| ACA/DI/15 | TEACHING PLAN (TP) Tentative | Academic Year:2024-25 |
|---|---|---|
| REV: 00 | Subject- Mathematics | Class- 11th Commerce |
| Date- 9/9/2024 | | Subject code-88 |

**Stream:-Commerce**  
**Standard: 11th-Maths**

**Subject:-Mathematics**  
**Name of Faculty: Mrs. Mayura Patel**

| No. | Name of Chapters | Topics/ content of chapters | Planned Date of Commencing | Planned Date of Completion | Media/Teaching Aid/ Teaching Method used |
|---|---|---|---|---|---|
| 1 | Determinants | • find value of a determinant.<br>• simplify determinant.<br>• solve linear equations in 2/3 variables, find area of triangle using determinants. | 12,14/08/2024<br>16,21/08/2024<br>22,23/08/2024 | 12,14/08/2024<br>16,21/08/2024<br>22,23/08/2024 | White board<br>Hand written notes |
| 2 | Sets and Relations | The student will be able to<br>• work with sets and set functions.<br>• construct sets from given conditions/description/ rule.<br>• solve problems using set theory. Relations<br>• identify the types of relations:-<br>• use relations to associate different sets.<br>• verify equality, equivalence or other relation- ships       between given sets. | 24,26/08/2024<br>28,29/08/2024<br>30/08/2024<br><br>31/08/2024<br>2,4/09/2024 | 24,26/08/2024<br>28,29/08/2024<br>30/08/2024<br><br>31/08/2024<br>2,4/09/2024 | |
| 3 | Functions | • work with function defined on different  domains.<br>• identify different types of functions.<br>• carry out complicated operations on functions. | 5/09/2024<br>6,9/09/2024<br>12,13/09/2024 | 5/09/2024<br>6,9/09/2024<br>12,13/09/2024 | |
| 4 | Complex Numbers | simplify algebraic expressions involving complex numbers. | 23,25,26/09/2024<br>27,28,30/09/2024 | 23,25,26/09/2024<br>27,28,30/09/2024 | |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Limits | • find limit of a function<br>• determine whether a given function has a limit | 3,4,7/10/2024<br>9,10/10/2024 | 3,4,7/10/2024<br>9,10/10/2024 | White board<br>Hand written notes |
| 6 | Continuity | • determine whether a given function is continuous at a given point<br>• determine whether a given function is continuous over a specified interval<br>• identify points of discontinuity of a given function | 11,14/10/2024<br><br>16,17/10/2024<br><br>18/10/2024 | 11,14/10/2024<br><br>16,17/10/2024<br><br>18/10/2024 | |
| 7 | Differentiation | • differentiate algebraic functions | 11,13,14,18,20/11/ 2024 | 11,13,14,18,20/11/ 2024 | White board<br>Hand written notes |
| 8 | Partition Values | The student will be able to<br>• calculate specified partition values for given ungrouped data<br>• calculate specified partition values for grouped data (using formulae and graphs) | 21,22,23/11/2024<br><br>25,27,28,29/11/202 4 | 21,22,23/11/2024<br><br>25,27,28,29/11/202 4 | |
| 9 | Measures of Dispersion | • calculate range, quartiles and quartile deviation for given data<br>• calculate variance and standard deviation from given data<br>• calculate measures of dispersion for grouped data | 2,4/12/2024<br><br>5,6/12/2024 | 2,4/12/2024<br><br>5,6/12/2024 | |
| 10 | Skewness | • decide if the given frequency distribution is symmetric<br>• calculate Pearson's coefficient of skewness<br>• calculate Bowley's coefficient of skewness | 9,11/12/2024<br>12,13/12/2024<br>16/12/2024 | 9,11/12/2024<br>12,13/12/2024<br>16/12/2024 | White board<br>Hand written notes |
| 11 | Bivariate Frequency Distribution | • construct a bivariate frequency distribution for given raw data<br>• find marginal and conditional frequency distributions from given bivariate frequency distribution.<br>• find $\chi 2$ statistic. | 18,19/12/2024<br><br>20,23/12/2024<br><br>30/12/2024 | 18,19/12/2024<br><br>20,23/12/2024<br><br>30/12/2024 | |

