

ASSIGNMENT FOR QUANTITATIVE APTITUDE

1. AVERAGE

Question-1

The average of the first nine prime numbers is

- (a) 9 (b) 11
(c) $11\frac{1}{9}$ (d) $11\frac{2}{9}$

Question-2

In three numbers, the first is twice the second and thrice the third. If the average of these three numbers is 44, then the first number is :

Question-3

The average of five consecutive odd numbers is 61. What is the difference between the highest and lowest numbers?

- (a) 2 (b) 5
(c) 8 (d) Cannot be determined

Question-4

There are 30 students in a class. The average age of the first 10 students is 12.5 years. The average age of the next 20 students is 13.1 years. The average age of the whole class is:

- (a) 12.5 years (b) 12.7 years
(c) 12.8 years (d) 12.9 years

Question-5

The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of the girls is 15.4 years. The ratio of the number of boys to the number of girls in the class is

- (a) 1 : 2 (b) 2 : 3
(c) 3 : 4 (d) 3 : 5

Question-6

The average monthly expenditure of a family was ₹2200 during the first 3 months; ₹2250 during the next 4 months and ₹3120 during the last 5 months of a year. If the total saving during the year were ₹1260, then the average monthly income was

- (a) ₹2605 (b) ₹2805
(c) ₹2805 (d) ₹2905

Question-7

The average weight of 29 students in a class is 48 kg. If the weight of the teacher is included, the average weight rises by 500 g. Find the weight of the teacher.

Question-8

The average age of 40 students in a class is 15 years. When 10 new students are admitted, the average is increased by 0.2 year. Find the average age of the new students.

Question-9

A motorist travels to a place 150 km away at an average speed of 50 km/hr and returns at 30 km/hr. His average speed for the whole journey in km/hr is :

- (a) 35 (b) 37
(c) 37.5 (d) 40

2. PERCENTAGE

Question-10

Express the fraction $\frac{11}{12}$ into the per cent.

Question-11

Express $45\frac{5}{6}\%$ into fraction.

Question-12

Rent of the house is increased from ₹7000 to ₹7700. Express the increase in price as a percentage of the original rent.

Question-13

The cost of a bike last year was ₹19000. Its cost this year is ₹17000. Find the per cent decrease in its cost.

Question-14

A positive number is divided by 5 instead of being multiplied by 5. By what per cent is the result of the required correct value?

Question-15

3.5% income is taken as tax and 12.5% of the remaining is saved. This leaves ₹4,053 to spend. What is the income?

Question-16

If the price of coal be raised by 20%, then find by how much a householder must reduce his consumption of this commodity so as not to increase his expenditure?

Question-17

The population of a certain town increased at a certain rate per cent per annum. Now it is 456976. Four years ago, it was 390625. What will it be 2 years hence?

Question-18

The population of a city increases at the rate of 4% per annum. There is an additional annual increase of 1% in the population due to the influx of job seekers. Therefore, the % increase in the population after 2 years will be :

- (a) 10 (b) 1025
(c) 10.55 (d) 10.75

Question-19

A number is increased by 10% and then it is decreased by 10%. Find the net increase or decrease per cent.

Question-20

The price of a car is decreased by 10% and 20% in two successive years. What per cent of price of a car is decreased after two years?

Question-21

Vishal requires 40% to pass. If he gets 185 marks, falls short by 15 marks, what was the maximum he could have got?

Question-22

A candidate scores 15% and fails by 30 marks, while another candidate who scores 40% marks, gets 20 marks more than the minimum required marks to pass the examination. Find the maximum marks of the examination.

Question-23

If the radius of a circle is increased by 10%, what is the percentage increase in its area?

Question-24

If the length and width of a rectangular garden were each increased by 20%, then what would be the per cent increase in the area of the garden?

- (a) 20% (b) 24%
(c) 36% (d) 44%

Question-25

If A's salary is 50% more than B's, then by what percent B's salary is less than A's salary?

Question-26

Ravi's weight is 25% that of Meena's and 40% that of Tara's. What percentage of Tara's weight is Meena's weight.

3. PROFIT AND LOSS

Question-27

An article was bought for ₹2000 and sold for ₹2200. Find the gain or loss

Question-28

A cycle was purchased for ₹1600 and sold for ₹1400. Find the loss and loss %.

Question-29

By selling a table for ₹330, a trader gains 10%. Find the cost price of the table.

Question-30

A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25%. If C pays ₹225 for it, what did A pay for it.

