

PRACTICE TEST OF TOP RANK

TEST OF REASONING & MENTAL ABILITY - NO.7

Time : 30 minutes

Marks : 100

1. Five bells ring at the intervals of 2, 3, 4, 5 and 8 seconds respectively. They will ring together after.
A. 1 minute B. 3 minutes C. 2 minutes D. 4 minutes E. None of these
2. A clock shows the time 4 : 30. The minute hand of the clock points towards south. In which direction, the hour hand will point ?
A. South-west B. South C. East D. South - East E. None of these
3. In a certain code language, PART is written as RTYR. Then How YEAR can be written in that code language ?
A. PCCA B. PCCZ C. PCAC D. PCCB E. None of these
4. If $x = \sqrt{6 + \sqrt{6 + \sqrt{6 + \dots}}}$, then x is equal to,
A. 3 B. 2 C. -1 D. +2 E. None of these
5. Find the length of the longest rod that can be placed in a room of size 10 m × 8 m × 6m
A. $5\sqrt{2}$ m B. $10\sqrt{2}$ m C. $20\sqrt{2}$ m D. $15\sqrt{2}$ E. None of these
6. 'Boy' is related to 'Girl' in the same way as 'pig' is related to _____
A. Sow B. Ewe C. Doe D. Bitch E. None of these
7. If 'A' means '+', 'B' means '-', 'C' means 'x' and 'D' means '÷', then what will be the value of the following expression ?
8 D 2 A 6 C 3 B 5
A. 25 B. 17 C. 10 D. 30 E. None of these
8. What should come next in the following number series ?
2 2 3 2 3 4 2 3 4 5 2 3 4 5 6 2 3 4 5 6 7 2 3 4 5 6 7
A. 2 B. 5 C. 7 D. 9 E. None of these
9. How many meaningful English words can be made with the letters NREA using each letter only once in each word ?
A. none B. one C. two D. three E. more than three
10. If the numerator of a fraction is increased by 8% and the denominator is decreased by 10%, the fraction obtained is $\frac{2}{3}$. What was the original fraction ?
A. $\frac{3}{4}$ B. $\frac{4}{9}$ C. $\frac{5}{9}$ D. $\frac{5}{8}$ E. None of these
11. Present age of Tara is five times the age of her son. Five years ago, her age was 25 times the age of her son that time. What is Tara's present age ?
A. 30 years B. 32 years C. 35 years D. 25 years E. None of these
12. Half of a number is equal to 65% of another number. What is the ratio between the first number and second number respectively ?
A. 10 : 13 B. 8 : 13 C. 13 : 8 D. 13 : 10 E. none of these
13. Working 5 hours a day, A can complete a work in 8 days and working 6 hours a day, B can complete the same work in 10 days. Working 8 hours a day, they can jointly complete the work in how many days ?
A. 3 days B. 4.5 days C. 4 days D. 5.4 days E. none of these
14. Which of the missing number will complete the below series ?
123, 6, 234, 24, 345, 60, 456, 120, 567, _____
A. 150 B. 180 C. 210 D. 140 E. none of these
15. In the following sequence of digits, how many odd digits are immediately preceded and immediately followed by even digits ?

2 9 6 8 1 3 4 8 7 6 5 2 1 3 4 3 6 8

A. 4 B. 3 C. 5 D. 6 E. none of these

16. In a certain code, If $11 \times 7 = 72$, $9 \times 4 = 65$, then what is $7 \times 2 = ?$

A. 40 B. 42 C. 50 D. 45 E. none of these

17. Find the odd one among the following ?

A. NPE B. RAESRE C. ACELS D. FNA E. none of these

18. Starting from his house, Raju walks 40 m towards south. Then he turn right and walks 20m then turns right and walks 15 m. He now travels 10 m towards East to reach the park. In which direction is the park with respect to his house ?

A. South-west B. North-East C. East D. West E. none of these

19. If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?

A. 6 B. 8 C. 9 D. 10 E. none of these

20. Choose the odd one

A. Ear B. Lung C. Eye D. Heart E. Kidney

21. By how much does $\frac{6}{7/8}$ exceed $\frac{6/7}{8}$?

A. $6\frac{1}{8}$ B. $6\frac{3}{4}$ C. $7\frac{3}{4}$ D. $7\frac{5}{6}$ E. none of these

22. The mean of $1^2, 2^2, 3^2, 4^2, 5^2, 6^2, 7^2$ is

A. 10 B. 20 C. 30 D. 40 E. none of these

23. Complete the below series

AZ, CX, FU, _____

A. KP B. JQ C. IR D. IV E. none of these

24. BIRD is to AEROPLANE as FISH is to _____

A. YATCH B. RAFT C. SHIP D. SUBMARINE E. none of these

25. Court : Justice :: _____

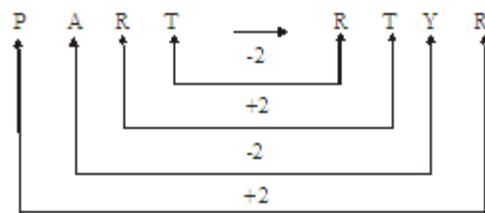
A. Food : Eat B. Temple : Church C. Life : living D. Theatre : Entertainment
E. none of these