| 12 | Correlation | • compute correlation coefficient for given bivariate data<br>• compute correlation coefficient for a bivariate frequency table. | 1/1/2025<br>10,11,13/1/2025 | 1/1/2025<br>10,11,13/1/2025 | White board<br>Hand written notes |
|----|-------------|---------|---------|---------|---------|
| 13 | Permutation and combi¬nation | • count the number of arrangements of given objects satisfying specified conditions<br>• count the number of possible selections of objects satisfying specified conditions | 15,16/1/2025<br><br>17,20/1/2025 | 15,16/1/2025<br><br>17,20/1/2025 | |
| 14 | Sequence And Series | • identify the type of a given sequence.<br>• find the general term of given sequence.<br>Series:-<br>• identify the type of a given series<br>• find the nth term of a given series<br>• find the sum of the first n terms of a given series<br>• find the sum to infinite terms of a given series | 22,23/1/2025<br>24/1/2025<br><br>25/1/2025<br>27/1/2025<br>29/1/2025 | 22,23/1/2025<br>24/1/2025<br><br>25/1/2025<br>27/1/2025<br>29/1/2025 | White board<br>Hand written notes |
| 15 | Locus And Straight Line | • find equation of a straight line satisfying given conditions<br>• identify properties of given set of straight lines | 30,31/1/2025<br><br>3,5/2/2025 | 30,31/1/2025<br><br>3,5/2/2025 | |
| 16 | Probability | • calculate probabilities of events in a random experiment<br>• calculate probability of an event using description of an experiment<br>• calculate probabilities of events obtained using algebra of events. | 6,7,8/2/2025<br><br>10/2/2025<br><br>12/2/2025 | 6,7,8/2/2025<br><br>10/2/2025<br><br>12/2/2025 | |
| 17 | Linear Inequatio | • identify sets of numbers satisfying given in - equations<br>• solve a given set of in equations graphically | 13/2/2025<br><br>14/2/2025 | 13/2/2025<br><br>14/2/2025 | |

| 18 | Commercial Mathematics | • calculate percentages from given information<br>• compare quantities in terms of percentages | 17/2/2025 | 17/2/2025 | White board<br>Hand written notes |
|---|---|---|---|---|---|
| | | Profit and Loss<br>• calculate profit/loss from descriptions of a commercial activity/transaction<br>• express profit/loss in terms of percentages<br>Interest • calculate simple interest<br>• calculate compound interest | 20/2/2025 | 20/2/2025 | |
| | | GST<br>• calculate CGST, SGST and UTGST<br>• calculate input tax and output tax<br>• calculate input tax credit at different stages of trade | 21/2/2025 | 21/2/2025 | |
| | | Shares<br>• calculate dividend on shares<br>• understand concepts of face value, market value, nominal value and par value of shares<br>• calculate brokerage in a given transaction | 22/2/2025 | 22/2/2025 | |
| | | Partnership<br>• understand types of partnerships<br>• understand levels of involvement of partners in a specified business | 24/2/2025 | 24/2/2025 | |
| | | Depreciation<br>• calculate depreciation using the initial value, period and duration of use of an asset<br>• calculate present value from initial value for a given rate of depreciation and a specified duration after purchase of an asset | 27/2/2025 | 27/2/2025 | |

# Teaching Plan (TP) [Tentetive]

**Stream:-Commerse**
**Standard: 12th-Maths**

| No. | Name of Chapter | Topics/ content of chapter |
|---|---|---|
| 1 | Differentation | 1 .Derivative of some std function , Rule of Differentiation ,Derivative of composite function Ex — 3.1<br>2.Derivativc of Inverse function Ex-3.2<br>3. Derivative of logarithmic function Ex-3.3<br>4. Derivative of Implicit Function Ex — 3.4<br>5.Derivative of Parametric Function Ex -3.5<br>6. Second order Derivative Ex -3.6 |
| 2 | Application of Differentation | 1.Application of derivative in geometry, equation of<br>tangent and  normal Ex-4.1<br>2. Increasing and decreasing function Ex -4.2<br>3. Maxima and Minima Ex —4.<br>4. Application of derivative in Economics Ex-4.4 |
| 3 | Commission, Brokerage and Discount | 1.commission and brokerage agent,<br>Del credere agent , Principal, Broker, factor and discount ,<br>Trade discount cash discount Ex- 1.1<br>2.Discount , present worth ,sum due ,true discount<br>,drawer, drawee , date of bill ,face value ,nominal due date,<br>legal due date Ex -1.2 |

