

CLASS-10

MCQs

2024-'25

1) If the first three terms of an AP are  $3p-1$ ,  $3p+5$  and  $5p+1$ , then the value of  $p$  is -  
(a) 2 (b) -3 (c) 4 (d) 5

2) The next 4<sup>th</sup> term of the AP  
 $\sqrt{18}$ ,  $\sqrt{50}$ ,  $\sqrt{98}$  ... is

(a)  $\sqrt{128}$  (b)  $\sqrt{140}$  (c)  $\sqrt{162}$  (d)  $\sqrt{200}$

3) The common difference of the AP whose  $n^{\text{th}}$  term is given by  $a_n = 3n+7$  is  
(a) 7 (b) 3 (c)  $3n$  (d) 1

4) If sum of first  $n$  terms of an AP is  $3n^2 + n$  and its common difference is 6, then its first term is —  
(a) 2 (b) 3 (c) 1 (d) 4

5) The first term of an AP is  $p$  and the common difference is  $q$ , then its  $10^{\text{th}}$  term is —  
(a)  $q + 9p$  (b)  $p - 9q$  (c)  $p + 9q$  (d)  $2p + 9q$

6) Which term of the AP 21, 42, 63, ... is 210  
(a) 9<sup>th</sup> (b) 10<sup>th</sup> (c) 11<sup>th</sup> (d) 12<sup>th</sup>

7) Two APs have the same common difference. The first term of one these is  $-1$  and that of the other is  $-8$ . Then the difference between their  $n^{\text{th}}$  terms is  
(a)  $-1$  (b)  $-8$  (c)  $7$  (d)  $-9$

8) The list of numbers  $-10, -6, -2, 2, \dots$  is  
(a) an AP with  $d = -16$   
(b) an AP with  $d = 4$   
(c) an AP with  $d = -4$   
(d) not an AP

9) In an AP, if  $a = 3.5$ ,  $d = 0$ ,  $n = 101$ , then  $a_n$  will be  
(a)  $0$  (b)  $3.5$  (c)  $103.5$  (d)  $104.5$

10) If  $a_1, a_2, a_3, \dots$  is an AP such that  $a_1 + a_5 + a_{10} + a_{15} + a_{20} + a_{24} = 300$  then  $a_1 + a_2 + a_3 + \dots + a_{24}$  is equal to  
(a) 1200 (b) 400 (c) 800 (d) 1000

11) If  $S_n = nP + \frac{n(n-1)}{2} Q$ ; where  $S_n$  denotes the sum of the first  $n$  terms of an AP, then common difference is  
(a)  $P+Q$  (b)  $2P+3Q$  (c)  $2Q$  (d)  $Q$

12) The sum of  $n$  terms of the series  $2, 5, 8, 11, \dots$  is 60100, then  $n$  is  
(a) 100 (b) 200 (c) 150 (d) 250

13) The 15<sup>th</sup> term of the sequence  $x-7, x-2, x+3, \dots$  is

(a)  $x+63$  (b)  $x+73$  (c)  $x+83$  (d)  $x+53$

14) The second term of an AP is  $(x-y)$  and the 5<sup>th</sup> term is  $x+y$ , its first term is

(a)  $x - \frac{1}{3}y$  (b)  $x - \frac{2}{3}y$  (c)  $x - \frac{4}{3}y$  (d)  $x - \frac{5}{3}y$

15) If  $x, y, z$  are in AP, then the value of  $(x+y-z)(y+z-x)$  is

(a)  $8yz - 3y^2 - 4z^2$  (b)  $4xz + 3y^2$

(c)  $8xy + 4x^2 - 3y^2$  (d) none of these

16) The 10<sup>th</sup> term of the sequence

$\sqrt{3}, \sqrt{12}, \sqrt{27}, \dots$  is

- (a)  $\sqrt{243}$  (b)  $\sqrt{300}$  (c)  $\sqrt{363}$  (d)  $\sqrt{432}$

17) The 21<sup>st</sup> term of the AP whose first two terms are -3 and 4 is

- (a) 17 (b) 137 (c) 143 (d) -143

18) The first term of an AP is 5 and the last term is 45. If the sum of all the terms is 400, the no. of terms is

- (a) 20 (b) 8 (c) 10 (d) 16

19) If 7 times the 7<sup>th</sup> term of an AP is equal to 11 times its 11<sup>th</sup> term, then its 18<sup>th</sup> term will be  
(a) 7 (b) 11 (c) 18 (d) 0

20) The sum of first 16 terms of the AP 10, 6, 2, ... is  
(a) -320 (b) 320 (c) -352 (d) -400

21) The first term of an AP is -76 and the sum of first 45 terms is -9360. Which of the following is the last term of this AP?  
(a)  $416 + 76$  (b)  $416 - 76$  (c)  $-416 + 76$  (d)  $-416 - 76$



22) If  $S_n$  denotes the sum of first  $n$  terms of an AP whose common difference is  $d$ , then  $S_n - 2S_{n-1} + S_{n-2}$  ( $n \geq 3$ ) is  
(a)  $a_n$  (b)  $a_{n-1}$  (c)  $d$  (d) none of these

23) If sum of  $n$  terms of an AP is  $3n^2 + 4n$ , then the common difference of the AP is  
(a) 3 (b) 4 (c) 6 (d) 7

