ನಮೂನೆ–1

(ಪ್ರಯೋಗ ರಹಿತ ವಿಷಯಗಳು)

ವಿಷಯ: MATHEMATICS ಸಂಕೇತ:35 ತರಗತಿ : ಪ್ರಥಮ ಪಿಯುಸಿ

ಕ್ರ ಸಂ	ಅವಧಿ	ನಿಗದಿಪಡಿಸಿದ ಅಧ್ಯಾಯಗಳು	ಲಭ್ಯ ಅವಧಿಗಳು
1	ಮೊದಲ ಅವಧಿ 16.08.2021 ರಿಂದ 15.09.2021 ರವರೆಗೆ	**1. Bridge Course** The course focuses on important concepts, problem-solving and formulae. The PU syllabus is in-depth, and students must have a strong hold over core concepts which are taught in the 9th and 10th class. (Breif recapitulation of INDICES, NUMBER SYSTEM,OPERATION ON FRACTIONS, BASIC CONCEPTS OF GEOMETRY, POLYNOMIALS,SOLVING LINEAR AND QUADRATIC EQUATIONS, ELEMENTARY ALGEBRA.TRIGONOMETRIC RATIO, and two dimensional geometry) **2.Sets (1.1 to 1.10.2)** **(**Sets and their representations. Empty set. Finite and Infinite sets. Equal sets. Subsets. Subsets of a set of real numbers especially intervals (with notations). Power set. Universal set. Venn diagrams. Union and Intersection of sets.) 3. **Relations & Functions (Full Chapter)** **(**Ordered pairs. Cartesian product of sets. Cartesian product of the set of reals with itself (R x R only).Definition of relation, domain, co-domain and range of a relation. Function, Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs.)	(20) 8 4 8
2	1ನೇ ಕಿರುಪರೀಕ್ಷೆ 13–09–2021 ರಿಂದ 15–09–2021 ರವರೆಗೆ	ಮೊದಲ ಅವಧಿಯಲ್ಲಿ ಬೋಧಿಸಿದ ಪಠ್ಯವಸ್ತು ವಾರ್ಷಿಕ ಪರೀಕ್ಷೆಯ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯ ಮಾದರಿಯಲ್ಲಿಯೇ ಪರೀಕ್ಷೆಗಳು ನಡೆಯುವವು	
3	ಅಸೈನ್ ಮೆಂಟ್ –1	ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಾರ್ಕಿಕ ಚಿಂತನೆಗೊಳಿಸುವ ವಿಷಯಗಳನ್ನು ನೀಡುವುದು	

4	ಎರಡನೇ ಅವಧಿ 16–09–2021 ರಿಂದ 30–11–2021ರವರೆಗೆ	1.**Trigonometric Functions (3.1 to 3.4.20)** Introduction, Angles, Degree measure, Radian measure, Relation between radian and real numbers, Relation between degree and radian, Notational Convention, Trigonometric Functions, Sign of trigonometric functions, Domain and range of trigonometric functions, Trigonometric Functions of Sum of Two Angles. (sin (– x) = – sin x, cos (– x) = cos x and cos (x + y) = cos x cos y – sin x sin y) geometrically, sin ($x\pm y$) and cos ($x\pm y$) in terms of sin$x$, sin$y$, cos$x$ & cos$y$ and their simple applications. Deducing identities like the following: tan(x±y)=tanx±tany/1∓tanxtany ,cot(x±y)=cotxcoty ∓1/coty±cotx sinx±siny=2sin$\left(\frac{x+y}{2}\right)cos\left(\frac{x-y}{2}\right)$, cosx+cosy=2cos$\left(\frac{x+y}{2}\right)cos\left(\frac{x-y}{2}\right)$ cosx-cosy=-2sin$\left(\frac{x+y}{2}\right)sin\left(\frac{x-y}{2}\right)$Identities related to sin2x, cos2x, tan2 x, sin3x, cos3x and tan3x. **2.Straight Lines(10.1 to 10.5.1)** Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept form and normal form. General equation of a line. Distance of a point from a line. **3.Limits and Derivatives (13.1 to13.5.2)** Introduction, Intuitive, Idea of Derivatives, Limits, Algebra of limits Limits of polynomials and rational functions, Limits of Trigonometric Functions, Derivatives, Algebra of derivative of functions.Derivative of polynomials and trigonometric functions	(40) 18 10 12
5	ಅಸೈನ್ ಮೆಂಟ್ –2	ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಾರ್ಕಿಕ ಚಿಂತನೆಗೊಳಿಸುವ ವಿಷಯಗಳನ್ನು ನೀಡುವುದು	
6	ಮಧ್ಯ ವಾರ್ಷಿಕ ಪರೀಕ್ಷೆ 20–11–2021 ರಿಂದ 30–11–2021 ರವರೆಗೆ	1 ಮತ್ತು 2ನೇ ಅವಧಿಯಲ್ಲಿ ಬೋಧಿಸಿದ ಒಟ್ಟು ಪಠ್ಯವಸ್ತುವನ್ನು ಆಧರಿಸಿ	

