



2. If the time taken by boat to travel upstream on Monday is  $27\frac{1}{5}$  hrs. more than the time taken by it to travel downstream on the same day, then find the speed of boat in still water on Monday? (speed of boat in still water is same in upstream as in downstream)
- (a) 25 kmph (b) 18 kmph  
(c) 20 kmph (d) 15 kmph  
(e) None of these

**Ans: (a)**

3. If the speed of boat in still water on Saturday was 27 km/hr and the speed of boat in still water on Wednesday was  $66\frac{2}{3}\%$  more than that of Saturday and time taken to travel upstream on Wednesday is  $\frac{16}{13}$  times than time taken by it to travel downstream on Saturday, then find the speed of stream (in kmph) on Saturday?
- (a) 2 (b) 4  
(c) 9 (d) 8  
(e) None of these

**Ans: (c)**

4. The speed of boat in still water on Saturday was 21 km/hr. and that on Sunday was  $28\frac{4}{7}\%$  more than that on Saturday, if the time taken by boat to travel upstream on Saturday is  $2\frac{1}{2}$  times the time taken to travel downstream on Sunday, then find the time taken by the boat to cover a distance of 125 km upstream on Saturday?
- (a) 6 hrs 45 min (b) 2 hrs 45 min  
(c) 4 hrs 30 min (d) 6 hrs 15 min  
(e) None of these

**Ans: (d)**

5. If the time taken by boat to travel upstream on Friday is 30 hours more than the time taken by it to travel downstream on Wednesday and the speed of boat in still water on Friday is 17 kmph, then find the upstream speed of boat on Wednesday? (speed of boat in still water is different on different days)
- (a) 27 kmph (b) 22 kmph  
(c) 20 kmph (d) 25 kmph  
(e) None of these

**Ans: (e)**

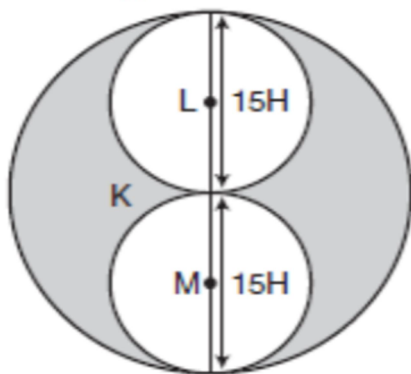
6. A Container contains X Litres of Milk. A thief stole 50 Litres of Milk and replaced it with the same quantity of water. He repeated the same process further two times. And thus Milk in the container is only X-122 litres. Then what is the quantity of water in the final mixture?
- (a) 122 Litre (b) 124 Litre  
(c) 128 Litre (d) 250 Litre

**Ans: (a)**

7. Veena has to pay Rs. 2460 to Sita, 5 Months later at 6% SI per annum, and Gita has to pay Sita same amount at 7.5% SI per annum after certain months. If both took the same amount of loan from Sita then Gita paid loan after how many months?
- (a) 3 Months (b) 4 Months  
(c) 6 Months (d) 12 Months

**Ans: (b)**

Use the figure below to answer questions 8 through 9.



8. What is the area of the shaded figure?
- (a)  $56.25\pi$  square feet                      (b)  $112.5\pi$  square feet  
(c)  $225\pi$  square feet                        (d)  $337.4\pi$  square feet

**Ans: (b)**

9. What is the ratio of the area of Circle M and the area of Circle K?
- (a) 1 : 8    (b) 1 : 4  
(c) 1 : 2    (d) 1 : 1

**Ans: (b)**

10. If  $x\%$  of  $y$  is equal to  $z$  then what percentage of  $z$  is  $x$ ?
- (a)  $\frac{y^2}{100}$     (b)  $\frac{x^2}{100}$   
(c)  $\frac{100^2}{y}$     (d)  $\frac{100^2}{x}$

**Ans: (d)**

11. Train A takes 45 minutes more than train B to travel 450 km. Due to engine trouble, speed of train B falls by a quarter. So it takes 30 minutes more than Train A to complete the same journey. Find the speed of Train A.
- (a) 120 km/hr                                      (b) 110 km/hr  
(c) 100 km/hr                                      (d) 90 km/hr