Question-31

A mobile phone is sold for ₹5060 at a gain of 10%. What would have been the gain or loss per cent if it has been sold for ₹4370?

Question-32

A cloth merchant says that due to slump in the market, he sells the cloth at 10%, but he uses a false metre-scale and actually gain 15%. Find the actual length of the scale.

- (a) 78 cm (b) 78.25 cm
(c) 78.5 (d) 78.75 cm

Question-33

A dishonest dealer professes to sell his goods at cost price, but he uses a weight of 960 g for the kg weight. Find his gain per cent.

Question-34

A table is sold at a profit of 20%. If the cost price and selling price are ₹200 less, the profit would be 8% more. Find the cost price.

Question-35

If the C.P. of 15 tables be equal to the S.P. of 20 tables, find the loss per cent.

Question-36

If the C.P. of 6 articles is equal to the S.P. of 4 articles. Find the gain per cent.

Question-37

By selling 33 metres of cloth, a man gains the sale price of 11 metres. The gain % is

- (a) 50% (b) 25%
(c) $33\frac{1}{3}\%$ (d) 20%

Question-38

How much % must be added to the cost price of goods so that a profit of 20% must be made after throwing off a discount of 10% from the marked price?

- (a) 20% (b) 30%
(c) $33\frac{1}{3}\%$ (d) 25%

Question-39

At a clearance sale, all goods are on sale at 4.5% discount. If I buy a skirt marked ₹600, how much would I need to pay?

Question-40

A shopkeeper sold two radio sets for ₹792 each, gaining 10% on one, and losing 10% on the other. Then he

- (a) neither gains nor loses (b) gains 1%
(c) loses 1% (d) gains 5%

Question-41

A man bought two housing apartments for ₹2 lakhs each. He sold one at 20% loss and the other at 20% gain. Find his gain or loss.

- (a) 4% loss (b) 4% gain
(c) No loss, no gain (d) 10% loss

Question-42

A man sold two watches for ₹1000 each. On one he gains 25% and on the other 20% loss. Find how much % does he gain or lose in the whole transaction?

- (a) $\frac{100}{41}\%$ loss (b) $\frac{100}{41}\%$ gain
(c) No gain, no loss (d) Cannot be determined

Question-43

After allowing a discount of 12% on the marked price of an article, it is sold for ₹880. Find its marked price.

Question-44

A shopkeeper offers his customers 10% discount and still makes a profit of 26%. What is the actual cost to him of an article marked ₹280?

Question-45

Find the single discount equivalent to successive discounts of 15% and 20%.

Question-46

An article is listed at ₹65. A customer bought this article for ₹56.16 and got two successive discounts of which the first one is 10%. The other rate of discount of this scheme that was allowed by the shopkeeper was:

- (a) 3% (b) 4%
(c) 6% (d) 2%

Question-47

A shopkeeper offers 5% discount on all his goods to all his customer ₹. He offers a further discount of 2% on the reduced price to those customers who pay cash. What will you actually have to pay for an article in cash if it M.P. is ₹4800?

Question-48

Sonika bought a V.C.R. at the list price of ₹18,500. If the rate of sales tax was 8%, find the amount she had to pay for purchasing the V.C.R.

Question-49

The sale price of an article including the sales tax is ₹616. The rate of sales tax is 10%. If the shopkeeper has made a profit of 12%, then the cost price of the article is:

- (a) ₹500 (b) ₹515
(c) ₹550 (d) ₹600

4. RATIO AND PROPORTION

Question-50

Find the compound ratio of the four ratios:
4 : 5, 15 : 13, 26 : 3 and 6 : 17

Question-51

What is the least integer which when subtracted from both the numerator and denominator of $\frac{60}{40}$ will give a ratio equal to $\frac{16}{21}$?

Question-52

If $\frac{x}{y} = \frac{4}{5}$, find the value of $\frac{3x+4y}{4x+3y}$.

Question-53

Find the value of $\frac{x+a}{x-a} + \frac{x+b}{x-b}$, if $x = \frac{2ab}{a+b}$.

Question-54

Divide ₹581 among A, B and C such that four time A's share is equal to 5 times B's share which is equal to seven times C's share.

Question-55

The ratio of the radius of two circles is 2 : 5. find the ratio of their areas.

Question-56

The ratio between two numbers is 3 : 4. If each number be increased by 2, the ratio becomes 7 : 9. Find the number.

Question-57

The sum of two numbers is 60 and their difference is 6. What is the ratio of the two numbers?