7	ಮೂರನೇ ಅವಧಿ 01–12–2021 ರಿಂದ 30–01–2022ರವರೆಗೆ	**1. Linear Inequalities(Full Chapter)** Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Graphical method of finding a solution of system of linear inequalities in two variables. **2. Permutations and Combinations(Full Chapter)** Introduction, Fundamental Principle of Counting, Permutations and Combinations **3.Sequence and Series (9.1 to 9.6)** Sequence and Series. Arithmetic Progression (A. P.). Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a G.P., sum of *n* terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M **4.Complex Numbers and Quadratic Equations (5.1 to 5.5.0)** **(**Introduction.Complex Numbers.Algebra of Complex Numbers.The Modulus and the Conjugate of a Complex Number.Argand Plane. Quadratic Equations) 5.**Introduction to Three-dimensional Geometry(Full Chapter)** Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula. **6. Statistics(15.1 to 15.5.1)** Measures of Dispersion: Range, mean deviation, variance and standard deviation of ungrouped/grouped data. 7. **Probability (16.1 to 16.3.5)** Random experiments; outcomes, sample spaces (set representation). Events; occurrence of events, ‘not’, ‘and’ and ‘or’ events, exhaustive events, mutually exclusive events, Probability of an event, probability of ‘not’, ‘and’ and ‘or’ events..	40 6 7 6 6 5 5 5
8	2ನೇ ಕಿರುಪರೀಕ್ಷೆ 28–01–2022 ರಿಂದ 31–01–2022 ರವರೆಗೆ	3ನೇ ಅವಧಿಯಲ್ಲಿ ಬೋಧಿಸಿದ ಪಠ್ಯವಸ್ತು	

9	ನಾಲ್ಕನೇ ಅವಧಿ 01–02–2022 ರಿಂದ 31–03–2022ರವರೆಗೆ	1. **Conic Sections (Full Chapter)** Sections of a cone: circles, ellipse, parabola, hyperbola. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle. **2.Sets (1.10.3 to 1.12)** Complement of a Set, Practical Problems on Union and Intersection of two Sets. **3.Trigonometric Functions (3.5)** Trigonometric Equations. **4.Principle of Mathematical Induction (Full Chapter)** Introduction, Motivation, The Principle of Mathematical Induction **5.Complex Numbers and Quadratic Equations(5.5.1 to 5.6)** Polar Representation **6. Binomial Theorem(Full Chapter)** Introduction. Binomial Theorem for Positive Integral Indices, General And Middle Terms. **7. Sequences and Series(9.6)** Sum to n terms of Special Series. **8. Mathematical Reasoning (Full Chapter)** Introduction, Statements, New Statements from Old, Special Words/Phrases Implications, Validating Statements **9. Statistics (15.5.2 to 15.6.1)** Analysis of Frequency Distributions **10. Probability(16.4 to 16.4.4)** Axiomatic Approach to Probability.	(37) 6 3 3 4 3 6 2 5 2 3
10	ವಾರ್ಷಿಕ ಪರೀಕ್ಷೆ 24–03–2022 ರಿಂದ 30–03–2022	ಪೂರ್ಣ ಪ್ರಮಾಣದ ಪಠ್ಯವಸ್ತು	