

Section A (10 Marks)

1. Which of the following sequences are arithmetic progressions? Justify your answer.
 - a) 2, 4, 6, 8, ...
 - b) 1, 4, 9, 16, ...
 - c) -3, -1, 1, 3, ...
2. Find the common difference of the arithmetic progression: 5, 11, 17, 23, ...
3. Write the first five terms of the arithmetic progression whose first term is 3 and common difference is 2.
4. Find the 10th term of the arithmetic progression: 2, 7, 12, 17, ...
5. Which term of the arithmetic progression: 21, 18, 15, ... is -81?

Section B (10 Marks)

6. The 17th term of an AP exceeds its 10th term by 7. Find the common difference.
7. The sum of the first n terms of an AP is given by $S_n = 3n^2 + 5n$. Find the n th term of the AP.
8. How many terms of the AP: 9, 17, 25, ... must be taken so that their sum is 636?
9. The sum of the 4th and 8th terms of an AP is 24 and the sum of the 6th and 10th terms is 34. Find the first three terms of the AP.
10. Find the sum of all two-digit natural numbers which are divisible by 4.