

Aptitude

1. A train 150 meters long is running at a speed of 72 kilometers per hour. In what time will it pass a telegraph pole?

A) 5.5 seconds

B) 6.5 seconds

C) 7.5 seconds

D) 8.5 seconds

Answer: C) 7.5 seconds

2. A train 240 meters long passes a platform 300 meters long in 27 seconds. What is the speed of the train in kilometers per hour?

A) 60 km/hr

B) 72 km/hr

C) 80 km/hr

D) 90 km/hr

Answer: B) 72 km/hr

3. Two trains of lengths 120 meters and 80 meters are running in opposite directions with velocities of 42 kilometers per hour and 30 kilometers per hour. In what time will they completely cross each other?

A) 8 seconds

B) 10 seconds

C) 12 seconds

D) 14 seconds

Answer: B) 10 seconds

4. A car covers a distance of 690 kilometers in 30 hours. What is the speed of the car?

A) 21 km/hr

B) 23 km/hr

C) 25 km/hr

D) 27 km/hr

Answer: B) 23 km/hr

5. A person travels from P to Q at a speed of 40 kilometers per hour and returns by increasing his speed by 50%. What is his average speed for both trips?

- A) 45 km/hr
- B) 48 km/hr
- C) 50 km/hr
- D) 52 km/hr

Answer: B) 48 km/hr

6. A cyclist is moving at a speed of 15 meters per second. What is the speed in kilometers per hour?

- A) 48 km/hr
- B) 50 km/hr
- C) 52 km/hr
- D) 54 km/hr

Answer: D) 54 km/hr

7. The angle of elevation of the top of a tower from a point 30 m away from its foot is 30° . What is the height of the tower?

- A) 30 m
- B) $30\sqrt{3}$ m
- C) 10 m
- D) $10\sqrt{3}$ m

Answer: D) $10\sqrt{3}$ m

8. A pole 6 m high casts a shadow $2\sqrt{3}$ m long on the ground. The sun's elevation is:

- A) 30°
- B) 45°
- C) 60°
- D) 90°

Answer: C) 60°

9. From the top of a cliff 150 m high, the angle of depression of a boat is 60° . Find the distance of the boat from the cliff.

- A) $50\sqrt{3}$ m
- B) $150\sqrt{3}$ m
- C) 50 m
- D) 150 m

Answer: A) $50\sqrt{3}$ m

10. A can do a piece of work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is:

- A) $7/15$
- B) $8/15$
- C) $1/4$
- D) $1/10$

Answer: B) $8/15$

11. A is twice as good a workman as B and together they finish a piece of work in 14 days. In how many days can A alone finish the work?

- A) 11 days
- B) 21 days
- C) 28 days
- D) 42 days

Answer: B) 21 days

12. A and B can do a job in 12 days, B and C can do it in 16 days, and A and C can do it in 24 days. How many days will A, B, and C take to complete the job together?

- A) $32/3$ days
- B) $16/3$ days
- C) $30/3$ days
- D) 10 days

Answer: A) $32/3$ days

13. P can finish a work in 18 days. Q can finish the same work in 15 days. Q worked for 10 days and left the job. In how many days, P alone can finish the remaining work?

- A) 5 days
- B) 5.5 days
- C) 6 days
- D) 8 days

Answer: C) 6 days

14. Find the simple interest on ₹5000 for 2 years at 8% per annum.

- A) ₹700
- B) ₹800
- C) ₹900
- D) ₹1000

Answer: B) ₹800

15. A sum of money amounts to ₹9800 after 5 years and ₹12005 after 8 years at the same rate of simple interest. The rate of interest per annum is:

- A) 5%
- B) 8%
- C) 12%
- D) 15%

Answer: C) 12%

16. In what time will ₹1000 become ₹1331 at 10% per annum compounded annually?

- A) 2 years
- B) 2.5 years
- C) 3 years
- D) 3.5 years

Answer: C) 3 years

17. Find the compound interest on ₹8000 for 2 years at 5% per annum.

- A) ₹800

B) ₹810

C) ₹820

D) ₹830

Answer: C) ₹820

18. What will be the amount if a sum of ₹10,000 is placed at compound interest for 3 years at a rate of 10% per annum?

A) ₹12,310

B) ₹13,000

C) ₹13,310

D) ₹14,310

Answer: C) ₹13,310

19. The difference between simple interest and compound interest on ₹1200 for one year at 10% per annum, reckoned half-yearly is:

