CHAPTER-5

ARITHMETIC PROGRESSIONS

QUESTION BANK

SECTION- A (1 Mark Each)

01. Find the number of terms of the AP : 3,7,11,15 ..... to be taken so that the sum is 406.
02. Which term of the AP : 21,42,63,84..... is 210.
03. What is the sum of first five multiples of 3.
04. Find 8^{th} term of 117, 104,91,78 .....
05. The nth term of an AP is 7.4n. Find its common difference.

SECTION- B (2 Mark Each)

06. The 6^{th} term of an AP is -10 and its 10^{th} term is -26. Determine 15^{th} term of the AP.
07. If -150 a term of the AP : 17, 12, 7, 2 .....
08. Find the sum of all the natural numbers less than 100, which are divisible by 6.
09. The first term, common difference and last term of an AP are 12,6 & 252 respectively. Find sum of all terms of this AP.
10. Which term of the AP : 21, 42, 63,84, ... is 420

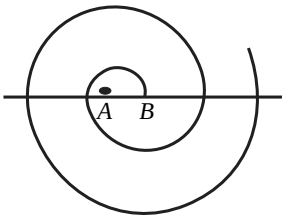
SECTION- C (3 Mark Each)

11. The nth term of an AP is 6n + 2 find its common difference.
12. Which term of AP : 3,15,27,39 will be 120 more than its 21^{st} term.
13. The sum of n terms of an AP is $5n^2 - 3n$. Find the AP and also its 10^{th} term.
14. Find the 11^{th} term from the last term of the AP : 10, 7, 4, ... – 62.
15. If the sum of the first 14 terms of an AP is 1050 and its first term is 10, find the 20^{th} term.

SECTION- D (4 Mark Each)

16. 200 logs are stacked in such a way that 20 logs in the bottom row, 19 in the next row, 18 in the row next to it and soon. In how many rows are the 200 logs placed and how many logs are in the tops ?
17. A sum of Rs 700 is to be used to give seven case prizes to students of a school for their academic performance. If each prize is Rs 20 less than its preceding prize, find the value of each of the prizes.

18. A spiral made up of successive semicircles, with centres alternatively of A and B, starting with centre at A of radii 0.5 cm, 1.0 cm, 1.5 cm, 2.0 cm..... as shown in figure. What is the total length of such aspiral made up of thirteen consecutive circles. $\left(\pi=\frac{22}{7}\right)$



19. The sum of the 4^{th} and 8^{th} terms of the AP is 24 and the sum of the 6^{th} and 10^{th} terms is 44. Find the first three terms of the AP.

20. A contract on construction job specifies a penalty for delay of completion beyond a certain date as follows: Rs 200 for the first day, Rs 250 for the 2^{nd} day, Rs 300 for the third day etc. The penalty for each succeeding day being Rs 50 more than for the preceding day. How much money the contractor has to pay as penalty, if he has delayed the work by 30 days.

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