

TEST OF REASONING & MENTAL ABILITY - NO.5

Time : 30 minutes

Marks : 100

1. If A means 'x', B means '÷', C means '+', D means '-', then what is the value of
19 C 16 A 5 D 144 B 18 ?
A. 93 B. 89 C. 91 D. 99 E. None of these
2. If water is called black, black is called tree, tree is called white, white is called blue, blue is called pink and pink is called book in a certain language. What is the colour of milk in that language ?
A. black B. blue C. tree D. white E. pink
3. Three cubes of metals whose edges are 3, 4 and 5 cm respectively are melted and formed into a single cube. If there is no loss of metal in the process, find the side of new cube ?
A. 6 cm B. 12 cm C. 3 cm D. 18 cm E. none of these
4. Find compound interest on Rs 5000 at 10% per annum for 3 years ?
A. 1600 B. 1655 C. 1700 D. None of these
5. If a radio set is sold for Rs.1120, profit earned is 40%. At what price should it be sold so as to earn a profit of 60% ?
A. Rs 1320 B. Rs 1290 C. Rs 1180 D. Rs 1260 E. None of these
6. Four of the following five are alike a certain way and so form a group. which is the one that does not belong to that group ?
A. jump B. Walk C. Swim D. Run E. Listen
7. In a certain code language 'POETRY' is written as 'QONDSQX' and 'OVER' is written as 'PNUDQ'. How is 'MORE' written in that code ?
A. NNNQD B. NLPQD C. NLNQD D. LNNQD E. None of these
8. A man is 24 years older than his son. In two years, his age will be twice the age of his son. What is the present age of son ?
A. 14 years B. 18 years C. 20 years D. 22 years E. None of these
9. Evaluate $\sqrt{248} + \sqrt{51} + \sqrt{169}$
A. 12 B. 15 C. 16 D. none of these
10. January 1, 2007 was monday. What day of the week lies on Jan 1, 2008 ?
A. Monday B. Tuesday C. Wednesday D. Sunday
11. How many times in a day, the hands of a clock are straight ?
A. 22 B. 24 C. 44 D. 48 E. None of these
12. Complete the below series :
5 : 24 :: 7 : _____
A. 49 B. 56 C. 63 D. None of these E. 48

13. In a certain code language, if the word REJECTION is coded as SGMHZIPWW, then how is the word MECHANIC coded in that Language ?
 A. NLGFFTPK B. FTNLGFTK C. NGFLFTPk D. none of these
14. If 'p' means 'x', y means '-', x means +, z means \div , then the value of,
 $10 P 2 \times 5 y 5$ is _____
 A. 10 B. 15 C. 20 D. 25 E. None of these
15. Find the odd one among the following.
 A. CIFICAP B. CITCRA C. NAIDNI D. NAIBARA E. None of these
16. DIGEST is to STOMACH as THINK is to _____
 A. Brain B. Clever C. Man D. Intelligent E. None of these
17. For each of the letters of English alphabet a value is assigned in this way
 A = 1, B = 3, C = 5, D = 7 and so on. What will be the total value of letters of the word's 'eye-lid' ?
 A. 104 B. 94 C. 102 D. 114 E. none of these
18. If the sum of two numbers is 42 and their product is 437, then find the absolute difference between the numbers ?
 A. 4 B. 6 C. 2 D. None of these
19. If $2^x \times 8^{\frac{x}{5}} = 2^{\frac{x}{5}}$, then x is equal to
 A. $\frac{1}{5}$ B. $-\frac{1}{5}$ C. $\frac{2}{5}$ D. $-\frac{2}{5}$ E. None of these
20. Find the value of $(256)^{\frac{3}{4}}$
 A. 512 B. 984 C. 1024 D. 1032 E. None of these
21. Find the value of $\sqrt[3]{1\frac{9}{16}}$?
 A. $1\frac{1}{4}$ B. $1\frac{2}{4}$ C. $1\frac{1}{2}$ D. none of these
22. In a certain code If HOTEL = 55, then BORE = ?
 A. 35 B. 36 C. 40 D. 45 E. none of these
23. The average of first 50 natural numbers is
 A. 12.25 B. 21.25 C. 25 D. 25.5 E. None of these
24. Choose the odd one among the following :
 A. Leg : Lame B. Tongue : Taste C. Ear : Deaf D. Eye : Blind E. None of these
25. If MOBILITY is coded as 46293927, then how EXAMINATION can be coded ?
 A. 57250623076 B. 56149512965 C. 45038401854 D. 57159139550

