



INSTITUTE OF MATHEMATICS EDUCATION

MATHS APTITUDE TEST – 2020 (Primary Level)

Std. : V and VI

Question Paper

Date : 21.11.2020

Time : 2 Hours

Total Marks : 100

- A number 12,000,000,012 is read as
(A) One hundred twenty crores and twelve (B) Twelve billion and twelve
(C) Twelve million and twelve (D) One thousand crores and twelve
- If $729 = (8 \times 91) + 1$, then $8 \times (91 + a) + 1 = ?$
(A) 737 (B) $729 + 8a$ (C) $729 + a$ (D) $728 + 91a$
- What is the sum of two digit prime numbers less than 50 ?
(A) 328 (B) 330 (C) 311 (D) 331
- Which of the following is divisible by 24 ?
(A) 3168 (B) 8008 (C) 2168 (D) 4816
- H.C.F. of two consecutive even integers is equal to
(A) 1 (B) 2 (C) their product (D) cannot say
- If $1 - \left(\frac{12}{17}\right) = \frac{A}{51}$, then find A
(A) 17 (B) 11 (C) 5 (D) 15
- If $72 \times 24 = 1728$, then $0.072 \times 2.4 = ?$
(A) 0.1728 (B) 1.728 (C) 0.01728 (D) 17.28
- $3.2 \text{ deca m} + 2.5 \text{ km} - 1.2 \text{ hecto m} = \underline{\hspace{2cm}} \text{ m}$
(A) 24.12 (B) 0.2412 (C) 2412 (D) 2.412
- $\text{XLIX} \div \text{VII} = ?$
(A) VII (B) VI (C) V (D) III
- 14 hrs 45 minutes = hrs
(A) 14.45 hrs (B) 14.15 hrs (C) 14.75 hrs (D) 14.5 hrs
- Put correct sign $<$, $>$, $=$ in the \square
 $\{(102 \div 17) \times 2\} - 2 \square \{(126 \div 18) \times 2\} - 2$
(A) $<$ (B) $>$ (C) $=$ (D) cannot say
- If 1st April was on Wednesday, then find the day when Children's day will be celebrated in the same year ?
(A) Wednesday (B) Thursday (C) Friday (D) Saturday
- If 6 is added to a number, then it becomes four times of itself. Find the number.
(A) 5 (B) 3 (C) 4 (D) 2
- The length of rectangle is 3 times it's breadth. If it's perimeter is 64 cm, then find it's length.
(A) 22 cm. (B) 23cm. (C) 24cm. (D) 8cm.
- 5 dozen bananas were bought for ` 500. If they were sold for ` 80 per dozen, then find profit or loss percent.
(A) 10 % profit (B) 20% profit (C) 20% loss (D) 10% loss

16. If 10% of 500 = x % of 100, then find x.
 (A) 25 (B) 75 (C) 50 (D) 100
17. Cost of 5 kg of cashewnuts is ₹ 5500. What is the cost of 250g of cashewnuts ?
 (A) ₹ 250 (B) ₹ 300 (C) ₹ 275 (D) ₹ 225
18. What is 25th even number before y + 2 where y is an odd number?
 (A) y - 48 (B) y + 48 (C) y - 50 (D) y - 47
19. L.C.M. and G.C.D. of two numbers are 120 and 4 respectively. If difference between these numbers is also 4, find their sum.
 (A) 44 (B) 68 (C) 52 (D) 84
20. Which of the following is the greatest ?
 $\frac{30}{105}$, $\frac{46}{161}$, $\frac{58}{87}$, $\frac{38}{95}$
 (A) $\frac{30}{105}$ (B) $\frac{46}{161}$ (C) $\frac{58}{87}$ (D) $\frac{38}{95}$
21. What is the difference between the place values of underlined digits in the number $\underline{7}2.\underline{1}7\underline{5}$
 (A) 0.995 (B) 1.995 (C) 2.995 (D) 1.095
22. Simplify : $\left\{ [12 \times 4] - \left[12 \times 4 - \left\{ \left(\frac{22}{11} \right) \times 15 \right\} \right] \right\} \div [(25 \times 3) \div 10]$
 (A) 8 (B) 18 (C) 4 (D) 15
23. If C.P. = Profit, then profit or loss % ____
 (A) 100% profit (B) 100% loss (C) 50% profit (D) 50% loss
24. 6.25 % of 800 = 10 % of 250 + m % of 125, then find m.
 (A) 60 (B) 20 (C) 25 (D) 50
25. How many rectangles can be formed whose perimeter is equal to perimeter of regular hexagon of side 4 cm?
 (Dimensions of rectangle must be natural numbers)
 (A) 4 (B) 6 (C) 5 (D) 3
26. How many numbers of the form 'abba' are there which are divisible by 18?
 (A) 8 (B) 10 (C) 4 (D) 3
27. How many bundles of ₹ 500 denomination make amount ₹ 1 billion, if each bundle has 100 notes?
 (A) 20 thousand (B) 20 lakh (C) 2 hundred (D) 2 thousand
28. Two articles are purchased for ₹ 50 each. If one is sold for ₹ 40 and the other at 10% profit, then how much is loss or profit in the entire transaction?
 (A) ₹ 5 loss (B) ₹ 5 profit (C) ₹ 10 loss (D) No loss no profit.
29. Let 33.33 % of 300 = A, 12.5 % of 800 = B and 6.25 % of 1600 = C
 If A + B + C = x % of 3000, then find x.
 (A) 20 (B) 25 (C) 10 (D) 30
30. Tina's age 5 years ago was 'm' years and Meena's age 5 years hence will be 'n' years. Find the sum of their ages today.
 (A) (m + n) years (B) (m + n + 10) years (C) (m + n - 10) years (D) Can't determine

