

Multiple choice questions:

1. The sum of all terms of the arithmetic progression having ten terms except for the first term is 99 and except for the sixth term 89. Find the third term of the progression if the sum of the first term and the fifth term is equal to 10
(a) 15 (b) 5 (c) 8 (d) 10

2. If the third term of an AP is 12 and the seventh term is 24, then the 10th term is
(a) 33 (b) 34 (c) 35 (d) 36

3. If $p - 1, p + 3, 3p - 1$ are in AP, then p is equal to
(a) 4 (b) - 4 (c) 2 (d) - 2

4. A number 15 is divided into three parts which are in AP and sum of their squares is 83. The smallest part is
(a) 2 (b) 5 (c) 3 (d) 6

5. In a certain AP, 5 times the 5th term is equal to 8 times the 8th term, then its 13th term is equal to
(a) 5 (b) 1 (c) 0 (d) 13

6. The sum of all two-digit numbers which when divided by 4 yield unity as remainder is
(a) 1012 (b) 1201 (c) 1212 (d) 1210

7. The sum of 5 numbers in AP is 30 and sum of their squares is 220. Which of the following is the third term?
(a) 5 (b) 6 (c) 7 (d) 8

8. If a, b, c, d, e and f are in AP, then $e - c$ is equal to
(a) $2(c - a)$ (b) $2(f - d)$ (c) $2(d - c)$ (d) $d - c$

9. Four numbers are inserted between the numbers 4 and 39 such that an AP results. Find the biggest of these four numbers
(a) 30 (b) 31 (c) 32 (d) 33

10. A man receives Rs. 60 for the first week and Rs. 3 more each week than the preceding week. How much does he earn by the 20th week?

(a) Rs. 1760

(b) Rs. 1770

(c) Rs. 1780

(d) Rs. 1790

11. The value of the expression $1 - 6 + 2 - 7 + 3 - 8 + \dots$ to 100 terms

(a) -225

(b) -250

(c) -300

(d) -350

12. If the numbers a, b, c, d, e forms an AP, then the value of $a - 4b + 6c - 4d + e$ is

(a) 1

(b) 2

(c) 0

(d) none of these

13. 7th term of an AP is 40. The sum of its first 13th terms is

(a) 500

(b) 510

(c) 520

(d) 530

14. How many terms are there in the arithmetic series $1 + 3 + 5 + \dots + 73 + 75$?

(a) 28

(b) 30

(c) 36

(d) 38

15. The 8th term of an AP is 17 and its 14th term is -29. The common difference of the AP is

(a) -2

(b) 3

(c) 2

(d) 5