**Ans: (c)**

12. One Trader calculates the percentage of profit on the buying price and another calculates on the selling price. When their selling prices are same, then the difference of their actual profit is Rs 85 and both claim to have made 20% profit. What is the selling price for each?
- (a) Rs 3000    (b) Rs 2550  
(c) Rs 2800    (d) Rs 4000

**Ans: (b)**

13. Due to increase of 20% in the price of eggs, 2 eggs less are available for Rs 24. The present rate of eggs per dozen is

- (a) Rs 28.8/dozen (b) Rs 24.8/dozen  
(c) Rs 25.8/dozen (d) Rs 30/dozen

**Ans: (a)**

14.  $\sin \frac{13\pi}{6} = ?$

- (a)  $\frac{1}{2}$  (b)  $\frac{1}{\sqrt{2}}$   
(c)  $\frac{1}{\sqrt{3}}$  (d)  $\sqrt{3}$

**Ans: (a)**

15. Fruits were purchased for Rs 350. 9 boys ate  $\frac{3}{5}$ th of them in 2 hours. 6 boys feel their stomach as full so do not eat further. In how many hours the remaining fruits will get finished by remaining boys?

- (a) 2 hours (b) 3 hours  
(c) 5 hours (d) 4 hours

**Ans: (d)**

16. If minimum value of  $f(x) = x^2 + 2bx + 2c^2$  is greater than the maximum value of  $g(x) = -x^2 - 2cx + b^2$ , then for real value of  $x$ .

- (a)  $|c| > \sqrt{2}|b|$  (b)  $\sqrt{2}|c| > b$   
(c)  $0 < c < \sqrt{2}b$  (d) no real value of  $a$

**Ans: (a)**

17. The set of all real numbers  $x$  for which  $x^2 - |x + 2| + x > 0$ , is

- (a)  $(-\infty, -2) \cup (2, \infty)$  (b)  $(-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)$   
(c)  $(-\infty, -1) \cup (1, \infty)$  (d)  $(\sqrt{2}, \infty)$

**Ans: (b)**

18. What should come at the place of question mark? 46080, 3840, 384, 48, 8, 2, ?

- (a) 1 (b)  $\frac{1}{64}$   
(c)  $\frac{1}{8}$  (d) None of these

**Ans: (a)**

19. A room has floor size of 15\*6sq.cm. What is the height of the room , if the sum of the areas of the base and roof is equal to the sum of the areas of the four walls ?

- (a) 1.12cm (b) 3.24cm  
(c) 4.29cm (d) 2.5cm

**Ans: (a)**

20. The sum of third and ninth term of an A.P is 8. Find the sum of the first 11 terms of the progression.

- (a) 44 (b) 22  
(c) 19 (d) None of the above

**Ans: (a)**

21. Given  $A = 2^{65}$  and  $B = (2^{64} + 2^{63} + 2^{62} + \dots + 2^0)$ , which of the following is true?

- (a) B is  $2^{64}$  larger than A (b) A and B are equal  
(c) B is larger than A by 1 (d) A is larger than B by 1

**Ans: (d)**

22. A line from center to circumference of a circle is known as

- (a) diameter (b) radius  
(c) area (d) midpoint

**Ans: (b)**

23. A bag contains 4 blue, 5 white and 6 green balls. Two balls are drawn at random. What is the probability that one ball is white?

- (a)  $\frac{10}{21}$  (b)  $\frac{1}{2}$

(c)  $\frac{3}{4}$

(d)  $\frac{2}{25}$

**Ans: (d)**

24. Two pipes P and Q can fill a tank in 20hrs and 25hrs respectively while a third pipe R can empty the tank in 30hrs. If all the pipes are opened together for 10hrs and then pipe R is closed then in what time the tank can be filled.

