Quantitative Aptitude and Reasoning
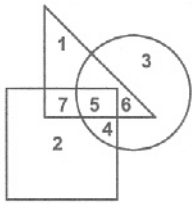
1. The difference between $\left(\frac{3}{5}\right)^{th}$ of $\left(\frac{2}{3}\right)^{rd}$ of a number and $\left(\frac{2}{5}\right)^{th}$ of $\left(\frac{1}{4}\right)^{th}$ of the same number is 288. What is the number?
   (a) 960
   (b) 850
   (c) 895
   (d) 995

2. Which greatest number will divide 3026 and 5053 leaving remainders 11 and 13 respectively?
   (a) 15
   (b) 30
   (c) 45
   (d) 60

3. A student was asked to divide a number by 3. But, instead of dividing it, he multiplied it by 3 and got 29.7. What was the correct answer?
   (a) 3.3
   (b) 9.3
   (c) 9.8
   (d) 9.9

4. The value of $\left\{7\frac{1}{2}+\frac{1}{2}\div\frac{1}{2}of\frac{1}{4}-\frac{2}{5}\times2\frac{1}{3}\div1\frac{7}{8}of\left(1\frac{2}{5}-1\frac{1}{3}\right)\right\}$ is equal to_____.
   (a) $3\frac{1}{5}$
   (b) $2\frac{1}{24}$
   (c) $4\frac{1}{30}$
   (d) None of these

5. Two numbers are in the ratio $1\frac{1}{2}:2\frac{2}{3}$. But, if each number is increased by 15, the ratio becomes $1\frac{2}{3}:2\frac{1}{2}$. The numbers are
   (a) 27, 42
   (b) 36, 48
   (c) 27, 48
   (d) 27, 36

6. In the given diagram, the triangle stands for graduates, square stands for membership of professional organisations and the circle stands for membership of social organisations. The number of graduates who has membership in professional organisations only is

   (a) 5
   (b) 7
   (c) 6
   (d) 4

7. The value of $(2^3 + 2^2 + 2^{-2} + 2^{-3})$ is equal to_____.
   (a) $\frac{99}{8}$
   (b) $\frac{99}{16}$
   (c) $\frac{97}{8}$
   (d) 6

8. In an examination, 65% of the total examinees passed. If the number of failures is 420, the total number of examinees is _____.
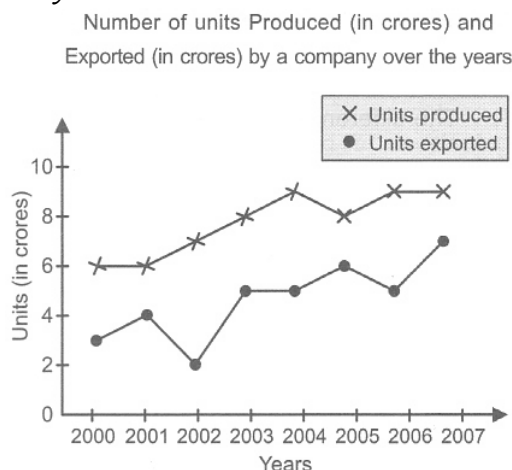   (a) 500
   (b) 1200
   (c) 1000
   (d) 1625

9. By selling a watch for Rs. 1440, a man loses 10%. At what price should he sell it to gain 5%?
(a) Rs. 1550
(b) Rs. 1680
(c) Rs. 1685
(d) Rs. 1600

10. Wasim borrowed some money at 6% p.a. simple interest for the first four years, 8% p.a. for the next three years and 10% p.a. for a period beyond 7 years. At the end of 12 years, he earned Rs. 5880 as simple interest. How much money did he borrow ?
(a) Rs.6000
(b) Rs.8000
(c) Rs.9000
(d) Rs. 10000

DIRECTION: Study the following graph carefully and answer the given questions 11 and 12. Number of units Produced (in crores) and Exported (in crarea) by a company over the years

Number of units Produced (in crores) and Exported (in crores) by a company over the years

11. What is the average number of units produced over the years?
(a) 77570000
(b) 75500000
(c) 77500000
(d) 7757000

12. What is the difference between the number of units exported in 2001 and 2002?
(a) 20000000   (b) 200000000
(c) 2000000   (d) 200000

13. A hall 20 m long and 15 m broad is surrounded by a verandah of uniform width of 2.5 m. The cost of flooring the verandah at Rs. 17.50 per sq. metre is
(a) Rs.2500
(b) Rs. 3000
(c) Rs.3500
(d) Rs.4000

14. If the digits of the number 5726489 are arranged in ascending order, how many digits will remain at the same position?
(a) None
(b) One
(c) Two
(d) Three

15. If it is possible to make a meaningful word from the second, the third, the fourth, the fifth and the eighth letters of the word MANGROVES, then the first letter of the word thus formed is your answer. If more than one such word can be formed, your answer is ' X' and if no such word can be formed, your answer is 'Z'.
(a) A
(b) R
(c) Z
(d) X

16. Which of the following options is correct?
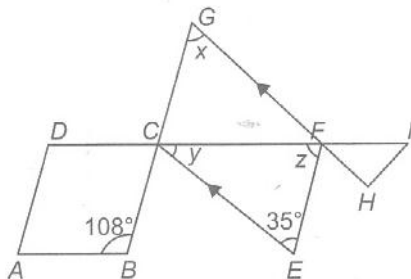(1) Every integer and fraction is a rational number.