A) ₹2.50

B) ₹3

C) ₹3.75

D) ₹4

Answer: B) ₹3

20. A man buys an article for ₹27.50 and sells it for ₹28.60. Find his gain percent.

A) 2%

B) 3%

C) 4%

D) 5%

Answer: C) 4%

21. If the cost price of 12 pens is equal to the selling price of 8 pens, the gain percent is:

A) 25%

B) 33.33%

C) 50%

D) 66.66%

Answer: C) 50%

22. By selling an article for ₹450, a man loses 10%. At what price should he sell it to gain 10%?

A) ₹500

B) ₹525

C) ₹550

D) ₹600

Answer: C) ₹550

23. A shopkeeper sells a transistor at ₹840 at a gain of 20% and another for ₹960 at a loss of 4%. His total gain or loss percent is:

A) $5\frac{15}{17}\%$ loss

B) $5\frac{15}{17}\%$ gain

C) $6\frac{2}{3}\%$ gain

D) $6\frac{2}{3}\%$ loss

Answer: B) $5\frac{15}{17}\%$ gain

24. A, B and C started a business by investing ₹1,20,000, ₹1,35,000 and ₹1,50,000 respectively. Find the share of A, out of an annual profit of ₹56,700.

A) ₹16,800

B) ₹18,900

C) ₹21,000

D) ₹15,500

Answer: A) ₹16,800

25. A starts a business with ₹3500. After 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2:3. What is B's contribution to the capital?

A) ₹7500

B) ₹8000

C) ₹8500

D) ₹9000

Answer: D) ₹9000

26. A and B invest in a business in the ratio 3:2. If 5% of the total profit goes to charity and A's share is ₹855, the total profit is:

- A) ₹1425
- B) ₹1500
- C) ₹1537.50
- D) ₹1576

Answer: B) ₹1500

27. What is 25% of 200?

- A) 25
- B) 50
- C) 75
- D) 100

Answer: B) 50

28. If the price of a book is first decreased by 25% and then increased by 20%, the net change in the price will be:

- A) 10% decrease
- B) 5% decrease
- C) No change
- D) 10% increase

Answer: A) 10% decrease

29. A student has to secure 40% marks to pass. He gets 178 marks and fails by 22 marks. The maximum marks are:

- A) 200
- B) 300
- C) 500
- D) 1000

Answer: C) 500

30. Express the fraction $\frac{3}{4}$ as a percentage.

A) 25%

B) 50%

C) 75%

D) 60%

Answer: C) 75%

31. The ratio of the present ages of two brothers is 1:2 and 5 years back, the ratio was 1:3. What will be the ratio of their ages after 5 years?

A) 1:4

B) 2:3

C) 3:5

D) 5:6

Answer: C) 3:5

32. The sum of the ages of a father and his son is 60 years. Six years ago, the father's age was five times the age of the son. After 6 years, the son's age will be:

A) 14 years

B) 20 years

C) 22 years

D) 24 years

Answer: B) 20 years

33. Rajan got married 8 years ago. His present age is $\frac{6}{5}$ times his age at the time of his marriage. Rajan's sister was 10 years younger to him at the time of his marriage. The age of Rajan's sister is:

A) 32 years

B) 36 years

C) 38 years

D) 40 years

Answer: C) 38 years

34. If today is Monday, what will be the day after 61 days?

- A) Wednesday
- B) Saturday
- C) Tuesday
- D) Thursday

Answer: B) Saturday

35. Which of the following is a leap year?

- A) 1900
- B) 1800
- C) 2000
- D) 2100

Answer: C) 2000

36. Find the angle between the hour hand and the minute hand of a clock when the time is 3:25.

- A) 45°
- B) 47.5°
- C) 50°
- D) 52.5°

Answer: B) 47.5°

37. At what time between 4 and 5 o'clock will the hands of a clock be at right angles?

- A) 4:38
- B) 4:05 $\frac{5}{11}$
- C) 4:40
- D) Both A and B

Answer: B) 4:05 $\frac{5}{11}$

38. What is the average of the first 50 natural numbers?

- A) 25
- B) 25.5

- C) 26
- D) 26.5

Answer: B) 25.5

39. The average age of a class of 39 students is 15 years. If the age of the teacher is included, then the average increases by 3 months. Find the age of the teacher.

