

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK
MATHEMATICS AND SCIENCE DEPARTMENT ACADEMIC PLAN

SEMESTER/BRANCH-1ST SEM (All ^{CIVIL} branches) (Sec - **C**)

SUBJECT:- ENGINEERING MATH-I (2020-21 WINTER)

FACULTY NAME:- ^{SR.} Goutam PARIIDA
SUVANANDA MOH A PATRA A

Semester From Dt.09.11.2020 to Dt. 31.3.21

No of week:15

Week No.	Dates	No. of Periods available	Topics to be Covered	Date of teaching	Shortfall if any	Reasons	Date of make up of shortfall	Initial of Faculty
1	9/11/20 10/11/20 12/11/20 14/11/20		Unit-1 Matrices & Determinants a) Types of matrices b) Algebra of matrices c) Determinant	9/11/20 10/11/20 12/11/20 13/11/20				S.M C.M S.M S.M C.P 13/11
2	16/11/20 17/11/20 18/11/20 19/11/20 20/11/20 21/11/20		Unit-1 Matrices & Determinants a) properties of determinants b) Inverse of matrix (second and third order)	16/11/20 19/11/20 18/11/20 19/11/20 20/11/20 21/11/20				S.M S.M S.M S.M S.M S.M C.M 14/11 C.M 15/11 C.M 16/11 C.M 17/11 C.M 18/11 C.M 19/11 C.M 20/11 C.M 21/11
3	23/11/20 24/11/20 25/11/20 26/11/20 27/11/20 28/11/20		Unit-1 Matrices & Determinants a) Cramer's Rule (only two variable) Solution of simultaneous equations by matrix inverse method (only two variable)	23/11/20 24/11/20 25/11/20 26/11/20 27/11/20 28/11/20				S.M S.M S.M S.M S.M S.M C.M 23/11 C.M 24/11 C.M 25/11 C.M 26/11 C.M 27/11 C.M 28/11 C.M
4	1/12/20 2/12/20 3/12/20 4/12/20 5/12/20		UNIT-2 TRIGONOMETRY a) Trigonometrical ratios b) Compound angles, multiple and sub-multiple angles (only formulae) c) Define inverse circular functions and its properties (no derivation)	1/12/20 2/12/20 3/12/20 4/12/20 5/12/20				S.M S.M S.M S.M S.M C.M 1/12 C.M 2/12 C.M 3/12 C.M 4/12 C.M 5/12 C.M

5	7/12/20 8/12/20 9/12/20 10/12/20 11/12/20		UNIT-2 TRIGONOMETRY b) Compound angles, multiple and sub-multiple angles (only formula)	7/12/20 8/12/20 9/12/20 10/12/20 11/12/20					7/12 8/12 9/12 10/12 11/12
6	12/12/20 14/12/20 15/12/20 16/12/20 17/12/20 18/12/20 19/12/20		UNIT-2 TRIGONOMETRY c) Define inverse circular functions and its properties (no derivation)	12/12/20 14/12/20 15/12/20 16/12/20 17/12/20 18/12/20 19/12/20					12/12 14/12 15/12 16/12 17/12 18/12 19/12
7	21/12/20 24/12/20 25/12/20 26/12/20		UNIT-3 Co-Ordinate Geometry in two-dimensions (straight line): a) Introduction of geometry in two dimension b) Define slope of a line and angle between two lines, conditions of perpendicularity and parallelism of two lines	21/12/20 24/12/20 25/12/20 26/12/20					21/12 24/12 25/12 26/12
8	28/12 29/12 30/12 31/12		UNIT-3 Co-Ordinate Geometry in two-dimensions (straight line): c) Different forms of straight lines (only formulae a. slope intercept form b. One point form c. Two point forms d. Intercept form e. Perpendicular form d) Derive equation of straight line a. Passing through a point and parallel to a line b. passing through a point and perpendicular to a line	28/12 29/12 30/12 31/12					28/12 29/12 30/12 31/12

9	1/01/21 2/01/21		UNIT-3 Co-Ordinate Geometry in two-dimensions (straight line): e) Equation of the line passing through the intersection of two lines f) Determine the perpendicular distance from a point to a line	1/01/21 2/01/21					1/01 2/01 CK 22-1
10	4/01/21 5/01/21 6/01/21 7/01/21 8/01/21 9/01/21		Unit-4 Circle: Equation of circle. (i) centre and radius form (ii) general equation of a circle (iii) end points of diameter form	4/01/21 5/01/21 6/01/21 7/01/21 8/01/21 9/01/21					4/01 5/01 6/01 7/01 8/01 9/01 CK 22-1
11	11/01 12/01 13/01 14/01 16/01		Unit-5 5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS (i) Distance formulae, section formulae, direction ratio, direction cosine (ii) Angle between two lines (condition of parallelism and perpendicularity)	11/01/21 12/01/21 13/01/21 14/01/21 16/01/21					11/01 12/01 13/01 14/01 16/01 CK 22-1
12	18/01 19/01 20/01 21/01 22/01		Unit-5 5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS a) Equation of a plane General form Angle between two planes	18/01/21 19/01/21 20/01/21 21/01/21 22/01/21					18/01 19/01 20/01 21/01 22/01 CK 22-1

