Class – XI
Lesson Plan

Topic: Sequence and Series
Brief Description of the lesson:

The students will be able to revise of topics related to algebra learnt in previous classes, importance and use of algebra and then concept of sequence and series, arithmetic progression, geometric progression and application of AP and GP.

Objectives:

Specific Objectives:

Students will be able to:
S1 understand the concept of sequence and series, meaning of arithmetic progression and nth term of an AP and GP **(Understanding/Classifying)**
S2 create and identify a sequence by given general term **(Synthesis) (Analysis)**
S3 find general term and last term of given AP and GP **(Apply/Implementation)**
S4 find sum to 'n' terms of given AP and GP **(Apply/Implementation)**
S5 understand concepts and formulae related to arithmetic mean and geometric mean.
(Understanding/Classifying)

II - Behavioral Objectives:

After completion of chapter, students would be able to attain following behavioural objectives:
1) B1 Identify and differentiate between AP and GP **(Analyze/Differentiate)**
2) B2 Real life problems solving based on AP and GP **(Apply/Implementation)**

Process / Activities:

ACT1 Students will be asked to solve real-world problems involving APs: A student wants to save money for a new phone. He wants to save Rs.10 on the first day, Rs.12 on the second day, Rs.14 on the third day, and so on. How much money will he saved after 30 days? **(Apply/Implementation)**

ACT2 Students can be asked to solve real-world problems involving GPs: A single bacterium is placed in a petri dish and allowed to grow. The bacterium divides every hour, and the number of bacteria doubles each time it divides. How many bacteria will be in the petri dish after 24 hours?
(Apply/Implementation)

Skills:

(i) Problem solving
(ii) Calculation
(iii) Critical thinking

Assessment:

Assessment of activity will be done on the basis of following questions
A1 A construction worker is building a staircase. He wants the staircase to have 10 steps, and he wants each step to be 1 inch taller than the previous step. How tall will the tenth step be? **(Analyze/Differentiate) (Apply/Implementation)**

A2 A radioactive isotope has a half-life of 10 years. If there is initially 1 gram of the isotope, how much of the isotope will remain after 50 years? **(Analyze/Differentiate) (Apply/Implementation)**

Expected Learning Outcomes:

Students would be able to:
1) differentiate between sequence and series **(Analyze/Differentiate)**
2) to define and identify an AP(and GP) as a sequence in which the difference(ratio) between any two consecutive terms is constant. **(Understand/Classifying)**
3) find and obtain a sequence(AP/GP) by given information. **(Synthesis) (Apply/Implementation)**
4) find general term and sum to 'n' terms of given AP(GP) **(Apply/Implementation)**
5) to apply APs and GPs to solve real-world problems. **(Apply/Implementation)**

Topic/Start Date/Assessment					
Knowledge	**Understanding**	**Application**	**Analysis**	**Synthesis**	**Evaluation**
	S1	S3	S2	S2	
	S5	S4	B1		
		B2	A1		
		ACT1	A2		
		ACT2			
		A1			
		A2			