

I PU Test Syllabus – November 2021

ಕನ್ನಡ

ವಚನಗಳು: ಅಲ್ಲಮಪ್ರಭು

ಪದ್ಯ: (1) ಎಂದಿಗೆ, (2) ಮಗು ಮತ್ತು ಹಣ್ಣುಗಳು

ಗದ್ಯ: (1) ಗಾಂಧಿ, (2): ರಾಗಿಮುದ್ದೆ

ನಾಟಕ: ಬೋಲೇಶಂಕರ (ಪ್ರತಿ 173 ರವರೆಗೆ)

ಭಾವಾರ್ಥ: ಪದ್ಯದ ಭಾವವನ್ನು ವಿವರಿಸುವುದು

ವ್ಯಾಕರಣ: ಪದಗಳ ಅರ್ಥ ಬರೆಯುವುದು, ಸ್ವಂತವಾಕ್ಯ ರಚಿಸುವುದು, ವಿರುದ್ಧ ಪದಗಳು, ಸಮಾನಾರ್ಥಕ, ನಾನಾರ್ಥಕ, ಗಾದೆ ವಿಸ್ತರಣೆ

HINDI

गद्य भाग से

1. बड़े घर की बेटी 2. युवाओं से

मध्ययुगीन काव्य से

1. कबीरदास के दोहे

आधुनिक कविता भाग से

1. कुटिया में राजभवन 2. तोड़ती पत्थर

अपठित भाग से

1. मधुआ

2. इमशान

व्याकरण तथा रचना भाग से

1. वाक्य शुद्धि 2. कारक-रिक्त स्थान की पूर्ति
3. मुहावरे 4. काल परिवर्तन 5. लिंग

SANSKRIT

वर्णमाला, प्रतिलेखा चरममाला प्रतीलैख

भूमिका (पूर्वार्धः) भूमिका (पूरुवार्धः)

द्वे विद्ये वेदितव्ये द्वे विद्ये वेदितव्ये

आदर्शगुणाः अदर्शगुणाः

विवादः विनाशाय विवादः विनाशाय

ENGLISH

Course Book:

1. The Gentlemen of the Jungle
2. The School Boy
3. Oru Manushyan

Work Book:

- Articles
Prepositions
Reading Comprehension Passage

ACCOUNTANCY

Introduction to Accounting
Theory Base of Accounting
Recording of Transactions – I (Till Journal)

BUSINESS STUDIES

01. Business, Trade and Commerce
02. Forms of Business Organization

ECONOMICS

STATISTICS FOR ECONOMICS

1. Chapter – 1
Introduction
2. Chapter - 2
Collection of data
IED
3. Chapter – 1
Indian economy on the eve of Independence
(1947-1990)
4. Chapter – 2
Indian Economy
(1950-1990)
5. Economic reforms since 1991

STATISTICS

Bridge Course

Unit I: Introduction to Statistics and Some basic Concepts
Unit II: Organization of data

Unit III: Classification and Tabulation

Unit IV: Diagrammatic & graphical representation of data

BASIC MATHEMATICS

- | | |
|----------------------|---|
| 1) Number Theory | 4) Coordinate system in a plane |
| 2) Theory of Indices | 5) Simple Interest |
| 3) Averages | 6) Trigonometry (Measurement of angles) |

PHYSICS

1. PHYSICAL WORLD

- 1.1 What is physics?
- 1.4 Fundamental forces in nature

2. UNITS AND MEASUREMENTS

- 2.1 Introduction
- 2.2 The international system of units
- 2.3 Measurement of length
- 2.4 Measurement of mass
- 2.5 Measurement of time
- 2.6 Accuracy, precision and errors in measurement
- 2.7 Significant figures
- 2.8 Dimensions of physical quantities
- 2.9 Dimensional formulae and dimensional equations
- 2.10 Dimensional analysis and its applications

