

TEST-1

(11-07-2021 3:00 p.m. to 3:45 p.m.)

CA FOUNDATION - MATHS

SEQUENCE AND SERIES

Time allowed: 45 minutes

Maximum Marks: 30

INSTRUCTIONS :

Answer to be given in OMR sheet

Negative marking applies

01. Find sum of first two terms of an infinity G P is 15 and each term is equal to the sum of all terms following it . The sum of the series is

- a) 20 b) 15 c) 25 d) none of these

02. Sum of $1/2.5 + 1/5.8 + 1/8.11 + 1/11.14 + \dots$ upto n terms

- a) $n/2(3n+2)$ b) $n/2n(3n-2)$ c) $n/3n+2$ d) none of these

03 . In an infinity terms of GP sum is $3/2$ and first term is 2 the common ratio is

- a) $1/4$ b) $-1/3$ c) $1/2$ d) none of these

04. There are n Arithmetic Means between 3 and 31 the ratio of third mean to (n-1) mean is 1:3 find the number of AMs

- a) 12 b) 15 c) 13 d) none of these

05. The sum of first 8 terms of GP IS 5 times the sum of first 4 terms the common ratio is

- a) $\sqrt{2}$ b) $-\sqrt{2}$ c) both d) none of these

06. If p, q, r are in AP and X, Y, Z are in GP THE value of $x^{q-r}y^{-p}z^{p-q}$ will be

- a) 0 b) -1 c) 1 d) none of these

07. In a G P $T_4=X$ $T_{10}=Y$ and $T_{16}=Z$ then

- a) $y^2=xz$ b) $z^2=xy$ c) $y^2=zx$ d) none of these

08. Find sum of all 3 digit numbers divisible by 9

- a) 57550 b) 35550 c) 55350 d) none of these

09 In an AP $Mt_M = Nt_N$ The sum of T_{M+N} is

- a) $(m+n)/2$ b) $(m+N)(m+n-1)/2$ c) $(m-n)(m+n+1)/2$ d) none of these

10. In an AP if $T_{90}=1/40$ and $T_{40}=1/90$ Find sum of first 300 terms

- a) $301/3600$ b) $301/2400$ c) $150(301)/2400$ d) none of these ,

11. In a series if S_N is given by $2n^2+3n$ the series is

- a) A .P Series b) G.P series c) H.P Series d) none of these

12. If a, b, c are in A P then $(b+c), (c+a), (a+b)$ are in

- a) A P B) GP C) HP D) None of these

13. Find three numbers in AP whose sum is 27 and sum of their square is 341

- a) 2,9,16 b) 16,9,2 c) 8,9,10 d) none of these

14. The sum of n terms in the series $4+14+30+50+62+\dots$ is

- a) $n(n+1)^2$ b) $n(n-1)^2$ c) $n(n^2-1)$ d) none of these

15. In a GP if third term is square of the first term and fifth term is 64 find r

- a) 2 b) -2 c) either of a or b d) none of these

16. The sum of $7+77+777+7777+\dots$ upto n terms

- a) $7/81[10(10^n-1)-9n]$ b) $7/9[1/9(10^{n+1}-10)-n]$ c) both a and b d) none of these

17. The sum upto infinity of GP $4+.8+.16+\dots$ is

- a) 5 b) 10 c) 8 d) none of these

18. If first term of GP exceeds the second term by 2 and sum upto infinity is 50 the value of r is

- a) .8 b) -.8 c) $1/3$ d) none of these

19. In an AP if ratio of t_7 and t_{10} is 5:7 what should be the ratio in t_8 and t_{11}

- a) 13:16 b) 17:23 c) 14:17 d) none of these
20. in an A P if sum of n terms is $2n^2+n$ the difference in first and tenth term is
- a) 207 b) 36 c) 90 d) none of these
21. If sum of three AMs between "a" and 22 is 42 find 'a'
- a) 6 b) 14 c) 11 d) none of these
22. Find the sum of $.5+.55+.555+.5555+\dots$ up to n terms
- a) $5/81[9n-1+1/10^n]$ b) $5/81[9n+1-1/10^n]$ c) $5/81[9n+1+1/10^n]$ d) none of these
23. Find sum of $1+1/2+1/3+1/4+1/9+1/8+1/27+\dots$ up to infinity.
- a) $1/2$ b) $5/2$ c) $3/2$ d) none of these
- 24 Find sum n terms if Nth term is $n(n+4)$
- a) $1/6\{n(n+1)(2n+24)\}$ b) $1/6\{n(n+1)(2n-13)\}$ c) $1/6\{n(n+1)(2n+13)\}$ d) none of these
25. Find sum of $1+1/3+1/5+1/9+1/25+1/27+1/125+\dots$ up to n terms
- a) $7/4$ b) $5/4$ c) $1/2$ d) none of these
26. Find sum of $1+4/5+7/25+10/125+13/625+\dots$ up to infinity
- a) $5/4$ b) $3/5$ c) $35/16$ d) none of these
27. The sum of terms of an infinite GP is 15 and sum of their square up to infinity is 45 find r
- a) $3/2$ b) $2/3$ c) $-2/3$ d) none of these
28. Find the product of $(243)(243)^{1/6}(243)^{1/36}+\dots$ up to infinity is
- a) 1024 b) 27 c) 729 d) none of these
29. The sum of third and ninth term of A P is 8 find sum of first 11 terms
- a) 44 b) 22 c) 19 d) none of these
30. n A.Ms are inserted between 7 and 71 and fifth AMs is 27 find the value of n
- a) 15 b) 16 c) 17 d) 18

BEST OF LUCK