QB365 Important Questions - Arithmetic Progressions

10th Standard CBSE

Maths

Reg.No. :

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Time : 01:00:00 Hrs

| Т | otal Marks : 50 |
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| Section - A | |
| 1) A sequence a_1 , a_2 , a_3 , is an A.P. if and only if a_n is a expression in n. | 1 |
| 2) Find the nextterm of the series $\sqrt{2}, \sqrt{8}, \sqrt{18}, \sqrt{32}$ | 1 |
| 3) What is the next term of an AP. $\sqrt{7}, \sqrt{28}, \sqrt{63}, \ldots$? | 1 |
| 4) Find the 25 th term of the AP5,-5/2 0,5/2, | 1 |
| 5) Find the 37 th term of the A.P. \sqrt{x} , $3\sqrt{x}$, $5\sqrt{x}$, | 1 |
| 6) For an A.P., if $a_{25} - a_{20} = 45$, then find the value of d. | 1 |
| 7) Find the sum of first 16 terms of the A.P. 10, 6, 2, | 1 |
| 8) What is the sum of five positive integers divisible by 6. | 1 |
| 9) If the sum of first k terms of an A.P.is 3P - k and its common difference is 6. What is the first term? | 1 |
| 10) Find the 10th term of 10.0 <mark>, 10.5</mark> , 11.0, 11.5, | 1 |
| Section - B | |
| 11) For the following APs, write the first term and the common difference: | 2 |
| -5, -1, 3, 7, | |
| 12) Determine k so that $4k + 8$, $2k^2 + 3k + 6$ and $3k^2 + 4k + 4$ are three coonsecutive terms of an AP. | 2 |
| 13) Find the sum of the following APs: | 2 |
| 2, 7, 12,, to 10 terms. | |
| 14) Find the sum of first 19 terms of an A.P. whose 8th term is 41 and 13th term is 61. | 2 |
| 15) For A.P.show that $a_p + a_p + 2_q = 2a_{p+q}$ | 2 |
| 16) If the 1 st term of a series is 7 and 13 th term is 35. Find the sum of 13 terms of the sequence. | 2 |
| 17) The sum of first n terms of an A.P. is $5n - n^2$. Find the n^{th} term of the A.P. | 2 |
| 18) $a_1, a_2, a_3, \dots, a_{24}$ are in AP and $a_1 + a_5 + a_{10} + a_{15} + a_{20} + a_{24} = 300$. Find the sum of first 24 terms of the A | vP. 2 |
| 19) If the sum of first fourteen terms of an A.P. is 1050 and its first term is 10, find its 20th term. | 2 |
| 20) The sum of the first n terms of an A.P. whose first term is 8 and the common difference is 20 is equal to | the 2 |
| sum of first 2n terms of another A.P. whose first term is -30 and the common difference is 8. Find n. | |
| Section - C | |
| 21) If the sum of first 4 terms of an AP is 40 and that of first 14 terms is 280, find the sum of its n terms. | 5 |
| 22) Jaipal Singh repays the total loan of Rs 118000 by paying every month starting with the first instalment | it of Rs 5 |
| 1000. If the increases the instalment by Rs 100 every month, then what amount will be paid by him in th | າe 30th |
| instalment? What amount of loan does he still have to pay after 30th instalment? | |

23) Which of the following form an AP? Justify your answer.

(i) 1,1,2,2,3,3...

(ii) $\sqrt{3}, \sqrt{12}, \sqrt{27}, \sqrt{48} \dots$

24) In an A.P.of 50 terms, the sum of first 10 terms is 210 and sum of its last 15 terms is 2565. Find the A.P.

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