(a)  $\frac{400}{23}$  hrs

(b)  $\frac{400}{27}$  hrs

(c)  $\frac{200}{23}$  hrs

(d)  $\frac{200}{27}$  hrs

**Ans: (b)**

25. Given ratio are  $a : b = 2 : 3$ ,  $b : c = 5 : 2$ ,  $c : d = 1 : 4$ . Find  $a : b : c$ .

(a) 2 : 3 : 6

(b) 4 : 5 : 6

(c) 10 : 15 : 6

(d) 1 : 5 : 7

**Ans: (c)**

26. If there are Rs 495 in a bag in denominations of one-rupee, 50 paise and 25 paise coins, which are in the ratio 1 : 8 : 16. How many 50 paise coins are there in the bag?

(a) 50

(b) 220

(c) 440

(d) None of these

**Ans: (c)**

27. What decimal of an hour is a second?

(a) .00028

(b) .00027

(c) .00026

(d) .00025

**Ans: (b)**

28. What will be vulgar fraction of 0.0056?

(a)  $\frac{7}{1150}$

(b)  $\frac{7}{1175}$

(c)  $\frac{7}{1250}$

(d)  $\frac{7}{1275}$

**Ans: (c)**

29. One-fifth of a number is equal to  $\frac{5}{8}$ th of another number. If 35 is added to the first number, it becomes four times of the second number. Find the second number.

- (a) 39 (b) 70  
(c) 40 (d) 25

**Ans: (c)**

30. If  $* = +, / = -, + = *, - = /$  then  $43 * 561 + 500 - 100 / 10 = ?$

- (a) 3211 (b) 2388  
(c) 2883 (d) 2838

**Ans: (d)**

31. A circle is inscribed in an equilateral triangle of side 24 cm, touching its sides. What is the area of the remaining portion of the triangle?

- (a)  $144\sqrt{3} - 48\pi \text{ cm}^2$  (b)  $121\sqrt{3} - 36\pi \text{ cm}^2$   
(c)  $144\sqrt{3} - 36\pi \text{ cm}^2$  (d)  $121\sqrt{3} - 48\pi \text{ cm}^2$

**Ans: (a)**

32. A clock strikes 4 taking 9 seconds. In order to strike 12 at the same rate, the time taken is

- (a) 33 seconds (b) 30 seconds  
(c) 36 seconds (d) 27 seconds

**Ans: (a)**

33. John's present age is one fourth of his father's age two years ago. John's father's age will be twice Raman's age after 10 years. If Raman's 12th birthday was celebrated 2 years ago, then what is John's present age?

- (a) 5 years (b) 7 years  
(c) 9 years (d) 11 years

**Ans: (c)**

34. Raj invested Rs 76000 in a business. After few months Monty joined him and invests Rs 57000. At the end of the year, both of them share the profits at the ratio of 2:1. After how many months Monty joined Raj?

- (a) 4 Months (b) 7 Months  
(c) 8 Months (d) 12 Months

**Ans: (a)**

35. Work done by P in one day is double the work done by Q in one day and work done by Q in one day is thrice the work done by R in one day. If P, Q and R together can complete the work in 30 days then in how many days P alone can do the work?

- (a) 52 days (b) 42 days  
(c) 30 days (d) 50 days

**Ans: (d)**

36. A boatman goes 2 km against the current of the stream in 1 hour and goes 1 km along the current in 10 minutes. How long will it take to go 5 km in stationary water?

- (a) 40 minutes (b) 1 hour  
(c) 1 hr 15 min (d) 1 hr 30 min

**Ans: (c)**

37. Simplification:  $25^{(2.7)} \times 5^{(4.2)} \div 5^{(5.4)} = ?$

- (a)  $5^4$  (b)  $5^{(3.2)}$   
(c)  $5^{(4.1)}$  (d)  $5^{(4.2)}$

**Ans: (d)**

38.  $18800 / 470 / 20$

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

**Ans: (b)**

39. Find the HCF of  $\frac{2}{3}, \frac{4}{6}, \frac{8}{27}$

(a)  $\frac{2}{27}$

(b)  $\frac{8}{3}$

(c)  $\frac{2}{3}$

(d)  $\frac{8}{27}$

**Ans: (a)**

40. If  $\log 2, \log (2x - 1)$  and  $\log (2x + 3)$  are in A.P, then x is equal to \_\_\_\_\_

(a)  $\frac{5}{2}$

(b)  $\log_2 5$

(c)  $\log_3 2$

(d) 32

**Ans: (a)**

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