

**KHM HIGHER SECONDARY SCHOOL, VALAKKULAM**  
**FIRST MIDTERM EVALUATION - 2023**  
**MATHEMATICS**

**Time: 40 Minutes**

**STD: X**

**Max.Marks:20**

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1. Algebraic expression of an arithmetic sequence is  $3n+2$ 
  - a) What is the common difference ?
  - b) Find 10th term ? (2)
2. Consider the arithmetic sequence 1,4,7,10.....
  - a) What is the common difference ?
  - b) Write the algebraic form of this sequence ? (2)
3. The sum of the 6th and the 9th terms of an arithmetic sequence is 30
  - a) What is the sum of the first and the 14th terms of this sequence ?
  - b) What is the sum of the first 14 terms of this sequence ? (2)
4. Consider the arithmetic sequence 10,14,18.....
  - a) Can the difference of any two terms of this sequence be 96 ?
  - b) Check whether 2021 is a term of this sequence ? (3)
5. Find the sums
  - a)  $1+2+3+\dots\dots\dots+15$
  - b)  $2+4+6+\dots\dots\dots+30$
  - c)  $5+7+9+\dots\dots\dots+33$  (3)
6. Consider the sequence of two digit numbers which leave a remainder 1 on divisible by 2
  - a) What is its common difference ?
  - b) Which is the smallest number in this sequence ?
  - c) How many two digit numbers are there which leave a remainder 1 on divisible by 2 ?
  - d) What is the sum of such numbers ? (4)
7. Sum of the first n terms of an arithmetic sequence is  $n^2+3n$ 
  - a) What the common difference ?
  - b) What is the sum of first 25 terms of this sequence ?
  - c) Find 13th term of this sequence ? (4)