| 4 | Insurance and Annuity | Linsurance, life insurance, general insurance Ex-2.1<br>2.Annuity,Four parties of annuity, two phases of annu<br>Types of Annuities, Classification ,Basic formula for Ex-2.2 |
|---|---|---|
| 5 | Matrices | 1.Defn of matrix, determinant ,Types of matrices Ex -<br>2. Algebra of matrices Ex-2.2<br>3. Multiplication of Matrices Ex-2.3<br>4. Properties of transpose of matrix Ex2.4<br><br>5. Elementary Transformation<br>   Inverse of matrix<br>       1. By elementary transformation<br>       2. By Adjoint method Ex-2.5<br><br>6. Application of matrices<br>   1.inversion method<br>   2.Rcduction method Ex-2.6 |
| 6 | Mathematical Logic | 1.Statement ,Truth value of Statement Ex-1.1<br>2.Logical connectives ,simple and compound statement<br>conjunction and disjunction Ex-1.2<br>3.Negation Ex- 1.3<br>4.conditional statement , biconditional statement Ex-<br>5.Quantifiers, Quantified statement Ex -1.5<br>6. Statement pattern, logical equivalence ,Tautology,<br>Contradiction ,Contingency Ex-I .6<br>7.Duality Ex-1.7<br>8.Negation of compound statement, converse inverse |
| 7 | Integration | 1 .Elementary integration formulae, Rules or theorem of integration Ex-5.1<br>2.Methods of Substitution Ex-5.2<br>3.Integrals of the          Ex -5.3<br>4.To solve some different types of integrations Ex -5.4<br>5.Integration by parts and evaluation of different types of integration Ex -5.5<br>6. Integration by partial fraction Ex - 5.6 |

| 8 | Definte integration | 1.Fundamental theorem of integral calculus Ex-6.1<br>2.Pro crties of definite inte ral Ex-6.2 |
|---|---|---|
| 9 | Application of definite integral | 1.Area under the curve Ex-7.1 |
| 10 | Linear Regression | 1.Meaning and Types of regression ,Types of linear regression, fitting simple linear regression ,scatter diagram ,<br>method of least square, Regression of Y on X Ex-3.1<br>2.Properties of Regression coefficient Ex-3.2<br>2,Correlation Co-efficient Ex -3.3 |
| 11 | Time series | Def, uses of Time series Analysis ,components of time series<br>secular trend ,Seasonal variation c), Irregular variation |
| 12 | Index number | 1.Definition of Index number ,Example Nifty ,senses,<br>Types of index number, Terminology, Notation , construction<br>of index number Ex -5.1<br>2.1vIethod -2 Weighted Aggregate method Ex -5.2<br>3.cost of living index number, Family budget method Es-5.3 |
| 13 | LPP | 1.LPP,mcaning , mathematical formulation Ex-6.1<br>2.Solution of LPP by graphical method Ex-6.2 |
| 14 | Differential Equation | 1.Def. of differential Equation , order and Degree of Differential equation Ex-8.1<br>2. Formation of Differential equation Ex-8.2<br>3. Solution of differential equation Ex-8.3<br>4. Homogeneous Differential equation Ex-8.4<br>5. Linear Differential Equation Ex-8.5<br>6. Application of Differential equation Ex-8.6 |
| 15 | Assignment problem and Sequencing | 1.Assignment problem , Hungarian method ,special case of<br>assignment problem Ex-7.1<br>2.Sequncing problem Ex-7.2 |

| 16 | Probability Distribution | 1.Random Variable , Types of random variable a) Discrete<br>b) Continuous , Probability Distribution of discrete Randon Variable, Prbability<br>mass Function , cumulative distribution function , Expected value and variance of a random variable Ex-8.1<br>2. Probability Distribution of continuous random variable ,<br>Probability density function, cumulative<br>Distribution function .Ex-8.2 |

nwad Education Trust's
f Science and Commerce
No 1, Ravet, Pune- 412101
n, email-sbp.science@gmail.com
College Index No : J.11.16.066

**Subject:-Mathematics**
**Name of Faculty: Mrs. Mayura Patel**

| Planned Date of Commencing | Planned Date of Completion | Media/Teaching Aid/ Teaching Method used | Remark |
|---|---|---|---|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |