

Class – XI Lesson Plan

Topic: Numbers, Quantification and Numerical Applications

Brief Description of the lesson:

The chapter Numbers, Quantification and Numerical Applications in Class 11 Applied Mathematics deals with the basic concepts of numbers, their representation and application in numerical problems. The chapter Numbers, Quantification and Numerical Applications is an important foundation for the rest of the course in Applied Mathematics. The concepts and skills learned in this chapter will be used in many of the other chapters, so it is important to have a strong understanding of them.

Objectives:

I - Specific Objectives:

To enable the students to:

- S1 Students will be able to define indices and logarithms (**Knowledge/Recalling**)
- S2 Students will be able to state and apply the laws of indices. (**Apply/Implementation**)
- S3 Students will be able to convert between exponential and logarithmic forms. (**Understand/Interpret**)
- S4 Students will be able to solve simple logarithmic equations. (**Apply/Implementation**)
- S5 Understand the concept of binary numbers (**Understand/Interpret**)
- S6 Convert decimal number to binary number and vice – versa (**Apply/Implementation**)
- S7 Binary addition and subtraction (**Understand/Interpret**)
- S8 Solve numerical problems on: Averages, Calendar, Clock, Work, Time and Distance, Mensuration and Seating arrangement (**Apply/Implementation**)

II - Behavioural Objectives:

By understanding and solving variety of problems, students will attain following behavioural objectives:

- 1) B1 Understand the concept of binary numbers, conversion of decimal number to binary and vice-versa. (**Apply/Implementation**)
- 2) B2 Develop the practical problem-solving skills by learning and applying different concepts learnt in the topics of quantitative aptitude (Averages, Calendar, Clock, Work, Time and Distance, Mensuration and Seating arrangement). (**Analysis**)

Process / Activities:

- 1) ACT1 Different videos would be shown to understand the topic better. (**Understand/Classifying**)
- 2) ACT2 Graphical representation of logarithm as a function of a variable. (**Analysis**)

Skills:

- 1) Analysis
- 2) Problem solving
- 3) Application

Assessment:

Assessment of activity will be done based on decided rubrics:

A1 Assessment of activity will be done based on the selected questions from textbook and reference book.

Expected Learning Outcomes:

The students would be able to efficiently deal with:

- 1) Conversion of decimal number to binary number and vice – versa, Binary addition and Binary subtraction

(Knowledge/Recalling)

- 2) Understand about Indices, Logarithms and Anti – logarithms

a) Laws and properties of logarithms **(Understand/Classifying)**

b) Simple applications of logarithm and antilogarithm **(Understand/Classifying)**

c) Calculate „numbers having power“ without using calculator by using concept of logarithm and anti – logarithm **(Apply/Implementation)**

- 3) Solution of problem based on:

a) Averages

b) Calendar

c) Clock

d) Work, Time and Distance

e) Mensuration

- 4) Critical thinking **(Apply/Implementation)**

Placements of Objectives, Instructional Activities and Assessment:

| Topic/Start Date/Assessment | | | | | |
|-----------------------------|---------------|-------------|----------|-----------|------------|
| Knowledge | Understanding | Application | Analysis | Synthesis | Evaluation |
| S1 | S3 | S2 | B2 | | |
| | S5 | S4 | ACT2 | | |
| | S7 | S6 | | | |
| | ACT1 | S8 | | | |
| | | B1 | | | |
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