of different advance surveying equipment and analyzing various aspect of geological feature through remote sensing.										
LO Description	Describe different terminology and use of advance surveying equipment.										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Construction and use of one second Micro Optic Theodolite, Electronic Digital Theodolite. Features of Electronic Theodolite Principle , Components , functions and use of E.D.M. and Total station	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.	03	00	Text book, charts, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required	External /Internal				
1.	End term exam	Students will be asked to describe different terminology and use of advance surveying equipment.			06	Question paper, assignments + rating scale	External				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
NIL											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code		LO Code		Format No.
					C	0	3			5	2	4	
COURSE NAME	Advance survey												
CO Description	Study of different advance surveying equipment and analyzing various aspect of geological feature through remote sensing.												
LO Description	Explain remote sensing and its application.												
SCHEME OF STUDY													
S. No.	Learning Content			Teaching –Learning Method		Description of T-L Process			Teach Hrs.	Pract. /Tut Hrs.	LRs Required		Remarks
1.	Remote Sensing – Introduction, Electro-Magnetic Energy , Remote sensing system Passive system , Active system. Applications of remote sensing in civil engineering – mineral, land use / Land cover, mapping, disaster management. Natural Hazards and Environmental engineering system. Aerial Survey Introductions, definition, Aerial photograph.			Interactive classroom teaching, assignments, quiz, presentation		Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.			04	00	Text book, charts, video lectures, chalk board.		NIL
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment		Description of Assessment					Maximum Marks		Resources Required		External /Internal	
1.	End term exam		Students will be asked to explain remote sensing and its application.					06		Question paper, assignments + rating scale		External	
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
NIL													



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No.
					C	0	3		5	3	4
COURSE NAME	Advance survey										
CO Description	Study of different advance surveying equipment and analyzing various aspect of geological feature through remote sensing.										
LO Description	Explain the use of GPS / GIS										
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1.	Introduction, definition and components, content of GIS/GPS ,geological concept , application of GIS. Use of global positioning system (GPS) instruments. Introduction to drone Surveying.	Interactive classroom teaching, assignments, quiz, presentation	Teacher will explain the contents and provide handouts to the students, teacher will conduct a quiz and give assignments to practice their knowledge.	03	00	Text book, charts, video lectures, chalk board.	NIL				
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment			Maximum Marks	Resources Required		External /Internal			
1.	Paper pen test	Students will be asked to explain the use of GPS / GIS			10	Test paper, assignments + rating scale		Internal			
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
NIL											



RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code		LO Code		Format No.
					C 0 3				5		4		4
COURSE NAME		Advance survey											
CO Description		Study of different advance surveying equipment and analyzing various aspect of geological feature through remote sensing.											
LO Description		Measure the angles by micro optic theodolite, ,geographical parameters by total station and use of GPS and GIS											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1.	<ol style="list-style-type: none"> 1. Study and use of 1 second Micro Optic Theodolite for measurement of Horizontal and Vertical angles. 2. Study of E.D.M. for knowing its components. 3. Determine the geographical parameters of 4-5 sided traverse by total station and plot them. 4. Use GPS to locate the coordinates of a station. 	Lab demonstration, hands on practice, lab assignments	Teacher will explain the contents and provide handout to students. Teacher will demonstrate the components in lab. Students will learn through practice.		12	Handouts, chalk board, PPT, manual, , video film, virtual lab	NIL						
SCHEME OF ASSESSMENT													



S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External /Internal
1.	Observation of Field performance and submission	Students will be asked to measure the angles by micro optic theodolite, ,geographical parameters by total station and use of GPS and GIS	-	Lab record / rating scales	Internal
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)					
Part of Lab Work					