Padasalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- Padasalai's NEWS - Group
https://t.me/joinchat/NIfCqVRBNj9hhV4wu6_NqA

- Padasalai's Channel - Group
https://t.me/padasalaichannel

- Lesson Plan - Group
https://t.me/joinchat/NIfCqVWwo5iL-21gpzrXLw

- 12th Standard - Group
https://t.me/Padasalai_12th

- 11th Standard - Group
https://t.me/Padasalai_11th

- 10th Standard - Group
https://t.me/Padasalai_10th

- 9th Standard - Group
https://t.me/Padasalai_9th

- 6th to 8th Standard - Group
https://t.me/Padasalai_6to8

- 1st to 5th Standard - Group
https://t.me/Padasalai_1to5

- TET - Group
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- PGTRB - Group
https://t.me/Padasalai_PGTRB

- TNPSC - Group
https://t.me/Padasalai_TNPSC

Padasalai.net Centum Coaching Team 2019-2020

Expected 5 Marks - Chapter Wise - Q.No 41 To 47- 7 x 5 = 35

Chapter 1 Applications of Matrices and Determinants (May be 1 x 5 = 5)

- Cramer's Rule (or) Matrix Inversion Method (or) Gaussian Elimination Method

(or)

- K, µ,¥ Sums (or) Ex.1.7 with Example (or) Chemical Reaction Sums

Chapter 2 Complex Number (May be 1 x 5 = 5)

- Exp 2.8, Exp 2.9, Exp 2.15, Exp 2.27, Exp 2.31(ii),
- Triangle Inequality, Ex 2.5(2) (6), 2.6(2) Ex 2.7(3)(5)(6)

(or)

- Exp 2.32 to 2.36 Ex 2.8(2)(3)(4)(7)**(10)**

Chapter 3 Theory Of Equations (May be 1 x 5 = 5)

- Exp 3.2, Exp3.5, Exp3.6, Exp 3.15,Exp 3.20, Exp3.21, Exp 3.22,
- Exp 3.23, Exp 3.24, Exp 3.28, Exp 3.30
- Complex Conjugate Root Theorem

(or)

- Ex 3.1(3)(4)(6)(7)(8)(9)(10) Ex 3.3(1)(2)(3)(4)(5)(6) Ex 3.4(i)(2)
- Ex 3.5(3)(4)(5) Ex 3.6 Fully

Chapter 4 Inverse Trigonometric Functions (May be 1 x 5 = 5)

- Exp 4.21(ii), Exp 4.22, Exp 4.23, Exp 4.27, Exp 4.28, Exp 4.29, Exp 4.23

(or)

- Ex 4.2(6) Ex 4.4(2) Ex 4.5(5)(6)(7)(8) Ex 4.5(9-iii, iv)(10)

Chapter 5 Two Dimensional Analytical Geometry –I(May be 2 x 5 = 10)

- Eqn of the circle passing through the Points
- Parabola- Eqn, Vertex, focus, Directrix and length of the latus rectum
- Indentify the type of conic- Ellipse & Hyperbola –Centre, Foci, Vertices & Length of major and Minor Axis, Eccentricity,
- Exp 5.19, 5.21, Point of Contact

(or)

- Eqns of the Tangent and normal, Ex 5.4-1 to 8

- Practical Sums Exp 5.28 to 5.40 & Ex 5.5 –1 –10

Chapter 6 Vector Algebra (May be 2 x 5 = 10)

- Apollonius Theorem
- Cos(A+B), Cos(A-B), Sin(A-B), Sin(A+B), Triangle are Concurrent
- 6.23(1)(2) **Exp 6.37**
- Vector Cartesian in parametric form and Cartesian Eqn, Points of Intersection
- Shortest Distance- Parallel & Perpendicular /Skew lines
- Non Parametric vector and Cartesian eqn- 3 Models
- Exp 6.50 Ex 6.2 (10) Ex 6.3(4**) Ex 6.4(3)** Ex 6.8 and 6.9 Fully