3. MOTION IN A STRAIGHT LINE

- 3.1 Introduction
- 3.2 Position, path length and displacement
- 3.3 Average velocity and average speed
- 3.4 Instantaneous velocity and speed
- 3.5 Acceleration
- 3.6 Kinematic equations for uniformly accelerated motion
- 3.7 Relative velocity
(Frame of reference: Position-time graph, speed and velocity
– To be discussed in the last session)

4. MOTION IN A PLANE

- 4.1 Introduction
- 4.2 Scalars and vectors
- 4.3 Multiplication of vectors by real numbers
- 4.4 Addition and subtraction of vectors - graphical method
- 4.5 Resolution of vectors
- 4.6 Vector addition – analytical method

CHEMISTRY

Unit I: Some Basic Concepts of Chemistry: (9Hours)

Importance and scope of chemistry.

Historical approach to particulate nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses. Mole concept and molar mass; percentage composition and empirical and molecular formula; chemical reactions, stoichiometry and calculations based on stoichiometry.

Unit 12: Organic Chemistry – Some Basic Principles and Techniques(12 Hours)

General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation.

Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions.

MATHEMATICS

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. (Brief 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 ($\mathbb{R} \times \mathbb{R}$ 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.)

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:

$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$

$\sin x \pm \sin y = 2 \sin\left(\frac{x+y}{2}\right) \cos\left(\frac{x-y}{2}\right), \cos x + \cos y = 2 \cos\left(\frac{x+y}{2}\right) \cos\left(\frac{x-y}{2}\right)$

$\cos x - \cos y = -2 \sin\left(\frac{x+y}{2}\right) \sin\left(\frac{x-y}{2}\right)$ Identities related to $\sin 2x, \cos 2x, \tan 2x, \sin 3x, \cos 3x$ and $\tan 3x$.

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 to 13.5.2)

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

COMPUTER Sc.

1. Overview of Computer

Introduction, Features / characteristics of computer, Evolution of computers / History of computer, Generations of computer, Block diagram of computer / functional units, Classifications of computers & Applications of computers

2. Problem Solving Methodology

Introduction, Problem solving stages, Algorithms – characteristics & Examples solved in class, Flowcharts – types and symbols , Examples solved in class

3. Introduction to C++

Character set, C ++ Tokens – Keywords, identifiers, variables, constants & punctuators, Operators- arithmetic, relational , logical , unary , binary & ternary , increment and decrement , Expressions- types and General structure of C++ Program, solved examples.

4. Data Types

Definition, Fundamental data type , Modifiers and Type conversion

5. Input output operators

Introduction, Cin and cout with syntax and example, Manipulators and Cascading of input and output operators

6. Spread sheets

Introduction, Features, Applications, Components of spread sheets and Built-in functions (arithmetic, statistical and text functions)

BIOLOGY

1: The Living World

3: Plant Kingdom

2: Biological Classification

4: Animal Kingdom

ELECTRONICS

1. Introduction To Electronics

2. Principles of Electricity, Network Theorems and AC Principles

4. Passive Electronic Components (Resistors only upto variable and problems of resistors)

FRENCH

1. Articles indéfinis et définis.

2. Les jours de la semaine/les mois de l'année/les saisons/les chiffres (nombres ordinaux de 1 à 20 et nombres cardinaux de 1 à 100)/les professions/les couleurs

3. Le Present :
etre/avoir/aller/venir et les verbes du 1^{er}/2^e et 3^e groupe

4. Les articles contractés

5. Les adjectifs possessifs

6. Les adjectifs démonstratifs

7. Se présenter ou quelqu'un et des verbes pronominaux

8. Les adjectifs interrogatifs (quel/quels/quelle /quelles)

9. Dossier 1 (text book & work book) : Traduisez les phrases/Reliez/ Répondez aux questions/Présent er le ou la /Dialoguez : jeux de rôles - (situation 1 et 2)/ Faisons le point/ Reliez/ Compréhension et exercice (pg 8 from work book)