MCQS on Chapter 5: Arithmetic Progressions for Class 10

1. The first term and common difference of the AP: 3, 1, −1, −3, … are:
(a) a = 1, d = 3
(b) a = 3, d = 2
(c) a = 3, d = −2
(d) a = −1, d = 3
2. If a = 10 and d = 5, the first four terms of the AP are:
(a) 10, 15, 25, 40
(b) 10, 15, 20, 25
(c) 10, 20, 30, 40
(d) 5, 10, 15, 20
3. The common difference of the AP: −3, −½, 2, 9/2, … is:
(a) 2
(b) 3
(c) 5/2
(d) 7/2
4. In an AP, a = 28, d = −4, n = 7. Find a□.
(a) 4
(b) 5
(c) 3
(d) 7
5. If the 17th term of an AP exceeds its 10th term by 7, the common difference is:
(a) 1
(b) 2
(c) 3
(d) 4
6. The sum of the first 20 terms of the AP: 1, 3, 5, 7, … is:
(a) 361
(b) 381
(c) 390
(d) 400
7. The sum of the first 10 terms of the AP: 8, 3, −2, … is:
(a) −145

(b) −85
(c) 85
(d) 145

8. The number of multiples of 4 between 10 and 250 is:
(a) 50
(b) 40
(c) 60
(d) 30

9. The sum of first n terms of an AP is $3n^2 + 5n$. What is the first term and common difference?
(a) a = 5, d = 3
(b) a = 8, d = 6
(c) a = 3, d = 8
(d) a = 6, d = 8

10. The missing terms in the AP: __, 13, __, 3 are:
(a) 11 and 9
(b) 17 and 9
(c) 18 and 8
(d) 16 and 9

11. In an AP, if $S_5 + S_7 = 167$ and $S_{10} = 235$, find the AP.
(a) a = 1, d = 5; AP: 1, 6, 11, 16, …
(b) a = 2, d = 5; AP: 2, 7, 12, 17, …
(c) a = 5, d = 1; AP: 5, 6, 7, 8, …
(d) a = 3, d = 5; AP: 3, 8, 13, 18, …

12. A contract specifies that a penalty of ₹200 is charged for the first day of delay in completing a work, ₹250 for the second, ₹300 for the third, and so on. If the contractor is 30 days late, what is the total penalty?
(a) ₹26,500
(b) ₹27,750
(c) ₹30,000
(d) ₹25,000

13. A ladder has rungs 25 cm apart. The rungs decrease uniformly in length from 45 cm at the bottom to 25 cm at the top. The ladder is 2.5 m tall. How much wood is required for the rungs?
(a) 375 cm

(b) 385 cm
(c) 395 cm
(d) 400 cm

14. In a potato race, a bucket is placed at the starting point (0 m). Potatoes are placed 5 m from the bucket, then every 3 m thereafter. There are 10 potatoes. A competitor picks them up one by one and drops them in the bucket. What is the total distance run?
(a) 730 m
(b) 370 m
(c) 400 m
(d) 340 m

15. The 21st term of an AP whose first two terms are −3 and 4 is:
(a) 17
(b) 137
(c) 143
(d) −143

Answer key

1 - c, 2 - b, 3 - c, 4 - a, 5 - a, 6 - d, 7- a, 8 - c, 9 - b, 10 - c, 11 - a, 12 -b, 13 - b, 14 - b, 15 - b