- A) 25 years
- B) 23 years
- C) 27 years
- D) 28 years

Answer: A) 25 years

40. A man travels at 60 kilometers per hour on a journey from A to B and returns at 100 kilometers per hour. Find the average speed for the journey.

- A) 75 km/hr
- B) 80 km/hr
- C) 70 km/hr
- D) 85 km/hr

Answer: A) 75 km/hr

41. The length of a rectangular plot is 20 meters more than its breadth. If the cost of fencing the plot at ₹26.50 per meter is ₹5300, what is the length of the plot in meters?

- A) 40 meters
- B) 50 meters
- C) 60 meters
- D) 70 meters

Answer: C) 60 meters

42. What is the area of a circle whose circumference is 44 centimeters?

- A) 154 cm^2
- B) 144 cm^2
- C) 164 cm^2

D) 174 cm^2

Answer: A) 154 cm^2

43. The diagonal of a square is $4\sqrt{2} \text{ cm}$. The area of another square whose area is double that of the first square is:

A) 16 cm^2

B) 32 cm^2

C) 64 cm^2

D) 128 cm^2

Answer: B) 32 cm^2

44. What is the volume of a cube with a side length of 6 centimeters?

A) 144 cm^3

B) 180 cm^3

C) 216 cm^3

D) 256 cm^3

Answer: C) 216 cm^3

45. The length, breadth, and height of a room are 12 meters, 10 meters, and 8 meters respectively. Find the total surface area.

A) 428 m^2

B) 512 m^2

C) 592 m^2

D) 624 m^2

Answer: B) 592 m^2

46. The radius and height of a cylinder are in the ratio 5:7 and its volume is 550 cm^3 . Find its radius.

A) 5 cm

B) 6 cm

C) 7 cm

D) 10 cm

Answer: A) 5 cm

47. In how many different ways can the letters of the word 'LEADING' be arranged?

- A) 720
- B) 2520
- C) 5040
- D) 1440

Answer: C) 5040

48. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there in the committee. In how many ways can it be done?

