



Sri Raghavendra Tuition Center

REVIEW TEST - JULY

10th Standard

Maths

Date : 19-07-24

Reg.No. :

Exam Time : 01:00 Hrs

Total Marks : 50

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Centum Book Available

I. MULTIPLE CHOICE QUESTION.

14 x 1 = 14

- 1) Euclid's division lemma states that for positive integers a and b, there exist unique integers q and r such that $a = bq + r$, where r must satisfy
 (a) $1 < r < b$ (b) $0 < r < b$ (c) $0 \leq r < b$ (d) $0 < r \leq b$
- 2) Using Euclid's division lemma, if the cube of any positive integer is divided by 9 then the possible remainders are
 (a) 0, 1, 8 (b) 1, 4, 8 (c) 0, 1, 3 (d) 0, 1, 3
- 3) 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
- 4) The sum of the exponents of the prime factors in the prime factorization of 1729 is
 (a) 1 (b) 2 (c) 3 (d) 4
- 5) 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
- 6) $7^{4k} \equiv \underline{\hspace{2cm}} \pmod{100}$
 (a) 1 (b) 2 (c) 3 (d) 4
- 7) 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
- 8) The first term of an arithmetic progression is unity and the common difference is 4. Which of the following will be a term of this A.P.
 (a) 4551 (b) 10091 (c) 7881 (d) 13531
- 9) If 6 times of 6th term of an A.P. is equal to 7 times the 7th term, then the 13th term of the A.P. is
 (a) 0 (b) 6 (c) 7 (d) 13
- 10) An A.P. consists of 31 terms. If its 16th term is m, then the sum of all the terms of this A.P. is
 (a) 16 m (b) 62 m (c) 31 m (d) $\frac{31}{2} m$
- 11) In an A.P., the first term is 1 and the common difference is 4. How many terms of the A.P. must be taken for their sum to be equal to 120?
 (a) 6 (b) 7 (c) 8 (d) 9
- 12) If $A = 2^{65}$ and $B = 2^{64} + 2^{63} + 2^{62} + \dots + 2^0$ Which of the following is true?
 (a) B is 2^{64} more than A (b) A and B are equal (c) B is larger than A by 1 (d) A is larger than B by 1

- 13) The next term of the sequence $\frac{3}{16}, \frac{1}{8}, \frac{1}{12}, \frac{1}{18}, \dots$ is
 (a) $\frac{1}{24}$ (b) $\frac{1}{27}$ (c) $\frac{2}{3}$ (d) $\frac{1}{81}$
- 14) If the sequence t_1, t_2, t_3, \dots are in A.P. then the sequence $t_6, t_{12}, t_{18}, \dots$ is
 (a) a Geometric Progression (b) an Arithmetic Progression (c) neither an Arithmetic Progression nor a Geometric Progression
 (d) a constant sequence

II. ANSWER ALL QUESTION

10 x 2 = 20

- 15) We have 34 cakes. Each box can hold 5 cakes only. How many boxes we need to pack and how many cakes are unpacked?
- 16) Find the quotient and remainder when a is divided by b in the following $a = -12, b = 5$
- 17) A man has 532 flower pots. He wants to arrange them in rows such that each row contains 21 flower pots. Find the number of completed rows and how many flower pots are left over.
- 18) If $13824 = 2^a \times 3^b$ then find a and b.
- 19) Find the value of
 $1 + 2 + 3 + \dots + 50$
- 20) Find the sum of
 $1 + 3 + 5 + \dots$ to 40 terms
- 21) Find the sum of
 $1^2 + 2^2 + \dots + 19^2$
- 22) Find the sum of
 $1^3 + 2^3 + 3^3 + \dots + 16^3$
- 23) If $1 + 2 + 3 + \dots + k = 325$, then find $1^3 + 2^3 + 3^3 + \dots + k^3$.
- 24) If $1^3 + 2^3 + 3^3 + \dots + k^3 = 44100$ then find $1 + 2 + 3 + \dots + k$

III. ANSWER ALL QUESTION

2 x 5 = 10

- 25) a) Find the greatest number consisting of 6 digits which is exactly divisible by 24, 15, 36?
 (OR)
- b) Find the sum of
 $5^2 + 10^2 + 15^2 + \dots + 105^2$
- 26) a) Find the sum of
 $15^2 + 16^2 + 17^2 + \dots + 28^2$
 (OR)
- b) Find the sum of the following series
 $10^3 + 11^3 + 12^3 + \dots + 20^3$

ALL THE BEST
