**BUDHA DAL PUBLIC SCHOOL, SAMANA**

**LESSON PLAN**

**CLASS - XII**

**SUBJECT - MATHEMATICS**

**Topic - Relation and Functions**

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| P. K. Testing | * Define Relation. * What do you mean by function? * What is domain and Range of a function? * Write the various types of functions? |
| Learning Objectives | * Illustrate the function with arrow diagram * Make them aware about the different types of function * Check whether the function is invertible or not. * Classify the given function into proper category like injective, bijective and subjective |
| Contents | * Introduction * Types of relation * types of functions * compositions tables * Invertible functions |
| Art integrated Activity | Students will perform an activity of chapter relation by making graphs and be making working models. The video to get the concept of relation and function will send to the students.  Link of Video <https://diksha.gov.in/play/collection/do_31303> |
| Home Work | Ex - 1.1, 1.2, 1.3 Will be given as homework. |

**Topic - Matrix and Determinants**

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| P. K. Testing | * What is Horizontal line? * What is vertical line? * Arrange 16 elements Horizontally and vertically |
| Learning Objectives | * Understanding the definition of Matrix and Determinants. * To make them aware about addition, Subtraction and multiplication of elements when they are given in rows and columns. * Understand the concept of transpose. * Understand the operations on matrices. * Properties of matrices and determinants |
| Contents | * Introduction * Types of Matrices * Transpose of matrix * Minors and co factors * Area of Triangle * Adjoint of Matrix * Inverse of a Matrix * Matrix Method |
| Art integrated Activity | Students will perform an activity on matrix by making colorful charts.  The Video to get the concept of matrix and determinants link will send to the students.  Link: <https://youtu.be/OY9X9KiHCLg> |
| Home Work | Ex - 3.1, 3.2, 3.3, 4.1, 4.2, 4.3 Will be given as homework. |

**Topic - Continuity and Differentiability**

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| P. K. Testing | * What is the meaning of derivative? * Find the derivative of logax? * Find the derivative of ex? |
| Learning Objectives | * Understand the concept of continuity and its application * Make them aware about the derivative * Understand the concept of higher derivative. |
| Contents | * Continuity of a point * Algebra of Continuous function * Derivative and higher derivative |
| Art integrated Activity | The video link send to the students  Link of Video <https://youtu.be/KuWJv39UBHO> |
| Home work | Ex. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6 will be given as homework |

**Topic - Application of Derivatives**

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| P. K. Testing | * If f(x)= x3+4x+5 then find f'(x) and f"(x)? * What is Delta Method? * Tell anyone use of derivative? |
| Learning Objectives | * To make them aware about square root and cube root to decimal nos. * Understand about increasing and decreasing function * To make them aware about maximum and minimum value of a function. |
| Contents | * Increasing decreasing function * Equation of tangents and normal. * Maxima and minima function * Word problems of maxima and Minima function |
| Art integrated Activity | Students will perform an activity of complex number by making charts and Assignments given to the students.  Link of Video [https://youtu.be/](https://youtu.be/QYOF_NQEGUQ)J\_pw5xdccm Rate of change  <https://youtu.be/F41HU_70804> Tangents & Nurmals  [https://youtu.be/](https://youtu.be/QYOF_NQEGUQ)APaEEOX2U6U Maximum & Minimum values  <https://youtu.be/QYOF_NQEGUQ> Approximation |
| Homework | 6.2 , 6.3 , 6.5 will be given as homework |

**Topic - Application of Derivatives**

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| Homework | 6.2 , 6.3 , 6.5 will be given as homework |

**Topic - Integration and Its Application**

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| --- | --- |
| P. K. Testing | * If f(x)= sinx then find f"(x)? * What do you mean by Integration? * Is Integration and ant derivative both are same? |
| Learning Objectives | * To make them understand the concept of Indefinite Integral * Learn fundamental integral formula * Apply standard result of integration * To make them aware about daily life use of integration |
| Contents | * Problem based on some standard result * Method of integration * Integration of substitution * Integration by parts * Integration by Partial fractions * Area of bounded region |
| Homework | 7.1, 7.2, 7.3, 7.5, 8.1 will be given as homework |

**Topic - Differential Equations**

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| P. K. Testing | * Find the derivative of 5x+sinx+tan2x? * Find ∫sinzcosxdx * What is the derviation of constant function? |
| Learning Objectives | * To make them understand the concept of Indefinite Integral * Learn fundamental integral formula * Apply standard result of integration * To make them aware about daily life use of integration |
| Contents | * Problem based on some standard result * Method of integration * Integration of substitution * Integration by parts * Integration by Partial fractions * Area of bounded region |
| Homework | 7.1, 7.2, 7.3, 7.5, 8.1 will be given as homework |