- A) 564
- B) 645
- C) 735
- D) 756

Answer: D) 756

49. Evaluate 8P_3 .

- A) 336
- B) 504
- C) 240
- D) 120

Answer: A) 336

50. Which of the following is a prime number?

- A) 51
- B) 87
- C) 91
- D) 97

Answer: D) 97

51. The number 33455672 is divisible by:

A) 3

B) 4

C) 9

D) 11

Answer: B) 4

52. What is the place value of 5 in the number 357,890?

A) 5

B) 500

C) 5000

D) 50,000

Answer: D) 50,000

53. The sum of two numbers is 40 and their difference is 4. The ratio of the numbers is:

A) 11:9

B) 11:10

C) 21:19

D) 22:9

Answer: A) 11:9

54. If one-fifth of a number decreased by 5 is 5, find the number.

A) 25

B) 50

C) 60

D) 75

Answer: B) 50

55. The sum of three consecutive odd numbers is 57. What is the middle number?

A) 17

B) 19

C) 21

D) 23

Answer: B) 19

56. Find the L.C.M (Least Common Multiple) of 24, 36 and 40.

A) 120

B) 240

C) 360

D) 480

Answer: C) 360

57. Find the H.C.F (Highest Common Factor) of 96, 144 and 180.

A) 12

B) 24

C) 36

D) 6

Answer: A) 12

58. The H.C.F. of two numbers is 11 and their L.C.M. is 7700. If one of the numbers is 275, then the other is:

A) 279

B) 283

C) 308

D) 318

Answer: C) 308

59. Convert $\frac{3}{8}$ to a decimal fraction.

A) 0.125

B) 0.375

C) 0.425

D) 0.625

Answer: B) 0.375

60. What is the sum of $0.25 + 1.3 + 0.005$?

A) 1.555

B) 1.6

C) 1.55

D) 2.555

Answer: A) 1.555

61. What is the value of $100 \times 10 - 100 + 2000 \div 100$?

A) 29

B) 920

C) 980

D) 1000

Answer: B) 920

62. The value of $\frac{1}{2} + \frac{1}{4} \div \frac{1}{4} - \frac{1}{2}$ is:

A) 0

B) $\frac{1}{2}$

C) 1

D) 2

Answer: C) 1

63. Simplify: $18 - [5 - \{6 + 2(7 - 8 - 5)\}]$

A) 13

B) 15

C) 27

D) 32

Answer: C) 27

64. What is the value of $(5+5+5) \div 5 / (3+3+3) \div 3$?

A) 1

B) $\frac{3}{2}$

C) $\frac{5}{3}$

D) 3

Answer: A) 1

65. What is the square root of 529?

A) 21

B) 23

C) 27

D) 29

Answer: B) 23

66. Find the cube root of 1728.

A) 11

B) 12

C) 13

D) 14

Answer: B) 12

67. What is the value of $(27)^{2/3}$?

A) 3

B) 6

C) 9

D) 18

Answer: C) 9

68. Simplify $\sqrt{72}$.

A) $3\sqrt{8}$

B) $6\sqrt{2}$

C) $2\sqrt{18}$

D) $4\sqrt{6}$

Answer: B) $6\sqrt{2}$

69. If $A:B = 5:7$ and $B:C = 6:11$, then $A:B:C$ is:

A) 30:42:77

B) 35:49:66

C) 55:77:66

D) 5:13:11

Answer: A) 30:42:77

70. Find the fourth proportional to 4, 9, 12.

A) 18

B) 21

C) 24

D) 27

Answer: D) 27

71. An amount of ₹735 was divided between A, B and C. If each of them had received ₹25 less, their shares would have been in the ratio of 1:3:2. The money received by C was:

A) ₹195

B) ₹200

C) ₹220

D) ₹245

Answer: D) ₹245

72. If 15 men can do a piece of work in 12 days, how many men will do the same work in 18 days?

A) 8 men

B) 10 men

C) 12 men

D) 15 men

Answer: B) 10 men

73. If 20 men can build a wall 56 metres long in 6 days, what length of a similar wall can be built by 35 men in 3 days?

- A) 49 metres
- B) 52 metres
- C) 55 metres
- D) 58 metres

Answer: A) 49 metres

74. Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?

- A) 10 minutes
- B) 12 minutes
- C) 15 minutes
- D) 25 minutes

Answer: B) 12 minutes

75. A pipe can fill a tank in 15 hours. Due to a leak in the bottom, it is filled in 20 hours. If the tank is full, how much time will the leak take to empty it?

- A) 40 hours
- B) 50 hours
- C) 60 hours
- D) 70 hours

Answer: C) 60 hours

76. Three pipes A, B and C can fill a tank in 6 hours. After working at it together for 2 hours, C is closed and A and B can fill the remaining part in 7 hours. The number of hours taken by C alone to fill the tank is:

- A) 10
- B) 12
- C) 14
- D) 16

Answer: C) 14

77. A man can row downstream at 20 kilometers per hour and upstream at 10 kilometers per hour. Find the speed of the boat in still water.

- A) 12 km/hr
- B) 15 km/hr
- C) 17 km/hr
- D) 18 km/hr

Answer: B) 15 km/hr

78. A boat's speed in still water is 8 kilometers per hour, and the speed of the stream is 2 kilometers per hour. It goes from A to B and returns in 4 hours. What is the distance between A and B?

- A) 15 km
- B) 18 km
- C) 20 km
- D) 22 km

Answer: A) 15 km

79. A man takes twice as long to row a distance upstream as to row the same distance downstream. If the speed of the stream is 5 kilometers per hour, find the speed of the man in still water.

- A) 10 km/hr
- B) 12 km/hr
- C) 15 km/hr
- D) 20 km/hr

Answer: C) 15 km/hr

80. In what ratio must a grocer mix two varieties of pulses costing ₹15 and ₹20 per kilogram respectively so as to get a mixture worth ₹16.50 per kilogram?