Question-58

Three persons A, B, C whose salaries together amount to ₹14400, spend 80, 85 and 75 per cent of their salaries respectively. If their savings are in the ratio 8 : 9 : 20, find their respective salaries.

Question-59

Find the mean proportional between 3 and 75.

Question-60

A courier charge to a place is proportional to the square root of the weight of the consignment. It costs ₹54 to courier a consignment weighing 25 kilos. How much more will it cost (in rupees) to courier the same consignment as two parcels weighing 16 kilos and 9 kilos respectively?

Question-61

A man completes $\frac{5}{8}$ of a job in 10 days. At this rate, how many more days will it take him to finish the job?

- | | |
|-------|--------------------|
| (a) 5 | (b) 6 |
| (c) 7 | (d) $7\frac{1}{2}$ |

Question-62

A fort had provision of food for 150 men for 45 days. After 10 days, 25 men left the fort. The number of days for which the remaining food will last, is :

- | | |
|---------------------|---------------------|
| (a) $29\frac{1}{5}$ | (b) $37\frac{1}{4}$ |
| (c) 42 | (d) 54 |

Question-63

If the cost of printing a book of 320 leaves with 21 lines on each page and on an average 11 words in each line is ₹19, find the cost of printing a book with 297 leaves, 28 lines on each page and 10 words in each line

- | | |
|-----------------------|-----------------------|
| (a) ₹ $22\frac{3}{8}$ | (b) ₹ $20\frac{3}{8}$ |
| (c) ₹ $21\frac{3}{8}$ | (d) ₹ $21\frac{3}{4}$ |

Question-64

If 80 lamps can be lighted, 5 hours per day for 10 days for ₹21.25, then the number of lamps, which can be lighted 4 hours daily for 30 days, for ₹76.50, is:

- | | |
|---------|---------|
| (a) 100 | (b) 120 |
| (c) 150 | (d) 160 |

5. PARTNERSHIP

Question-65

Three partner Rahul, Puneet and Chandan invest ₹ 1600, ₹ 1800 and ₹ 2300 respectively in a business. How should they divide a profit of ₹ 399?

Question-66

A, B and C enter into a partnership by investing 1500, 2500 and 3000 rupees, respectively. A as manger gets one tenth of the total profit and the remaining profit is divided among the three in the ratio of their investment.

If A's total share is ₹ 369. Find the shares of B and C.

Question-67

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

Question-68

A and B start a business A invests ₹ 600 more than B for 4 months and B for 5 months. A's share is ₹ 48 more than that of B, out of a total profit of ₹528. Find the capital contributed by each.

Question-69

A began a business with ₹4500 and was joined afterwards by B with ₹5400. If the profits at the end of year was divided in the ratio 2:1. B joined the business after

- | | |
|--------------|--------------|
| (a) 5 month | (b) 4 months |
| (c) 6 months | (d) 7 months |

6. MIXTURE (ALLIGATIONS)

Question-70

In what proportion must sugar at ₹ 13.40 per kg be mixed with sugar at ₹ 13.65 per kg, so that the mixture be worth ₹ 13.20 a kg?

Question-71

A mixture of a certain quantity of milk with 16 litres of water is worth 90 P per litre. If pure milk be worth ₹ 1.08 per litre. How much milk is there in the mixture?

Question-72

5 kg of rice of ₹ 6 per kg is mixed with 4 kg of rice to get a mixture costing ₹ 7 per kg. Find the price of the costlier rice.

7. INTEREST

Question-73

Find the interest to be paid on a loan of ₹ 6000 at 5% per year for 5 years.

Question-74

Find the amount to be paid back on a loan of Rs. 18,000 at 5.5% per annum for 3 years.

Question-75

In how many years will a sum of money triple itself, at 25% per annum simple interest.

Question-76

What rate per cent per annum will produce ₹ 250 as simple interest on ₹ 6000 in 2.5 years.

Question-77

Find the compound interest on ₹ 70000 for 4 years at the rate of 14% per annum compounded annually.

Question-78

If Rs 60000 amounts to Rs 68694 in 2 years then find the rate compound of interest.

Question-79

In how many years, the sum of ₹ 10000 will become ₹ 10920.25, if the rate of compound interest is 4.5% per annum?

Question-80

What will be the compound interest on ₹ 4000 in 4 years at 8 per cent annum. If the interest is calculated half-yearly.

Question-81

Find the compound interest on ₹ 25625 for 12 months at 16% per annum compounded quarterly.

