Sri Raghavendra Tuition Center

Chapter : 2 Numbers and sequence

10th Standard

Maths

Date : 02-08-24

Reg.No. :

Exam Time : 00:40 Hrs　　　　　　　　　　　　　　　Total Marks : 30

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EACHER NAME: P.DEEPAK M.Sc.,M.A.,B.Ed.,DCA.,TET-1.,TET-2.,

PHONE NUMBER : 9944249262

EMAIL: darthi99ktp@gmail.com

Centum Book Available

I. Multiple Choice Question.

4 x 1 = 4

1) If the HCF of 65 and 117 is expressible in the form of 65m - 117 , then the value of m is

   (a) 4　(b) 2　(c) 1　(d) 3

2) The sum of the exponents of the prime factors in the prime factorization of 1729 is

   (a) 1　(b) 2　(c) 3　(d) 4

3) The least number that is divisible by all the numbers from 1 to 10 (both inclusive) is

   (a) 2025　(b) 5220　(c) 5025　(d) 2520

4) Given F_1 = 1, F_2 = 3 and F_n = F_{n-1} + F_{n-2} then F_5 is

   (a) 3　(b) 5　(c) 8　(d) 11

II. Answer any 5 Question.

7 x 2 = 14

5) If 13824 = 2^a x 3^b then find a and b.

6) Find the first five terms of the following sequence,
   a_1 = 1, a_2 = 1, $a_n = \frac{a_{n-1}}{a_{n-2}+3}; n \geq 3, n \in N$

7) Find the 19th term of an A.P. -11, -15, -19,....

8) Find the sum of the following series
   1 + 4 + 9 + 16 +..+ 225

9) Find the sum of first 15 terms of the A.P. $8, 7\frac{1}{4}, 6\frac{1}{2}, 5\frac{3}{4},....$

10) Find the first four terms of the sequences whose nth terms are given by
    a_n = 2n^2 - 6

11) Find the first three terms of $a_n = \frac{2n-3}{6}$

III. Answer all Question.

3 x 5 = 15

12) If lth, mth and nth terms of an A.P are x, y, z respectively, then show that x(m - n) + y(n - l) + z(l - m) = 0

13) The 104th term and 4th term of an A.P. are 125 and 0. Find the sum of first 35 terms.

All the best

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