Discipline- Applied Science

Semester – 2nd Sem

Subject –Applied

Duration – 15 weeks (2023-24)

Work load (per week)-: lectures-04

Week	Theory			
	Lect. day	*Topic*		
1st	*1st*	**Unit-1** *Complex Numbers: definition of complex number, real and imaginary parts of a complex number,*		
	2nd	*real and imaginary parts of a complex number,,*		
	3rd	*Polar and Cartesian Form and their inter conversion, Conjugate of a complex*		
	4th	*Logarithms and its basic properties*		
2nd	*1st*	*Logarithms and its basic properties*		
	2nd	**Revsion unit-1**		
	3rd	**Unit-2** *Meaning of npr&ncr (mathematical expression*		
	4th	*Binomial theorem (without proof) for positive integral index*		
3rd	*1st*	*first binomial approximation with application to engineering problems.*		
	2nd	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of equations (upto 2 unknowns) by Crammer's rule,*		
	3rd	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of equations (upto 2 unknowns) by Crammer's rule,*		*,*
	4th	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of*		

		equations (upto 2 unknowns) by Crammer's rule,		
3rd	*1st*	*definition of Matrices and its types, addition, subtraction and multiplication of matrices (upto 2nd order).*		
	2nd	*definition of Matrices and its types, addition, subtraction and multiplication of matrices (upto 2nd order).*		
	3rd	***Revision Unit- 2***		
	4th	***Revision Unit- 2***		
4th	*1st*	***Unit-3*** *Concept of angle, measurement of angle in degrees, grades, radians and their conversions.*		
	2nd	***Unit-3*** *Concept of angle, measurement of angle in degrees, grades, radians and their conversions.*		
	3rd	*T-Ratios of Allied angles (without proof), Sum, Difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa*		
	4th	*T-Ratios of Allied angles (without proof), Sum, Difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa*		
5th	*1st*	*Applications of Trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc.*		*UNIT V* ***Geometry of Circle and Software*** ***Circle Introduction***
	2nd	*Applications of Trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc.*		*General equation of a circle and its characteristics. To find the equation of a circle, given:*
	3rd	***Revision Unit-3***		*Centre and radius*
	4th	***Revision Unit-3***		*Three points lying on it*
6th	*1st*	***UNIT IV*** ***Co-ordinate Geometry Introduction***		*Coordinates of end points of a diameter*
	2nd	*Cartesian and Polarco-ordinates (two dimensional), Distance between two points, mid-point, centroidof vertices*		***MATLAB Or SciLab software Introduction***

		of a triangle.		
	3rd	*Cartesian and Polar co-ordinates (two dimensional), Distance between two points, mid-point, centroid of vertices of a triangle.*		*Theoretical Introduction, MATLAB or Scilab as Simple Calculator*
	4th	*Slope of a line, equation of straight line in various standards forms (without proof);*		*(Addition and subtraction of values – Trigonometric and Inverse Trigonometric functions)*
7th	*1st*	*Slope of a line, equation of straight line in various standards forms (without proof);*		*General Practice*
	2nd	*(slope intercept form, intercept form, one-point form, two-point form, symmetric form,*		*Revision Unit-4*
	3rd	*form), intersection of two straight lines, concurrency of lines, angle between straight lines, parallel and perpendicular lines,*		*Revision Unit-4*
	4th	*perpendicular distance formula, conversion of general form of equation to the various forms.*		*Revision Unit-4*

8th	1st	**Revision- Unit-4** **Revision- Unit-4**
	2nd	
	3rd	**Revision- Unit-4**
	4th	**Revision- Unit-4**
9th	1st	**UNIT V** **Geometry of Circle and Software** **Circle Introduction**
	2nd	
	3rd	**UNIT V** **Geometry of Circle and Software** **Circle Introduction**
	4th	**UNIT V** **Geometry of Circle and Software** **Circle Introduction**
10th	1st	*General equation of a circle and its characteristics. To find the equation of a circle, given:*
	2nd	
		General equation of a circle and its characteristics. To find the equation of a circle, given:
	3rd	*Centre and radius*
	4th	*Three points lying on it*
11th	1st	*Coordinates of end points of a diameter*
	2nd	
		Centre and radius
	3rd	*Three points lying on it*
	4th	*Coordinates of end points of a diameter*

12th	1st	***MATLAB Or SciLab software Introduction***
	2nd	***MATLAB Or SciLab software Introduction***
	3rd	***MATLAB Or SciLab software Introduction***
	4th	***MATLAB Or SciLab software Introduction***
13th	1st	*Theoretical Introduction, MATLAB or Scilab as Simple Calculator*
	2nd	*Theoretical Introduction, MATLAB or Scilab as Simple Calculator*
	3rd	*(Addition and subtraction of values – Trigonometric and Inverse Trigonometric functions*
	4th	*(Addition and subtraction of values – Trigonometric and Inverse Trigonometric functions*
14th	1st	*Revision Unit-4*
	2nd	*Revision Unit-4*
	3rd	*Revision Unit-4*
	4th	*Revision*
15th	1st	*Revision*
	2nd	*Revision*
	3rd	*Revision*

	4th	Revision		
16th	1st	Revision		
	2nd	Revision		
	3rd	Revision		
	4th	Revision		