ANSWER WITH EXPLANATION

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1. C. After decoding we get.
 $19 + 16 \times 5 - 144 \div 18$
 $= 19 + 80 - 8 = \underline{19}$
2. B Since white is called blue in that language.
3. A Quicker method
 When many cubes integrate into one cube, the side of the new cube is given by,
 $\text{Side} = \sqrt[3]{\text{Sum of cubes of sides of all the cubes}}$
 Here, side = $\sqrt[3]{3^3 + 4^3 + 5^3}$
 $\sqrt[3]{27 + 64 + 125} = \underline{6 \text{ cm}}$
4. B Amount = $P \left[1 + \frac{R}{100} \right]^N$
 $= 5000 \left[1 + \frac{10}{100} \right]^3 = \underline{6655}$
 $\therefore \text{Compound interest} = 6655 - 5000 = \underline{1655}$
5. E New selling price = $1120 \times \frac{160}{140} = \underline{1280}$
6. E All the others need some movement.
7. C. $\begin{array}{ccc} +1 & +1 & +1 \\ \nearrow & \nearrow & \nearrow \\ P_1 O_1 E_1 I_1 R_1 Y_1 & O_1 V_1 E_1 R_1 & M_1 O_1 R_1 E_1 \\ \textcircled{Q} \quad 0 \quad N \quad D \quad S \quad Q \quad X & \textcircled{P} \quad N \quad U \quad D \quad Q & \textcircled{N} \quad L \quad N \quad Q \quad D \end{array}$
8. D Let present age of son be x years. Then man's present age = (x + 24) years.
 $\therefore (x + 24) + 2 = 2(x + 2)$
 $\Rightarrow x + 26 = 2x + 4$
 $\Rightarrow x = \underline{22}$
9. C $\sqrt{248 + \sqrt{51 + \sqrt{169}}} = \sqrt{248 + \sqrt{51 + 13}}$
 $= \sqrt{248 + \sqrt{64}}$
 $= \sqrt{248 + 8}$
 $= \sqrt{256} = \underline{16}$
10. B The year 2007 is an ordinary year. So it has 1 odd day

1st day of the year 2007 was monday.

1st day of the year 2008 will be 1 day beyond monday.

Hence, it will be Tuesday.

11. C In 12 hours the hands coincide or are in opposite direction 22 times
 \therefore In 24 hours, they are in opposite direction 44 times a day.

12. E $5 : 24 :: 7 : \text{—————}$

$$5^2 = 1 = 24$$

$$7^2 - 1 = \underline{\underline{48}}$$

13. C
- | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| R | E | J | E | C | T | I | O | N |
| (+1) | (+2) | (+3) | (+4) | (+5) | (+6) | (+7) | (+8) | (+9) |
| S | G | M | I | H | Z | P | W | W |
-
- | | | | | | | | |
|------|------|------|------|------|------|------|------|
| M | E | C | H | A | N | I | C |
| (+1) | (+2) | (+3) | (+4) | (+5) | (+6) | (+7) | (+8) |
| N | G | F | L | F | T | P | K |

14. C $10 \times 2 + 5 - 5$
 $\Rightarrow 20 + 5 - 5 = \underline{\underline{20}}$

15. D The words are jumbled

The words are PACIFIC, ARCTIC, INDIAN, ARABIAN.

Except ARABIAN, all others are oceans.

16. A

17. D Eye lid = $9 + 49 + 9 + 23 + 17 + 7 = 114$

18. D Let the numbers be x and y.

18. A Let the numbers be x and y.

Then, $x + y = 42$, $xy = 437$

$$\begin{aligned} \therefore x - y &= \sqrt{(x+y)^2 - 4xy} \\ &= \sqrt{(42)^2 - 4 \times 437} \\ &= \sqrt{1764 - 1748} = \sqrt{16} = \underline{\underline{4}} \end{aligned}$$

19. D

$$\begin{aligned}
2^x \times 8^{\frac{1}{5}} &= 2^{\frac{1}{5}} \\
\Rightarrow 2^x \times (2^3)^{\frac{1}{5}} &= 2^{\frac{1}{5}} \\
\Rightarrow 2^x \times 2^{\frac{3}{5}} &= 2^{\frac{1}{5}} \\
\Rightarrow 2^{x+\frac{3}{5}} &= 2^{\frac{1}{5}} \rightarrow (\because a^m \times a^n = a^{m+n}) \\
\therefore x + \frac{3}{5} &= \frac{1}{5} \\
\therefore x &= \frac{1}{5} - \frac{3}{5} = \underline{\underline{-\frac{2}{5}}}
\end{aligned}$$

20. C $(256)^{\frac{5}{4}} = (4^4)^{\frac{5}{4}} = (4)^5 = 1024 \left[(a^m)^n = a^{mn} \right]$

21. A $\sqrt[4]{1\frac{9}{16}} = \sqrt[4]{\frac{25}{16}} = \frac{5}{4} = 1\frac{1}{4}$

22. B HOTEL = 55

When we add the place values of letters of Hotel, we got answer as 60. Then subtract
no: of letters in Hotel (ie, 5) from 60

ie, $60 - 5 = 55$

Similarly BORE = $2 + 15 + 18 + 5 = 40$

$40 - 4 = 36$

23. D Sum of first n natural numbers = $\frac{n(n+1)}{2}$

So, average of first n natural numbers = $\frac{n(n+1)}{2n} = \frac{n+1}{2}$

Required average = $\frac{50+1}{2} = \frac{51}{2} = 25.5$

24. B Except B in all other groups, a part of the body is infected with a disability

25. B Since m is the 13th letter in the Alphabet.

Writing M = $13 = 1 + 3 = 4$

Similarly O = $15 = 1 + 5 = 6$

L = $12 = 1 + 2 = 3$

T = $20 = 2 + 0 = 2$

Y = $25 = 2 + 5 = 7$

EXAMINATION = 56149512965