

Class – XI
Lesson Plan

TOPIC: BINOMIAL THEOREM

Brief Description: In this chapter, Students will be able to learn / understand about

1. Pascal's triangle
2. Binomial Theorem for Positive Integral Indices, General Term and Middle Terms.

UN Sustainable Goals to be achieved (if any): Quality Education

Objectives: (put Bloom's level)

I - Specific Objectives

Students will be able to understand:

- ❖ Pascal's triangle
- ❖ Binomial Theorem for Positive Integral Indices,
- ❖ General Term and Middle Terms in the expansion of $(a + b)^n$

II - Behavioral Objectives

Students will observe following behavioral objectives after completion of topics, like:

- ❖ Reasoning ability
- ❖ Analyzing things

Process / Activities

Activity (to introduce the lesson)

1. To construct a Pascal's Triangle and to write binomial expansion for a given positive integral exponent.

Activity (to support learning)

Students will be asked to conduct an activity in the classroom regarding:

To expand binomial expression with different powers and try to find out the relation between power and number of terms

Skills (as per subject)

- ❖ Observation
- ❖ Understanding
- ❖ Problem solving

Exercise for Notebook (put Bloom's level)

- ❖ Glossary
- ❖ R.T.C (Reference to Context)
- ❖ Typology of questions
- ❖ Value based question

Expected Learning Outcomes

Students would be able to learn:

- ❖ Pascal's triangle
- ❖ Binomial Theorem for Positive Integral Indices
- ❖ General Term and Middle Term(s) in the expansion of $(a + b)^n$

Behavioral Perspective:

- ❖ Reasoning ability
- ❖ Analyzing things

Assessment: (put Bloom's level)

Q1. Write the expression for $(x + 2)^3$ (PS)

Q2. Find the coefficient of x^5 in $(x + 3)^8$. (US)

Q3. Find a if the 17th and 18th terms of the expansion $(2 + a)^{50}$ are equal. (MS)

Q4. Using binomial theorem, prove that $6n - 5n$ always leaves remainder 1 when divided by 25. (R)

Q5. Find the coefficient of a^4 in the product $(1 + 2a)^4 (2 - a)^5$ using binomial theorem. (AEL)