Objective Type Questions

Q.1 Each questions has four possible answers. Choose the correct answer and encircle it.

__1. The nth term of an A.P. whose 1st term is 'a' and common difference is 'd' is:

(a) $2a + (n + 1)d$ (b) $a + (n + 1)d$

(c) $a + (n - 1)d$ (d) $a + (d - 1)n$

__2. The nth term of an A.P. 1, 4, 7, …… is:

(a) 17 (b) 19 (c) 21 (d) 23

__3. If a, b, c are in A.P. then:

(a) $b - a = c - b$ (b) $\frac{b}{a} = \frac{c}{b}$

(c) $a + b = b + c$ (d) $\frac{a}{c} = \frac{b}{a}$

__4. The 10th term is 7, 17, 27, …… is:

(a) 97 (b) 98 (c) 99 (d) 100

__5. The sum of n terms of an A.P. with 'a' as 1st term and 'd' as common difference is:

(a) $\frac{n}{2}[a + (n - 1)d]$ (b) $\frac{n}{2}[2a + (n - 1)d]$

(c) $\frac{n}{2}[a + (n + 1)d]$ (d) $\frac{n}{2}[2a - (n - 1)d]$

__6. Arithmetic mean between $x - \sqrt{3}$ and $x + \sqrt{3}$ is:

(a) x (b) 2x (c) 3 (d) –3

__7. If $S_n = (n^2 + n + 1)$ then its 4th term will be:

(a) 21 (b) 40 (c) 41 (d) 101

__8. Arithmetic mean between – 7 and 7 is:

(a) $\frac{7}{2}$ (b) $-\frac{7}{2}$ (c) 0 (d) 14

__9. The sum of the series $1 + 2 + 3 + \ldots\ldots + 100$ is:

(a) 100 (b) 5000 (c) 5050 (d) 500

__10. The nth term of a G.P a, ar, ar^2, …… is:

(a) ar^2 (b) ar^{n+1} (c) $\frac{1}{a} r^{n-1}$ (d) ar^{n-1}

__11. The 5th term of a G.P $1, \frac{1}{2}, \frac{1}{4}, \ldots\ldots$ is:

(a) $\frac{1}{8}$ (b) $-\frac{1}{8}$ (c) $\frac{1}{16}$ (d) $\frac{1}{32}$

__12. The 6th term of G.P $1, \sqrt{2}, \sqrt{4}, \ldots\ldots$ is:

(a) $4\sqrt{2}$ (b) 4 (c) $\sqrt{2}$ (d)

__13. The G.M. between a and b is:

(a) $\pm ab$ (b) ab (c) $\pm\sqrt{ab}$ (d) $\sqrt{ab}$

__14. If x, y, z are in G.P. then:

(a) $2y = x + z$ (b) $2y = xz$ (c) $y^2 = xz$ (d) $z^2 = xy$

__15. Geometric mean between 3 and 27 is:

(a) -9 (b) 12 (c) 15 (d) ± 9

__16. The sum of n terms of a geometric series:
$a + ar + ar^2 + \ldots\ldots; |r| < 1$

(a) $\dfrac{ar^{n-1}}{r-1}$ (b) $\dfrac{a(1-r^n)}{1-r}$

(c) $\dfrac{ar^{n+1}}{1-r}$ (d) $\dfrac{a(r^n-1)}{1-r}$

__17. The sum of 6 terms of the series $1 + 2 + 4 + \ldots\ldots$ is:

(a) 63 (b) 64 (c) 65 (d) 66

__18. The sum of 5 terms of the series $1 - 2 + 4 \ldots\ldots$:

(a) 16 (b) 11 (c) –11 (d) –16

__19. The sum of infinite terms of a G.P. $a, ar_1, ar_1^2, \ldots\ldots$ if $|r| < 1$ is:

(a) $\dfrac{a}{1-r}$ (b) $\dfrac{a(1-r^n)}{1-r}$

(c) ar^{n-1} (d) None of these

__20. The sum of infinite geometric series $1 + \dfrac{1}{3} + \dfrac{1}{9} + \ldots\ldots$ is:

(a) $\dfrac{2}{3}$ (b) $-\dfrac{2}{3}$ (c) $\dfrac{3}{2}$ (d) $-\dfrac{3}{2}$

Answers

1.	c	2.	b	3.	a	4.	a	5.	b
6.	a	7.	a	8.	c	9.	c	10.	d
11.	c	12.	a	13.	c	14.	c	15.	d
16.	b	17.	a	18.	b	19.	a	20.	c