ANSWER WITH EXPLANATION

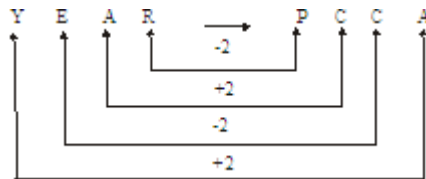
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1. C L . C . M of 2, 3, 4, 5 and 8 = 120
 \therefore 120 seconds = 2 minutes

2. D
- 

3. A
- 

Similarly



4. A $x = \sqrt{6 + \sqrt{6 + \sqrt{6 + \dots \infty}}} \rightarrow (1)$
 $\Rightarrow x = \sqrt{6 + x}$ from (1)
 $\Rightarrow x^2 = 6 + x$
 $\Rightarrow x^2 - x - 6 = 0$
 $\Rightarrow (x - 3)(x + 2) = 0$
 $\Rightarrow x = 3, -2$

5. B Length of Longest Rod

$$= \sqrt{10^2 + 8^2 + 6^2} = 10\sqrt{2}$$

6. A Here male-female relation ship has been shown Girl is feminine gender of boy. Similarly sow is feminine gender of pig.

7. B Given expression = 8 D 2 A 6 C 3 B 5

After conversion, $8 \div 2 + 6 \times 3 - 5$ (BODMAS rule)

$$\Rightarrow 4 + 18 - 5 = 17$$

8. E 2, 23, 234, 2345, 23456, 234567, 2345678

9. C Meaningful words \Rightarrow EARN, NEAR

10. C Let the original fraction be $\frac{x}{y}$

According to the question,
$$\frac{x \times \frac{108}{100}}{y \times \frac{90}{100}} = \frac{2}{3}$$

$$\Rightarrow \frac{x}{y} = \frac{2}{3} \times \frac{90}{108} = \frac{5}{9}$$

11. A Let Tara's son's present age be x years

\therefore Tara's present age = 5 x years

five years ago, $5x - 5 = 25(x - 5)$

$$\Rightarrow 20x = 120$$

$$\Rightarrow x = \underline{\underline{6}}$$

Tara's present age = $5 \times 6 = 30$ years

12. D Let the numbers be x and y

$$\therefore \frac{x}{2} = \frac{65}{100}y$$

$$\Rightarrow \frac{x}{y} = \frac{2 \times 65}{100} = \frac{13}{10}$$

\therefore

13. A A working 5 hours a day and complete in 8 days

A can complete the work in 40 hours

Similarly B working 6 hours and complete in 10 days

B can complete the work in 60 hours.

$$(A + B)'s \text{ 1 hour's work} = \frac{1}{40} + \frac{1}{60} = \frac{3+2}{120} = \frac{5}{120} = \frac{1}{24}$$

Hence A and B together will complete the work in 24 hrs.

They can complete the work in 3 days working 8 hrs a day.

14. C The given series is,

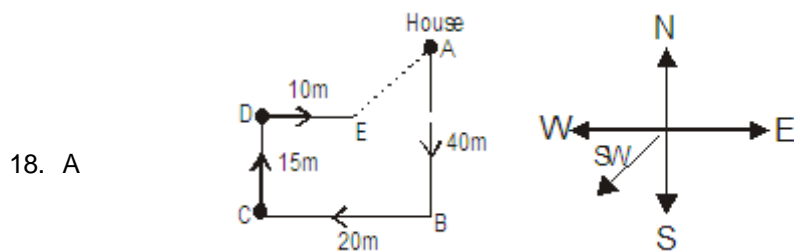
$$\begin{array}{c|c|c|c|c} 123, 6 & 234, 24 & 345, 60 & 456, 120 & 567, 210 \\ \hline 1 \times 2 \times 3 = 6 & 2 \times 3 \times 4 = 24 & 3 \times 4 \times 5 = 60 & 4 \times 5 \times 6 = 120 & 5 \times 6 \times 7 = 210 \end{array}$$

15. A 2 9 6 8 1 3 4 8 7 6 5 2 1 3 4 3 6 8

16. D $11 \times 7 = 72 \Rightarrow 11^2 - 7^2 = 121 - 49 = 72$
 $9 \times 4 = 65 \Rightarrow 9^2 - 4^2 = 81 - 16 = 65$

Similarly $7 \times 2 = \underline{\quad} \Rightarrow 7^2 - 2^2 = 49 - 4 = \underline{\underline{45}}$

17. D Here the words are jumbled
 The words are PEN, ERASER, SCALE, FAN
 Except FAN, all others are stationary items.



The direction of AE = South West

19. C Code for given word = (No: of letters in the word) - 1
 So, code for GOVERNMENT = 10 - 1 = 9
20. D All except Heart are present in the human body in a pair.

21. B
$$\frac{6}{7/8} - \frac{6/7}{8} = 6 \times \frac{8}{7} - \frac{6}{7} \times \frac{1}{8}$$

$$\Rightarrow \frac{48}{7} - \frac{6}{56}$$

$$\Rightarrow \frac{384 - 6}{56} = \frac{378}{56} = \frac{27}{4} = 6\frac{3}{4}$$

22. B
$$1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$$

$$\therefore 1^2 + 2^2 + \dots + 7^2 = \frac{7 \times 8 \times 15}{6} = \underline{\underline{140}}$$

So, required average = $\frac{140}{7} = 20$

23. B Each term of the series is obtained from its previous term by moving its first letter 2, 3, 4 ----- steps forward and second letter 2, 3, 4 ----- steps backward.
24. D
25. D