RK VISION ACADEMY

NEET | IIT – JEE | FOUNDATION

CBSE PRACTICE PAPER(2024)

(Mathematics)

Grade : X Marks: 40 marks

Chapter: AP SET-1 Time: 90 minutes

SECTION A (This section comprises of Multiple-choice questions (MCQ) of 1 mark each.)				
1.	If the nth term of an AP is 3n – 8, then its 16th term is			
	(a) 30	(b) 20	(c) 10	(d) 40
2.	30th term of the AP 10, 7, 4, ……, is			
	(a) 97	(b) 77	(c) -77	(d) -87
3.	If the first term of an AP is 2 and common difference is 4, then the sum of its 40 terms is			
	(a) 3000	(b) 2800	(c) 3200	(d) None of these
4.	If the first three terms of an AP are x – 1, x + 1, 2x + 3, then the value of x is			
	(a) 1	(b) 2	(c) -1	(d) 0
5.	In an AP, if d = –4, n = 7, an = 4, then a is			
	(A) 6	(B) 7	(C) 20	(D) 28
6.	In an AP, if a = 3.5, d = 0, n = 101, then an will be			
	(A) 0	(B) 3.5	(C) 103.5	(D) 104.5
7.	The list of numbers – 10, – 6, – 2, 2,... is			
	(A) an AP with d = – 16	(B) an AP with d = 4	(C) an AP with d = – 4	(D) not an AP
8.	The 11th term of the AP: –5, –5/ 2 , 0, 5/2 , ...is			
	(A) –20	(B) 20	(C) –30	(D) 30
9.	The first four terms of an AP, whose first term is –2 and the common difference is –2, are			
	(A) – 2, 0, 2, 4	(B) – 2, 4, – 8, 16	(C) – 2, – 4, – 6, – 8	(D) – 2, – 4, – 8, – 16
10.	The 21st term of the AP whose first two terms are –3 and 4 is			
	(A) 17	(B) 137	(C) 143	(D) –143
SECTION B (This section comprises of very short answer type-questions (VSA) of 2 marks each)				

11.	Find the sum of the series 7 + 10 + 14 + … + 84.		(C) None of these	(D) Statement wrong
12.	Sarita saved ₹ 5 in the first week of the year and then increased her weekly savings by ₹ 1.75 each week. In which week will her weekly savings be ₹ 20.75?			
13.	Shivangi started work in 1991 at an annual salary of ₹ 5000 and received an increment of ₹ 200 each year. In which year did his income reach ₹ 7000?			
SECTION C (This section comprises of short answer type questions (SA) of 3 marks each)				
14.	If the pth , qth and rth terms of an AP are a, b and c respectively, then show that a(q – r) + b(r – p) + c(p – q) = 0.			
15.	In an AP, if S n = 3n 2 + 5n and a k = 164, find the value of k .			
16.	Find the sum of last ten terms of the AP: 8, 10, 12,--- , 126.			
SECTION D (This section comprises of long answer-type questions (LA) of 5 marks each)				
17.	Find the sum of first 51 terms of an AP -Those second and third terms are 14 and 18, respectively.			
18.	If the sum of first 7 terms of an AP is 49 and that of 17 terms is 289. Find the sum of first n terms.			
19.	India is competitive manufacturing location due to the low cost of manpower and strong technical and engineering capabilities contributing to higher quality production runs. The production of TV sets in a factory increases uniformly by a fixed number every year. It produced 16000 sets in 6th year and 22600 in 9th year.  On the basis of above information, answer the following questions. • Find the production during first year. (2) • Find the production during 8th yr and first 3 yr. (2) • In which year, the production is ₹ 29200. (1)			