B.A. 1st year 1st Sem. (2025-26)

Paper: Sets and Sequences (Minor)

Name of teacher: Dr. Renu Sheoran

#### **Month of August:**

- Definition of sets
- Representation of sets
- Type of sets
- Finite and infinite sets

## **Month of September:**

- Operation on sets
- Venn diagram
- Complement of set
- Demorgan's law
- Practical application of set operation
- Assignment and test.

#### Month of October:

- Arithmetic progression
- Nth term of AP.
- Sum of n terms of A.P.
- Geometric progression

#### Month of November:

- Nth term of G.P.
- Sum of n terms of G.P.
- Sum of infinite terms of G.P.
- Harmonic progression
- Assignment and test

## Month of December:

Revision

B.COM. 1st year 1st Sem. (2025-26)

**Paper: Business Mathematics (Minor)** 

Name of teacher: Dr. Renu Sheoran

## **Month of August:**

- Definition of matrices
- Type of matrices
- Algebra of matrices
- Properties of determinant

#### **Month of September:**

- Arithmetic progression
- Nth term of AP.
- Sum of n terms of A.P.
- Geometric progression
- Nth term of G.P.
- Sum of n terms of G.P.
- Sum of infinite terms of G.P.
- Assignment and test.

#### **Month of October:**

- Common logarithm
- ❖ Anti logarithm

#### Month of November:

- Annuity
- Compound interest
- Assignment and test

#### **Month of December:**

Revision

B.A. 2<sup>nd</sup> year 3rd Sem. (2025-26)

Paper: Differential Equations (Major)

Name of teacher: Dr. Renu Sheoran

#### **Month of August:**

- Differential equation
- Exact differential equation
- Lagrange's equation
- Clairaut's equation
- Singular solution

#### **Month of September:**

- Linear differential equation with constant coefficient
- Homogeneous linear differential equation
- Equation reducible to Homogeneous linear differential equation
- Ordinary simultaneous differential equation
- Solution of simultaneous differential equation

#### Month of October:

- Formation of partial differential equation
- Solution of partial differential equation
- Formation of partial differential equation with variable coefficient
- Solution of partial differential equation with variable coefficient

#### Month of November:

- Classification of linear partial differential equation of second order
- Linear and non linear, homogeneous and non homogeneous partial differential equation of second order and higher order with constant and variable coefficient

#### Month of December:

Revision

B.A. 3rd year 5th Sem. (2025-26)

Paper: 1) Sequence and Series

2) Groups and Rings

Name of teacher: Dr. Renu Sheoran

#### Month of July:

- Fouries series
- Half range fourier series
- Parseval's identity

## **Month of August:**

- Groups
- Subgroup
- Cosets
- Quotient group

#### **Month of September:**

- Homomorphism
- Automorphism
- Permutation group

#### Month of October:

- Ring
- **❖** Field
- Subring
- Ideal and Quotient Ring

#### Month of November:

- Euclidean Ring
- Polynomial Ring
- Assignment and test

#### Month of December:

Revision

# B.A. 2nd year 3rd Sem. (2025-26)

# Paper: Application of Mathematical Statistics in daily life (MDC)

Name of teacher: Dr. Renu Sheoran

#### **Month of August:**

- Definition, importance and application of statistics
- Type of Data
- Organizing Data

#### **Month of September:**

- Mean for ungrouped and grouped data
- Median for ungrouped and grouped data
- Assignment and test

#### **Month of October:**

- Mode for ungrouped and grouped data
- Range

#### **Month of November:**

- Standard deviation and variance for ungrouped data and grouped data
- Interquartile range
- Assignment and test

#### Month of December:

Revision

B.A./B.Com. 1st year 1st Sem. (2025-26)

Paper: Environmental Studies (VAC)

Name of teacher: Dr. Renu Sheoran

## **Month of August:**

- Multidisciplinary nature of environmental studies
- Definition, scope, importance and need of EVS

## **Month of September:**

- Ecosystem
- Ecological succession
- Assignment and test.

#### **Month of October:**

- Biodiversity and its conservation
- Biogeographically classification of India

#### Month of November:

- Value of biodiversity
- In-situ and Ex-situ conservation of biodiversity
- Assignment and test

#### Month of December:

Revision