Chapter 7 Applications of Differentials Calculus (May be 2 x 5 = 10)

- Ex 7.1 Application Sums & Exp
- Eqn of the Tangent & Normal
- Angle b/w two curves
- Maclaurin's Series Sums Ex 7.5(12)

(or)

- Ex. 7.6, Ex 7.7 & Ex 7.8 with Exp

Chapter 8 Differentials and Partials Derivatives (May be 1 x 5 = 5)

- Exp 8.8, Exp 8.9 Ex 8.3 Fully
- Exp 8.13 Ex 8.4(2) (3) (6) (9) (8)

(or)

- Eulers Theorem & Ex 8.6 Fully with Example

Chapter 9 Applications of Integration (May be 1 x 5 = 5)

- Riemann Sum- Left End Rule/ Right End Rule/ Mid Point Rule
- Exp 9.4 With Ex 9.2 Fully Exp 9.12, Exp 9.13, Exp 9.14, Exp 9.15, Exp 9.16, Exp 9.17, Exp 9.19
- Exp 9.21, Exp 9.28, Exp 9.30 Ex 9.3 Fully

(or)

- Ex 9.8 and Ex 9.9 Fully

Chapter 10 Ordinary Differential Equation (May be 2 x 5 = 10)

- Ex 10.5 Variable Separable Method , Substitution Method

- **Ex 10.5 (1)(2)***
- **Exp 10.17 to Exp 10.17 & Ex 10.6 Fully**
- **Exp 10.22 to Exp 10.26 With Example**

(or)

- Ex10.8 with Example –Practical Problems *'

Chapter 11 Probability Distribution (May be 1 x 5 = 5)

- Binomial Distribution Ex 11.5 with Examples
- Exp 11.8,11.14,11.16,11.17,11.21,11.22
- Ex 11.4-1(iv) –2,3,6,7 Ex 11.5- 7,8

Chapter 12 Discrete Mathematics (May be 1 x 5 = 5)

- Exp 12.19, 12.18,12.16, 12.9,12.10,12.7,12.2,12.4,12.5
- Ex 12.2- 6(iv), 7 (i,ii,iii,iv),13,15
- Ex 12.1- 5,9,10
- Construct the Truth Table
- Associative, Distributive, De Morgans, Absorptions Law

Expected Theoretical sums

- Example 1.4 , Welcome sum (Cryptography), 1.1 –15 , 1.38 ,
- Pg.no 59 in first volume (Prove that question),
- Geometrical interpretation
- Example 3.7 , 3.11 , 3.12 , 3.13 , 3.29 ,
- Pg no 153 (Table), 4.1 –5 , Ex 4.2 –2 , 3 , 7 , 4.11 , 4.15 , 4.16 , 4.19 , 4.25 , 4.26 (See all trigonometric functions graph)
- Theorem 5.1 ,6.17 , 6.2-8 , 6.20 , 6.6 –6 , 6.54 , 7.16 , 7.22 , 7.23 ,
- 7.24 , 7.34 , 7.35 , 7.37 , 7.42 , 7.46 , 7.47 , 7.52 , 7.53 , 7.61 7.3 –8 , 9 ,
- 9.7 , 9.14 , 9.20 , 9.22 , 9.23 , 9.32 (vi), 9.31 , 9.33 , 9.44 , 9.45

Theory Qns

Chapter 1 Applications of Matrices and Determinants

- 1.1 , 1.2 , 1.3 , 1.4 , 1.5 , 1.6 , 1.7 , 1.8 , 1.9 –(vi) , 1.10 , Rouche –Capelli theorem 1.14 Adjoint , inverse , orthogonal , equivalent row , echelon of matrix , rank of matrix , consistent and inconsistent.

