

TEST OF REASONING & MENTAL ABILITY - NO.2

Time : 30 minutes

Marks : 100

1. In a certain code BAKE is written as 5796 and FIRE is written as 3146. How is FEAR written in that code?
A. 3564 B. 3674 C. 3574 D. 3654 E. None of these
2. What should come in place of the question mark (?) in the following series?
7 7 14 42 168 ? 5040
A. 1024 B. 1296 C. 1156 D. 1089 E. None of these
3. $(74 \times \sqrt{676}) - (42 \times \sqrt{?}) = 496$
A. 1156 B. 1126 C. 1024 D. None of these
E. Cannot be determined
4. If eraser is called box, box is called pencil, pencil is called sharpener and sharpener is called boy, what will a child write with?
A. Eraser B. Box C. Pencil D. Sharpener E. None of these
5. Vishnu sets alarm in two different clocks. The first alarm rings after every 30 minutes and the second rings after every 90 minutes. If they rang together at 11 pm, when is the earliest they will ring together again?
A. 12.30 am B. 2.00 am C. 1.30 am D. 1.00 am E. None of these
6. Solve $\left(\frac{18}{\sqrt{y}} - \sqrt{y} = \frac{7}{\sqrt{y}} \right)$
A. 10 B. 9 C. 11 D. 9 E. None of these
7. Anil started walking towards east. He walked a distance of 5km and then turned to his right and walked 10 km and as aim turned to his right and walked another 15 km. Then he turned to his left and walked 5km. In which direction is he in relation to his starting point?
A. South B. SouthEast C. North West D. South West E. None of these
8. Which one is odd from others?
A. Brass B. Iron C. Aluminium D. Zinc E. Copper
9. If P denotes \div , Q denotes $+$, M denotes $—$ and B denotes \times , then
 $18 \text{ B } 12 \text{ P } 4 \text{ M } 8 \text{ Q } 6 = ?$
A. 108 B. 46 C. 17 D. 52 E. None of these
10. Hygrometer is to Humidity as SPhygmomanometer is to _____?
A. pressure B. blood pressure C. precipitation D. heart beat E. None of these
11. The ratio of the age of the father to that of son is 2 : 1. 5 years earlier, the ratio was 11 : 5. What is the present age of son?
A. 20 years B. 25 years C. 30 years D. 35 years E. 40 years

12. Two numbers are respectively 33% and 40% more than a third number. What percentage is the first of the second?
 A. 105% B. 96% C. 95% D. 90% E. None of these
13. In an year, Teacher's day comes on Friday. Then on which day will be Gandhi Jayanthi?
 A. Friday B. Saturday C. Thursday D. Monday E. None of these
14. Find the missing number in the below series.
 342, 511, 728, _____, 1330
 A. 928 B. 840 C. 999 D. 900 E. None of these
15. What should come next in the following letter series?
 H H I H I J H I J K H I J K L
 A. H B. I C. M D. K E. None of these
16. Pointing to Sarath, Neethu says, "He is the son of my grandfather's only son." How is Sarath related to Neethu?
 A. Brother B. Cousin C. Uncle D. Father E. None of these
17. The position of how many alphabets will remain the same, if each of the alphabets in the word FRIENDS is rearranged in the alphabetical order from left to right?
 A. One B. Two C. Three D. More than three E. None of these
18. Nail is related to Nail cutter in the same way as Hair is related to _____.
 A. Oil B. Comb C. Scissors D. Haircut E. Colour
19. If the sum of one third, one sixth and $\frac{1}{12}$ th of a number is 20 less than the number itself, then what is the number?
 A. 72 B. 60 C. 48 D. 36 E. 24
20. The ratio of boys to girls in a class is 7 : 4. If the number of girls is 60 less than the number of boys, then how many students are there in the class?
 A. 180 B. 210 C. 220 D. 240 E. 550
21. '26' is related to '5' in the same way as '65' is related to _____.
 A. 7 B. 8 C. 9 D. 6 E. None of these
22. 'MORE' is related to 'EORM' in the same way as 'SUIT' is related to _____.
 A. TIUS B. ISTU C. IUST D. TUIS E. None of these
23. $\frac{1}{6}$ of $\frac{1}{4}$ of 640% of 60 = ?
 A. 24 B. 32 C. 18 D. 12 E. None of these
24. The positions of first and second digits in the number 421653 are interchanged. Similarly the positions of third and fourth digits are interchanged and so on. Which of the following will be the third digit from the right end after the rearrangement?
 A. 1 B. 6 C. 2 D. 4 E. None of these
25. Find the cube root of 0.000027?
 A. .003 B. .03 C. .0003 D. .00003 E. None of these

ANSWER WITH EXPLANATION

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1. B.
- | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| B | A | K | E | F | I | R | E | F | E | A | R |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 5 | 7 | 9 | 6 | 3 | 1 | 4 | 6 | 3 | 6 | 7 | 4 |
2. E.
- The given series is
- | | | | | | |
|----|----|----|----|-----|------|
| X1 | X2 | X3 | X4 | X5 | X6 |
| 7 | 7 | 14 | 42 | 168 | ? |
| | | | | | 5040 |
- ie. $168 \times 5 = 840$ is the right answer.