(2) A rational number $\frac{p}{q}$ is positive if p and q are either both positive or both negative.

(3) A rational number $\frac{p}{q}$ is negative if one of p and q is positive and other is negative.
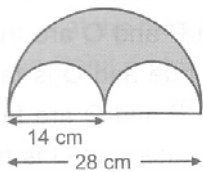
(4) If there are two rational numbers with same denominator, then the one with the larger numerator is larger than the other.
(a) Both 1 and 4 are incorrect.
(b) Both 2 and 3 are incorrect,
(c) Only 1 is incorrect.
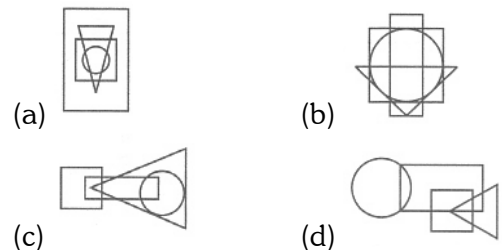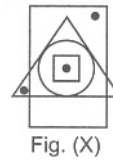(d) All are correct.

17. In the given figure (not drawn to scale), ABCD is a rhombus, FHI is an equilateral triangle and CEFG is a trapezium with EC parallel to FG. DCF/, BCG and GFH are straight lines. Find x + y + z.

(a) 190°
(b) 198°
(c) 203°
(d) 193°

18. In the given figure, the ratio of the area of the shaded portion to the area of total figure is ____.

(a) 2:3
(b) 1:4
(c) 1:2
(d) 1:3

19. A ludo die is rolled. Find the probability that the number of dots on its upper face is a odd prime number.
(a) 0
(b) $\dfrac{1}{2}$
(c) $\dfrac{1}{3}$
(d) 1

20. Select the option which satisfies the same conditions of placement of the dots as in the Fig. (X).

Fig. (X)

(a)   (b)

(c)   (d)

21. Study the statements carefully.
P : The corners of a solid shape are called its edges.
Q : The line segments of a solid shape are called its vertices.
Which of the following options is correct?
(a) Both P and Q are true.
(b) P is true and Q is false.
(c) Both P and Q are false.
(d) P is false and Q is true.

22. There is a certain relationship between the pair of figures on the either side of : :. Identify the relationship and find the missing figure.

(a)   (b)

(c)   (d)

23. A trader buys some goods for Rs. 150. If the overhead expenses be 12% of cost price, then at what price should it be sold to earn 10% profit ?
(a) Rs. 184.80
(b) Rs. 185.80
(c) Rs. 187,80
(d) Rs. 188.80

24. P, Q and R start at the same time and in the same direction to run around a circular stadium. P completes a round in 252 seconds, Q in 308 seconds and R in 198 seconds, ail starting at the same point. After what time will they meet again at the starting point?
(a) 26 mins 18 sees
(b) 42 mins 36 sees
(c) 46 mins 12 sees
(d) 45 mins

25. At Shimla, on Tuesday the temperature was -8°C . It then dipped by 4°C on Wednesday. On Thursday, it rose by x. if the temperature on Thursday is -7°C , then find the value of x.
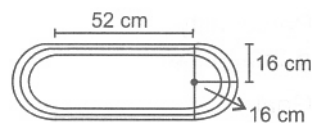(a) 4°C
(b) 5°C
(c) 7°C
(d) 2°C

26. The number of trees in different parks of a city are 33, 38, 48, 33. 34, 34, 33 and 24. The mode of this data is
(a) 24
(b) 34
(c) 33
(d) 48

27. In a debate competition, the judges decide that 20 percent of the total marks would be given for accent and presentation. 60 percent of the rest are reserved for the subject matter and the rest are for rebuttal. If this means 8 marks for rebuttal, then find the total marks.
(a) 20
(b) 40
(c) 30
(d) 25

28. Ishika has designed a small oval race track for her remote control car. Her design is shown in the figure. What is the total distance around the track? Round your answer to the nearest whole cm.

(a) 180 cm
(b) 205 cm
(c) 225 cm
(d) 195 cm

29. There are four containers that are arranged in the ascending order of their heights. If the height of the smallest container given in the figure is expressed as $\frac{7}{25}x = 10.5cm$. Find the height of the largest container.

(a) 37.5cm
(b) 42.5 cm
(c) 30.5 cm
(d) 45.5cm

30. Rohit and Raj study in the same class. Rohit has secured more marks than Raj in the terminal examination. Raj's rank is seventh from the top among all the students in the class. Which of the following is definitely true?
(a) Rohit stood first in the terminal examination.
(b) There is at least one student between Rohit and Raj in the rank list.
(c) There are at the most five students between Rohit and Raj in the rank list.
(d) Raj is five ranks lower than Rohit in the rank list.

Answer - Key

1. A	**2.** C	**3.** A	**4.** C	**5.** C
6. B	**7.** A	**8.** B	**9.** B	**10.** A
11. C	**12.** A	**13.** C	**14.** D	**15.** D
16. D	**17.** D	**18.** C	**19.** C	**20.** B
21. C	**22.** D	**23.** A	**24.** C	**25.** B
26. C	**27.** D	**28.** B	**29.** A	**30.** C