- A) 3:7
- B) 5:7
- C) 7:3
- D) 7:5

Answer: C) 7:3

81. A mixture of 40 litres of milk and water contains 10% water. How much water must be added to make the water 20% in the new mixture?

- A) 5 litres
- B) 6 litres
- C) 7 litres
- D) 8 litres

Answer: A) 5 litres

82. A can contains a mixture of two liquids A and B in the ratio 7:5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7:9. How many litres of liquid A was contained by the can initially?

- A) 10
- B) 20
- C) 21
- D) 25

Answer: C) 21

83. What is the value of $\log_{10} 1000$?

- A) 2
- B) 3
- C) 4
- D) 10

Answer: B) 3

84. If $\log_x 243 = 5$, find the value of x .

- A) 2
- B) 3
- C) 4
- D) 5

Answer: B) 3

85. In a 100 meter race, A runs at 8 kilometers per hour. If A gives B a start of 4 meters and still beats him by 15 seconds, what is the speed of B?

- A) 5 km/hr
- B) 5.76 km/hr
- C) 6 km/hr
- D) 6.2 km/hr

Answer: B) 5.76 km/hr

86. In a game of 100 points, A can give B 20 points and C 28 points. Then, B can give C:

- A) 8 points
- B) 10 points
- C) 12 points
- D) 14 points

Answer: B) 10 points

87. A man invests ₹9600 in a 10% stock at 120. The income of the man is:

- A) ₹800
- B) ₹960
- C) ₹1000
- D) ₹1200

Answer: A) ₹800

88. Which is a better investment: 12% stock at 120 or 8% stock at 96?

- A) 12% stock at 120
- B) 8% stock at 96
- C) Both are equally good
- D) Cannot be determined

Answer: C) Both are equally good

89. A single coin is tossed. What is the probability of getting a head?

- A) 1

B) $\frac{1}{2}$

C) $\frac{1}{3}$

D) $\frac{1}{4}$

Answer: B) $\frac{1}{2}$

90. From a pack of 52 cards, one card is drawn at random. What is the probability that the card drawn is a king?

A) $\frac{1}{13}$

B) $\frac{1}{26}$

C) $\frac{1}{52}$

D) $\frac{4}{13}$

Answer: A) $\frac{1}{13}$

91. A single die is rolled. What is the probability of getting a number greater than 4?

A) $\frac{1}{2}$

B) $\frac{1}{3}$

C) $\frac{1}{4}$

D) $\frac{1}{6}$

Answer: B) $\frac{1}{3}$

92. The true discount on a bill of ₹540 due 6 months hence at 6% per annum is:

A) ₹15

B) ₹15.53

C) ₹16

D) ₹16.50

Answer: B) ₹15.53

93. The present worth of a bill due 2 years hence is ₹500. If the rate of interest is 5% per annum, what is the bill amount?

A) ₹525

B) ₹550

C) ₹575

D) ₹600

Answer: B) ₹550

94. The banker's discount on a bill of ₹1250 for 6 months at 6% per annum is:

A) ₹37.50

B) ₹38

C) ₹39.50

D) ₹40

Answer: A) ₹37.50

95. The banker's gain on a certain sum due 2 years hence at 10% per annum is ₹24. The present worth is:

A) ₹480

B) ₹520

C) ₹600

D) ₹960

Answer: C) ₹600

96. Find the next term in the series: 3, 9, 27, 81, ?

A) 162

B) 243

C) 324

D) 210

Answer: B) 243

97. Find the wrong term in the series: 10, 26, 74, 218, 654, 1946, 5834.

A) 26

B) 74

C) 218

D) 654

Answer: D) 654

98. Complete the series: Z, X, V, T, R, ?, ?

A) P, N

B) O, M

C) P, O

D) M, N

Answer: A) P, N

99. Find the next number in the series: 1, 4, 9, 16, 25, ?

A) 35

B) 36

C) 48

D) 49

Answer: B) 36

100. Choose the odd one out:

A) Triangle

B) Square

C) Circle

D) Sphere

Answer: D) Sphere