PNS.SCHOOL OF ENGINEERING AND TECHNOLOGY,NISHAMANI VIHAR,MARSHAGHAI,KENDRAPARA
LESSON PLAN,
DEPARTMENT:BASIC SCIENCE & HUMANITIES
SUBJECT: ENGINEERING MATH.II(TH-3)

| DISCIPLINE:ME, EL,CI,CS &ETC | SEMESTER:2ND. | NAME OF THE TEACHING FACULTY:MR.SUNAKAR SINGH | |
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| WEEK | NO.OF DAYS PER WEEK=05,CLASSES ALLOTTED=60 | SEMESTER FROM DATE. 04/02/2025 to 17/05/2025 ,NO OF WEEKS=15 | |
| | DAY | PORTION TO BE COVERED | |
| 1st. | 1st. | DETERMINANT AND MATRICES:Determinant of 1st.,2nd. &3rd order,sarrus method | |
| | 2nd. | Minor and Co-factor, properties of determinant(cont.) | |
| | 3rd. | Properties of determinant | |
| | 4th. | product of determinant,Types of system of linear equations | |
| | 5th. | Cramer's rule and consistency of system of linear equations | |
| 2nd. | 1st. | problems -1 | |
| | 2nd. | problems -2 | |
| | 3rd. | Matrix,Types of matrices ( cont) | |
| | 4th. | Types of matrix,Sub matrix, principal and leading sub matrix | |
| | 5th. | Matrix addition, substraction,scalar multiplication, multiplication,Equality | |
| 3rd. | 1st. | Transpose,Adjoint and inverse of a matrix | |
| | 2nd. | Solution of system of linear equations by Matrix method | |
| | 3rd. | Problems -3 | |
| | 4th. | problems -4 | |
| | 5th. | INTEGRAL CALCULUS: Definition of integration, Algebra of integration,Some standard integrals | |
| 4th. | 1st. | problems -5 | |
| | 2nd. | Integration by substitution | |
| | 3rd. | problems -6 | |
| | 4th. | Problems -7 | |
| | 5th. | Integration by parts, Problems -8 | |
| 5th. | 1st. | problems -9 | |
| | 2nd. | Integration by partial fractions, problems- 10 | |
| | 3rd. | Definite integral and its properties | |
| | 4th. | problems -11 | |
| | 5th. | Walli's formula, problems -12 | |
| 6th. | 1st. | Area bounded by a curve and axes | |
| | 2nd. | problems -13 | |
| | 3rd. | Volume of a solid formed by revolution of an area about axes | |
| | 4th. | problems -14 | |
| | 5th. | CO-ORDINATE GEOMETRY:Cartesian co-ordinate system,Quadrant, co-ordinate of a point | |

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| 7th. | 1st. | Distance formula,Division formula, centroid of a triangle,Area of a triangle |
| | 2nd. | condition of co-linearity,Inclination and slope of a line,Intercepts |
| | 3rd. | Equation of line in different form |
| | 4th. | condition of parallelism and perpendicularity,Angle between two lines |
| | 5th. | perpendicular distance of a point from a line,point of intersection of |
| 8th. | 1st. | problems -15 |
| | 2nd. | problems -16 |
| | 3rd. | Circle and equation of circle in different form,properties of general equation of circle |
| | 4th. | problems -17 |
| | 5th. | problems -18 |
| 9th. | 1st. | Definition of conics(Parabloa,Hyperbola, Ellipse) |
| | 2nd. | Standard equations of Parabola,Hyperbola, Ellipse |
| | 3rd. | Problems -19 |
| | 4th. | Problems -20 |
| | 5th. | VECTOR ALGEBRA: Directed line segment,lenght, support and sense |
| 10th. | 1st. | Scalar and vector, Representation of vector and notation |
| | 2nd. | Types of vector |
| | 3rd. | Rectangular resolution of a vector, position vector, magnitude and direction of a vector |
| | 4th. | Vector Addition and subtraction (Triangle, parallelogram and polygon law of vector addition ) |
| | 5th. | Scalar product of two vector and its properties,scalar and vector projection |
| 11th. | 1st. | vector product of two vector and its properties |
| | 2nd. | Work , moment and angular velocity |
| | 3rd. | problems -21 |
| | 4th. | problems -22 |
| | 5th. | problems -23 |
| 12th. | 1st. | DIFFERENTIAL EQUATIONS:Differential equation and its types,Order and degree of differential equations, solution of differential equations |
| | 2nd. | Solution of 1st.order 1st.degree differential equations by variable separable method |
| | 3rd. | Linear differential and its solution , problems -24 |
| | 4th. | problems -25 |
| | 5th. | problems -26 |
| 13 | 1st. | Revision |
| | 2nd. | Revision |
| | 3rd. | Revision |
| | 4th. | Revision |
| | 5th. | Revision |

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| 14 | 1st. | Revision | |
| | 2nd. | Revision | |
| | 3rd. | Revision | |
| | 4th. | Revision | |
| | 5th. | Revision | |
| 15 | 1st. | Revision | |
| | 2nd. | Revision | |
| | 3rd. | Revision | |
| | 4th. | Revision | |
| | 5th. | Revision | |

Signature of Teacher

Signature of HOD.

Dept. of Basic S & ..
PNS School of Engg. & Tech.

Signature of principal 03/02/2025

PRINCIPAL
PNS SCHOOL OF ENGG. & TECH.
Nishamani Vihar, Marshaunai