13	<p>95.1.21 28.1.21 29.1.21 30.1.21</p>	<p>Unit-5 5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS b) perpendicular distance of a point from a plane equation of a plane passing through a point parallel to a plane perpendicular to a plane</p>	<p>25.1.21 27.1.21 28.1.21 29.1.21 30.1.21</p>				<p>SM SM GTP GTP GTP</p>
14	<p>10.2.21 8.2.21 3.2.21 4.2.21 5.2.21 6.2.21</p>	<p>Unit-6 SPHERE Equation of a sphere i) center radius form ii) general form iii) two end points of a diameter form (only formulae and problems)</p>					<p>GP GP GP GP</p>
15	<p>8.2.21 9.2.21 10.2.21 11.2.21 12.21 13.2.21</p>	<p>Problem practice</p>					<p>GP GP GP GP</p>



BHUBANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-(2020-21- SUMMER)

Lesson Plan

FACULTY NAME - MISS SUNANDA MOHAPATRA

Mechanical (F)

SEMESTER/BRANCH:- 2nd SEM (All Branches)

SUBJECT:- ENGINEERING MATHEMATICS-II

21.5.21	2	d) Existence of limit		Problem based on above.	22.5.21						SM
22.5.21		e) Methods of evaluation of limit problems based on it		Some standard form of limit	24.5.21						SM
24.5.21 25.5.21 26.5.21 27.5.21 28.5.21	3	UNIT-2-LIMITS AND CONTINUITY (12p) f) Some standard form of limit g) Definition of continuity of a function at a point a problems based on it		problem of standard form	25.5.21						SM
29.5.21				Question practice	29.5.21						SM
31.5.21 1.6.21 2.6.21 3.6.21 4.6.21 5.6.21	3	UNIT-3 DERIVATIVES (20p) a) Derivative of a function at a point b) Algebra of derivative c) Derivative of standard functions problems based on it		Derivative of a function at a point Algebra of derivative problem based on it	31.5.21 1.6.21						SM SM SM
7.6.21 8.6.21 9.6.21 11.6.21 12.6.21	3	UNIT-3-DERIVATIVES (20p) d) Derivative of composite function (Chain Rule) e) Methods of differentiation i) Parametric function Problems based on it		Derivative of composite function (Chain Rule) Derivative of composite function (Chain Rule) Method of differentiating problem on above	5.6.21 7.6.21 8.6.21 12.6.21						SM SM SM
	8	UNIT-3-DERIVATIVES (20p) Method of differentiation (continue)		method of differentiation							

16.6.21 17.6.21 18.6.21 19.6.21	1	ii) Implicit function iii) Logarithmic function iv) a function with respect to another function problems based on it	16-6-21 19.6.21	a function with respect to another function	—	—	SM
21.6.21 22.6.21 23.6.21 24.6.21 25.6.21 26.6.21	3	UNIT-3-DERIVATIVES (24p) f) Applications of Derivative i) Successive Differentiation (up to second order) ii) Partial Differentiation (function of two variables up to second order) problems based on it MCQ practice (Unit 1-3)	21.6.21 22.6.21 26.6.21	Applications of derivative Successive differentiation (up to 2nd order) inex practice (unit-1-3)	—	—	SM SM SM
28.6.21 29.6.21 30.6.21 1.7.21 2.7.21 3.7.21	3	UNIT-4 INTEGRATION (21p) a) Definition of integration as inverse of differentiation b) Integrals of standard functions c) Methods of integration i) Integration by substitution ii) Integration by parts problems based on it	28.6.21 29.6.21 3.7.21	definition of integrator as inverse of differentiation Integral of standard form problem based on it	—	—	SM SM SM
5.7.21 6.7.21 7.7.21 8.7.21 9.7.21 10.7.21	3	Unit 4 INTEGRATION(21p) d) Integration of some standard forms problems based on it	5.7.21 6.7.21 10.7.21	Integration of standard form problem on it	—	—	SM SM SM

12	13.7.21 14.7.21 15.7.21 16.7.21 17.7.21	2	Unit 4 INTEGRATION (12p) e) Definite integral, properties of definite integrals problems based on it	what is definite integral problem on it	19.7.21 17.7.21	SM SM
13	19.7.21 20.7.21 22.7.21 23.7.21 24.7.21	3	Unit 4 INTEGRATION (12p) Application of integration i) Area enclosed by a curve and X-axis ii) Area of a circle with centre at origin problems based on it	Application of integration. Area enclosed by a curve on X-axis problem based on it	19.7.21 20.7.21 24.7.21	SM SM SM
14	26.7.21 27.7.21 28.7.21 29.7.21 30.7.21 31.7.21	3	Unit 5 DIFFERENTIAL EQUATION (12p) a) Order and degree of a differential equation b) Solution of differential equation i) 1st order and 1st degree equation by the method of separation of variables problems based on it	order and degree of a differential equation 1st order and 1st degree equation by the method of separation of variables problems based on it	26.7.21 27.7.21 31.7.21	SM SM SM
15	2.8.21 3.8.21 4.8.21 5.8.21 6.8.21 7.8.21	3	Unit 5 DIFFERENTIAL EQUATION (12p) ii) Linear differential equation general form and its solution problems based on it	Linear differential equation general form and its solution problem on it	2.8.21 3.8.21 7.8.21	SM SM SM
16	9.8.21 10.8.21 11.8.21 12.8.21 13.8.21	2	Revision	Math quiz - unit - V	9.8.21 10.8.21	SM SM

14.8.21	1	Exam related problem practice		14.8.21	-	-	-
16.8.21 17.8.21 18.8.21 19.8.21	2	Exam related problem practice		16.8.21 17.8.21	-	-	-

MY BOOK REFERENCE: ENG. MATHEMATICS, KP, MATH BOOK BY NCERT, ELEMENTS OF MATHEMATICS.

Study Website:

Online Class link: Google Meet

Dr. P. S. Sankar (Maths)