3. A. $74 \times 26 - 42 \times \sqrt{?} = 496$
 $\sqrt{?} = \frac{74 \times 26 - 496}{42} = \frac{1428}{42} = 34$

$$\therefore ? = 34 \times 34 = \underline{\underline{1156}}$$

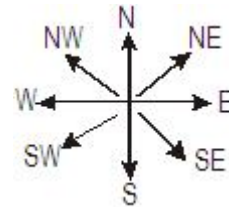
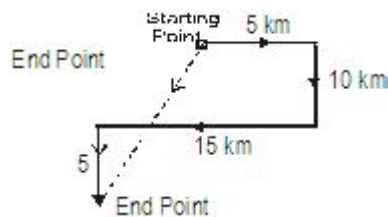
$$\therefore (\sqrt{a})^2 = a$$

4. D.
5. A. LCM of 30 and 90 is 90. Hence they will ring again earliest after 90 minutes.
Now 11 pm + 90 minutes = 12.30 am

6. C. $\frac{18}{\sqrt{y}} - \sqrt{y} = \frac{7}{\sqrt{y}}$
ie, $\sqrt{y} = \frac{18}{\sqrt{y}} - \frac{7}{\sqrt{y}} = \frac{18-7}{\sqrt{y}}$

$$\therefore y = \underline{\underline{11}}$$

7. D. The movement of Anil can be shown below



8. A. All others are metal, while brass is an alloy.
9. D. $18 \times 12 \div 4 - 8 + 6$
 $= 18 \times 3 - 8 + 6$
 $= 54 + 6 - 8$
 $= 60 - 8 = 52$ (BODMAS rule)

10. B.
11. C. Let the age of father be 'x' and son be 'y'

$$\therefore \frac{x}{y} = \frac{2}{1}$$

$$\therefore x = 2y \rightarrow (1)$$

five years earlier, $\frac{x-5}{y-5} = \frac{11}{5}$

$$\therefore 5x - 11y = -30 \rightarrow (2)$$

Solving (1) and (2) $y = 30$

12. C. Let the 3rd number be 100
So 1st number is 133 and 2nd number is 140.
 $\therefore \% = \frac{133}{140} \times 100 = 95\%$
13. C. September 5 = Friday
September 5 + 7 = 12 Friday
September 12 + 7 = 19 Friday
September 19 + 7 = 26 Friday
So October 2 is Thursday
14. C. The number series is $7^3 - 1, 8^3 - 1, 9^3 - 1, \underline{10^3 - 1}, 11^3 - 1$
15. A. H / HI / HIJ / HIJK / HIJKL / H
16. A. Son of grand father's only son = son of father = brother
17. B. The given word : F R I E

N
R

 D

S
S

In alphabetical order : D E F I

N
R

S
S
18. C.
19. C. Let the number be 'x'
$$x - \left(\frac{x}{3} + \frac{x}{6} + \frac{x}{12} \right) = 20$$
$$x - \frac{7x}{12} = 20$$
$$\therefore x = \underline{\underline{48}}$$
20. C. Let the number of boys be 7x and girls be 4x.
 \therefore Difference = 7x - 4x \Rightarrow 3x = 60
 \therefore x = 20
Boys = 7 \times 20 = 140
Girls = 4 \times 20 = 80
Total = 220
21. B. $\sqrt{26-1} = 5$
22. D. $\therefore \sqrt{65-1} = 8$
The places of first and last letters are interchanged.
23. E. $\frac{1}{6} \times \frac{1}{4} \times \frac{640}{100} \times 60 = \underline{\underline{16}}$
24. A. 421653 \rightarrow 246135
25. B.
$$\sqrt[3]{0.000027} = \left(\frac{27}{1000000} \right)^{\frac{1}{3}}$$
$$= \frac{(3^3)^{\frac{1}{3}}}{(100^3)^{\frac{1}{3}}} = \frac{3}{100} = \underline{\underline{.03}}$$