31. 2hrs.30min. + 1.25 hrs. + $3\frac{3}{4}$ hrs. = how many min. ?
 (A) 470 min. (B) 420 min. (C) 450 min. (D) 400 min
32. If 18 is added to a two digit number, then it becomes reversed. Then find how many such 2 digit numbers are there?
 (A) 5 (B) 6 (C) 7 (D) 14
33. A square of wire having each side equal to 20 cm. is re-bent to form a rectangle. The breadth of the rectangle is equal to half the length of side of the square. Then find the difference between areas of original square and new rectangle.
 (A) 100 sq.cm. (B) 200 sq.cm. (C) 300 sq.cm. (D) 250 sq.cm.
34. Find the difference between 21st even number after 779 and 53rd odd number before 652.
 (A) 820 (B) 547 (C) 273 (D) 191
35. If 'a' is a multiple of 'b' and 'b' is a multiple of 'c', then sum of G.C.D. and L.C.M. of a, b and c is _____.
 (A) a + b (B) a + c (C) b + c (D) ab + bc
36. Rectangles are drawn on each side of an isosceles triangle. The length of the rectangle is equal to the length of equal sides of the triangle and breadth of the rectangle is equal to the base of the triangle. If base of the triangle is 5 cm. and length of equal sides is twice the length of the base, then find the perimeter of the new figure.
 (A) 40 cm (B) 25cm (C) 65cm (D) 45 cm
37. $\left(\frac{1}{8} + \frac{1}{6} + \frac{1}{4}\right) + \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4}\right) = A\frac{B}{C}$, then find possible values of A + B + C.
 (A) 14 (B) 40 (C) Both (A), (B) (D) Neither (A) nor (B)
38. Arrange the following numbers in descending order and find the second last number.
 $33\frac{1}{3}\%$, $12\frac{1}{2}\%$, $6\frac{1}{4}\%$, 0.818181..., $\frac{3}{5}$
 (A) 0.818181... (B) $12\frac{1}{2}\%$ (C) $6\frac{1}{4}\%$ (D) $\frac{3}{5}$
39. A tempo can travel x km in 'm' litres of petrol, how much petrol is required, to travel 'y' km ?
 (A) (ym/x) lit. (B) (xm/y) lit (C) (xy/m) lit (D) (y/xm) lit
40. While writing twin prime numbers less than 100 which digit appears maximum number of times and how many times respectively?
 (A) 7, 4 (B) 3, 9 (C) 5, 7 (D) 1, 9
41. Selling price of an article is 'x'. If the profit is 10%, then find it's cost price.
 (A) $\frac{11x}{10}$ (B) $\frac{10x}{11}$ (C) $\frac{9x}{10}$ (D) $\frac{10x}{9}$
42. In four divisions of std. VI, number of students who play cricket are as follows.
 Div. A : 18 out of 45, Div. B : 20 out of 60, Div. C : 12 out of 40, Div. D : 15 out of 50, then in which division cricket is the most popular ?
 (A) A (B) B (C) C (D) D
43. If a number is divisible by sum of it's digits, then it is called 'Harshad Number' e.g. 12 is Harshad number as 12 is divisible by (1 + 2 = 3). Find how many two digits 'Harshad Numbers' are there upto and including 30?
 (A) 6 (B) 7 (C) 5 (D) 8
44. If all the divisors of 256 are arranged in descending order, then what is the middle number?

(A) 32

(B) 64

(C) 16

(D) 8

45. If $x\%$ of 10 + $y\%$ of 10 = $z\%$ of 10, then which of the following is true ?

(A) $x = y + z$

(B) $x + z = y$

(C) $x + y = z$

(D) cannot say

46. $(0.117117 / 0.13) + (0.133133 / 0.19) = ?$

(A) 1.6016

(B) 0.16016

(C) 16.016

(D) 1.00616

47. Find the sum of three digit numbers so formed using digits 2, 0, 5 if the digits are not repeated

(A) 1554

(B) 1447

(C) 1477

(D) 1774

48. 8.5 kg of sugar was distributed among the people which include equal number of male, female and children. If each adult was given 350 gm of sugar packet and each child was given 150 gm of sugar packet, find how many people were there altogether?

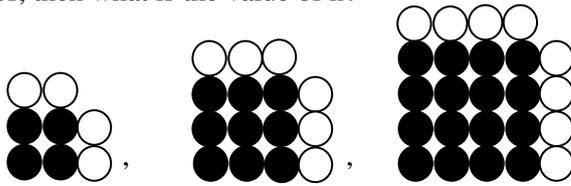
(A) 30

(B) 40

(C) 45

(D) 10

49. As shown in the figure, the sequence of black and white circles is created. At n^{th} position, there are total 624 circles, then what is the value of n ?



(A) 25

(B) 26

(C) 23

(D) 24

50. A rectangle of dimensions 10 cm \times 20 cm is divided into 32 small squares of equal size. If $6\frac{1}{4}\%$ squares are coloured red, $12\frac{1}{2}\%$ squares are coloured green and $3\frac{1}{8}\%$ are coloured blue, then how many squares are not coloured?

(A) 30

(B) 25

(C) 24

(D) 16