Chapter 2 Complex Number

- De moivre's theorem , triangle inequality , cube roots , fourth , sixth roots of unity Properties of polar form (80 , 81) Geometrical interpretation (67) , polar form of unit circle and complex number , scalar multiplication , addition of complex number Properties of complex conjugates (61) Pg .no 62 property

Chapter 3 Theory Of Equations

- Rational root theorem , Descartes rule , vieta's formula , Theorem 3.6 , 3.2 (107) , 3.3- 3.1, 3.2 , 3.3 Fundamental theorem of algebra

Chapter 4 Inverse Trigonometric Functions

- 4.3 –4 .8 , Periodic function , odd and even function

Chapter 5 Two Dimensional Analytical Geometry –I

- 5.2 , 5.3 , 5.4 , 5.6 , The sum of focal distances of any point on the ellipse is equal to length of major axis 5.1(175) – 5.5 (188), asymptotes

Chapter 6 Vector Algebra

- 6.1 –6.10 , 6.4 (234) 6.11 , 6.12 , 6.15 , 6.16(257) , 6.19 , 6.20 , 6.21 , 6.23 Cosine formula Apollonius's theorem

Chapter 7 Applications of Differentials Calculus

- Intermediate value , Rolle's , Lagrange mean value , Extreme value theorem , format

Chapter 8 Differentials and Partials Derivatives

- Clairaut's theorem (78)

Chapter 10 Ordinary Differential Equation

- Property –1, 2 , 3 , 4 , 6 , 7 , 8 , 10 , 12 Example 9.20 Reduction formula

Chapter 11 Probability Distribution

- Discrete , continuous random variable , cumulative distribution function , Bernoulli , Binomial

Chapter 12 Discrete Mathematics

- Uniqueness of identity and inverse (228) Laws –Idempotent , commutative , associative , distributive , identity , complement , involution , De morgan's law , Absorption law

More Than 40+ Marks

Chapter No	Chapter Name	1 m/s	2 m/s	3 m/s	5 m/s
1	Applications of Matrices and Determinants	Yes	Yes	Yes	Yes
2	Complex Number	Yes	Yes	Yes	Yes
3	Theory Of Equations	Yes	Yes	Yes	Yes
4	Inverse Trigonometric Functions	Yes			
5	Two Dimensional Analytical Geometry	Yes			Yes
6	Vector Algebra	Yes			Yes
7	Applications of Differentials Calculus	Yes			
8	Differentials and Partials Derivatives	Yes			
9	Applications of Integration	Yes			
10	Ordinary Differential Equation	Yes			
11	Probability Distribution	Yes	Yes	Yes	Yes
12	Discrete Mathematics	Yes	Yes	Yes	Yes

Part I 14X 1 = 14

Part II 4 x 2 = 4

Part III 4 x 3 = 12

Part IV 4 x 5 = 20

Total Marks 50

Hard Work Never Fails

Expected 2 m/s and 3 m/s Concept Wise

Chapter 1 Applications of Matrices and Determinants

- A(adj A) = (adj A)A = [A]I, A^{-1}, adjoint of the matrix, $(a^{-1})^T = (a^T)^{-1}$, $(AB)^{-1} = B^{-1} A^{-1}$
- Orthogonal, Row Echelon Form, Minor Method(Determinant Method)
- Gauss Jorden Method, Matrix Inversion Method(2x2 Matrix)
- Cramer's rule (2x2 Matrix) & 3x3 Matrix- System Inconsistent No soln Model
- Adj A given to find A model sums, Rank of the Method

Chapter 2 Complex Number

- Simplify Model Sums..... i , -i , -1, 1 sums, Separating Real and Imagine parts model
- z_1/z_2 & z^{-1}, Farthest from the origin , Equilateral Triangle, Isosceles Triangle
- Four Solutions Sums, Circle- Centre & Radius, Obtain the Cartesian form
- Polar Form, Principal Argument , Rectangular form, Modulus, Geometric Interpretation

Chapter 3 Theory Of Equations

- Exp 3.7 to Exp 3.14
- Exp 3.17 to Exp 3.27 & Exp 3.29
- Ex 3.1(1i)(i2)
- Ex 3.2(1) to Ex 3.2(5)
- Ex 3.3(6)(7
- Ex 3.5 (1) to (2)