24) The sum of  $2 + 5 + 8 + \dots + 152$  is  
(a) 3924 (b) 3927 (c) 3936 (d) 3942

25) If  $a_k$  be the  $k^{\text{th}}$  term of the AP 3, 15, 27, 39, ... and value of  $a_k$  is 180 more than the value of  $a_{50}$ , then  $k =$   
(a) 58 (b) 62 (c) 65 (d) 68

26) The sum of first 20 natural no.s is  
(a) 110 (b) 170 (c) 190 (d) 210

27) If for an AP,  $a_5 = a_{10} = 71$ , then  $a_{15}$  is  
(a) 72 (b) 71 (c) 76 (d) 66

28) If the 17<sup>th</sup> term of an AP exceeds the 13<sup>th</sup> term by 15, then the common difference is  
(a) 3 (b) 3.75 (c) 3.5 (d) 4.25

29) Which of the following is not an AP?  
(a) 1, 4, 7, 10, ... (c) 3, 7, 12, 18, ...  
(b) -5, -2, 1, 4, ... (d) 11, 14, 17, 20, ...

30) The first positive term of the AP  
-11, -8, -5, ... is  
(a) 5<sup>th</sup> term (b) 4<sup>th</sup> term (c) 3<sup>rd</sup> term (d) 6<sup>th</sup> term

31) A man receives ₹ 60 for the first week and ₹ 3 more each week than the preceding week. Then his earning by the 20th week is  
(a) ₹ 1761 (b) ₹ 1770 (c) ₹ 1780 (d) ₹ 1787

32) If  $a, b, c, d, e$  and  $f$  are in AP with common difference 3, then the value of  $e - c$  is  
(a) 3 (b) 5 (c) 6 (d) 9

33) If  $a, b, c$  form an AP with common difference  $d$ , then the value of  $a - 2b - c$  is  
(a)  $2a + 4d$  (b) 0 (c)  $-2a + 4d$  (d)  $-2a - 3d$

34) The  $n^{\text{th}}$  term from the end of the AP  
 $-11, -8, -5, \dots, 49$  is  
(a) 37 (b) 40 (c) 43 (d) 58

35) For what value of  $n$ , are the  $n^{\text{th}}$  terms  
of two APs  $63, 65, 67, \dots$  and  $3, 10, 17, \dots$  equal?  
(a) 13 (b) 15 (c) 16 (d) 17

36) Find the middle term of the AP  
 $213, 205, 197, \dots, 37$   
(a) 125 (b) 123 (c) 127 (d) 126

37) The sum of all two digit no.s divisible by 4

(a) 1188 (b) 1288 (c) 1388 (d) 1488

39) If the last term of an AP is 119 and the 8<sup>th</sup> term from the end is 91, then the c.d of the AP is

(a) 2 (b) 4 (c) 3 (d) -3

40) If  $\frac{3+5+7+\dots+n \text{ terms}}{5+8+11+\dots+10 \text{ terms}} = 7,$

then the value of  $n$  is

(a) 35 (b) 36 (c) 37 (d) 40

41) If the no.s  $a, b, c, d, e$  form an AP, then the value of  $a - 4b + 6c - 4d + e$  is

(a) 1 (b) 2 (c) 0 (d) none of these

42) Three numbers in an AP have sum 24.  
Its middle term is  
(a) 12 (b) 8 (c) 4 (d) 2

43) An AP consists of 31 terms. If its 16<sup>th</sup> term is  $m$ , then Sum of all terms is  
(a)  $16m$  (b)  $47m$  (c)  $31m$  (d)  $52m$

44) The first term of an AP of consecutive integers is  $p^2+1$ . The sum of  $(2p+1)$  terms of this AP is  
(a)  $(p+1)^2$  (b)  $(2p+1)(p+1)^2$  (c)  $(p+1)^3$  (d)  $p^3+(p+1)^3$



45)  $S_p = ap^2 + bp$ , then  $d =$

(a)  $a$       (b)  $2a$       (c)  $3a$       (d)  $4a$

46) How many numbers lie between 10 and 300 which when divided by 4 leave a remainder 3?

(a) 73      (b) 72      (c) 71      (d) 70

47) In an AP,  $a_{21} - a_7 = 84$ , then  $d =$

(a) 84      (b) 42      (c) 21      (d) 6

48) The  $n^{\text{th}}$  term of an A.P  $\frac{1}{m}, \frac{1+m}{m}, \frac{1+2m}{m}$  is

(a)  $\frac{1+m(n-1)}{m}$  (b)  $\frac{1-m(n-1)}{m}$

(c)  $\frac{1+m(1-n)}{m}$  (d)  $\frac{1+m(1+n)}{m}$

49) If  $p, q, r$  are in AP, then  $p^3 + r^3 - 8q^3$  is equal to  
(a)  $4pqr$  (b)  $-6pqr$  (c)  $2pqr$  (d)  $8pqr$

50) If the first term of an AP is 2 and the common difference is  $(-\frac{1}{2})$ , then  $a_{12}$  is

(a)  $2+11(-\frac{1}{2})$  (b)  $2+12(-\frac{1}{2})$  (c)  $2-11(-\frac{1}{2})$  (d)  $2-12(-\frac{1}{2})$