Chapter 4 Inverse Trigonometric Functions

- Exp 4.1 to Exp 4.20- Exp 4.24 to 4.26
- Ex 4.1(1) to Ex 4.1(7)
- Ex 4.2 (1) to Ex 4.2(8)
- Ex 4.3(1) to Ex 4.3(4)
- Ex 4.4(1)(2)
- Ex 4.5(1) to Ex 4.5(10)

Chapter 5 Two Dimensional Analytical Geometry –I

- General Eqn of a circle with centre with radius
- Exp 5.1 to Exp 5.9 Exp 5.10 to Exp 5.18, 5.22,5.25 Exp 5.25, **5.26*** Ex 5.1 (1) to Ex 5.1(12)
- Ex 5.2 (1) to Ex 5.2 (2),7, Ex 5.3* Ex 5.4(6) to Ex 5.4(8) Ex 5.5(10)

Chapter 6 Vector Algebra

- Cosine Formula, Exp 6.2, Exp 6.4, Workdone, Force, Coplaner , Sameplane
- Exp 6.18 to Exp 6.22,Exp 6.23 to 6.32, Origin and perpendicular
- Direction cosines, Length of the perpendicular , Plane in the std form
- Exp 6.42, Angle b/w straight line to plane
- Acute angle b/w, Distance b/w- point of intersection- plane model
- Distance –parallel- Exp 6.52- Exp 6.56
- Torque- Volume of the parallelepiped
- Area of base parallogram
- a x(bxc), (axb).(axc)
- Ex 6.3(6)(7)(8), Direction Ratios
- Intercept cut off the plane
- Distance b/w two planes

Chapter 7 Applications of Differentials Calculus

- Distance- Velocity- Acceleration
- Average Velocity, Instantaneous Velocity
- Eqn of the Tangent and normal- Exp 7.11-7.22, 7.16 Ex 7.1(1)
- Rolle's theorem fully
- Lagrange Theorem (Rotated Rolle's theorem)
- Consequence of lagrange mean value theorem Ex 7.3 Fully
- Maclaurin's theorem fully 7.4 Fully
- l.Hospital law 7.5 Fully
- Strictly Increasing
- Strictly Decreasing
- Critical Numbers
- Points of Inflection
- Test for Concavity
- Test for Points of inflection
- Asymptotes
- Symmetry
- Local Extremum

Chapter 8 Differentials and Partials Derivatives

- Ex 8.1 and Ex 8.2 and Ex 8.5 Fully with Example

Chapter 9 Applications of Integration

- Bernoulli theorem , Improper Integrals
- Reduction Formulea, Gamma Integral
- Exp 9.47, 9.51

Chapter 10 Ordinary Differential Equation

- Ex 10.1 ,Ex 10.2, Ex 10.3, Ex 10.4 with Exp, Exp 10.16

Chapter 11 Probability Distribution

- Exp 11.3 , 11.4 , 11.5 11.9 11.13 11.18 , 11,19 (each)
- Ex .11 .1 –1, 2 , 3 , 4 Ex .11.2 –1, 2 , 3 Ex .11.3 –1
- Ex .11.4 –1 (i) , (ii) , 2 , 3 , 5 , 6 , 7 , 8
- Ex .11.5 –1 each , 2 , 3 , 8 , 9 , 7

Chapter 12 Discrete Mathematics

- Exp 12.1 , 12,4 , 12.5 ,12.6 12.7 , 12.8 , 12.9 , 12.10 12.19 , 12.6 , 12.16 , 12.18 , 12.19
- Ex : 12.1 –1each , 2 , 3 , 4 , 6 , 7
- Ex : 12.2 –1each , 2 , 3 (each) , 4 , 5 , 6 each (except iv) , 7 (each)
- except (iv), , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15

Prepared By,

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