Question-82

The difference between compound interest and simple interest on a certain amount of money at 5% per annum for 2 years is ₹ 15. Find the sum:

- (a) ₹ 4500 (b) ₹ 7500
(c) ₹ 5000 (d) ₹ 6000

Question-83

The difference between the simple interest and the compound interest compounded annually at the rate of 12% per annum on ₹ 5000 for two years will be:

- (a) ₹ 47.50 (b) ₹ 63
(c) ₹ 45 (d) ₹ 72

8. TIME AND WORK

Question-84

A can do a piece of work in 5 days, and B can do it in 6 days. How long will they take if both work together?

Question-85

Two men, Vikas and Vishal, working separately can mow a field in 8 and 12 hours respectively. If they work in stretches of one hour alternately, Vikas beginning at 8 a.m. when will the moving be finished?

Question-86

A & B together can do a piece of work in 5 days and A alone can do it in 9 days. In how many days can B alone do it?

Question-87

A & B can do alone a job in 6 days and 12 days. They began the work together but 3 days before the completion of job A leaves off. In how many days will the work be completed?

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

Question-88

A is half good a workman as B and together they finish a job in 14 days. In how many days working alone will B finish the job.

- (a) 20 days (b) 21 days
(c) 22 days (d) None of these

Question-89

10 men can finish a piece of work in 10 days, where as it takes 12 women to finish it in 10 days. If 15 men and 6 women undertake to complete the work, how many days they will take to complete it?

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

9. PIPES AND CISTERNS

Question-90

A pipe can fill a cistern in 6 hours. Due to a leak in its bottom, it is filled in 7 hours. When the cistern is full, in how much time will it be emptied by the leak?

- (a) 42 hours (b) 40 hours
(c) 43 hours (d) 45 hours

Question-91

Three pipes A, B and C can fill a cistern in 6 hrs. After working together for 2 hrs. C is closed and A and B fill the cistern in 8 hrs. Then find the time in which the cistern can be filled by pipe C.

Question-92

Pipe A can fill a tank in 20 hours while pipe B alone can fill it in 30 hours and pipe C can empty the full tank in 40 hours.

If all the pipes are opened together, how much time will be needed to make the tank full?

Question-93

Three pipes A, B and C can fill a tank in 6 minutes, 8 minutes and 12 minutes, respectively. The pipe C is closed 6 minutes before the tank is filled. In what time will the tank be full?

- (a) 4 min (b) 6 min
(c) 5 min (d) Data inadequate

Question-94

If three taps are opened together, a tank is filled in 12 hrs. One of the taps can fill it in 10 hrs and another in 15 hrs. How does the third tap work?

10. DISTANCE, SPEED AND TIME

Question-95

The driver of a maruti car driving at the speed of 68 km/h locates a bus 40 metres ahead of him. After 10 seconds, the bus is 60 metres behind. The speed of the bus is

- (a) 30 km/h (b) 32 km/h
(c) 25 km/h (d) 38 km/h

Question-96

If a person goes around an equilateral triangle shaped field at speed of 10, 20 and 40 kmph on the first, second and third side respectively and reaches back to the starting point, then find his average speed during the journey.

Question-97

A train starts from A to B and another from B to A at the same time. After crossing each other they complete their journey in $3\frac{1}{2}$ and $2\frac{4}{7}$ hours respectively. If the speed of the first is 60 km/h, then find the speed of the second train.

Question-98

A boy walking at $\frac{3}{5}$ of his usual speed, reaches his school 14 min late. Find his usual time to reach the school.

Question-99

A man covers a certain distance on scooter. Had he moved 3 km/h faster, he would have taken 20 min less. If he had moved 2 km/h slower, he would have taken 20 min more. Find the original speed.

Question-100

A boy waling at a speed of 10 km/h reaches his school 12 min late. Next time at a speed of 15 km/h reaches his school 7 min late. Find the distance of his school from his house?

Question-101

A bus leaves Ludhiana at 5 am and reaches Delhi at 12 noon. Another bus leaves Delhi at 8 am and reaches Ludhiana at 3 pm. At what time do the buses meet?

11. TRAINS

Question-102

How long does a train 90 m long running at the rate of 54 km/h take to cross –

- (a) a Mahatma Gandhi's statue?
(b) a platform 120 m long?
(c) another train 150 m long, standing on another parallel track?
(d) another train 160 m long running at 36 km/h in same direction?
(e) another train 160 m long running at 36 km/h in opposite direction?
(f) a man running at 6 km/h in same direction?

(g) a man running at 6 km/h in opposite direction?

Question-103

Two trains of equal lengths are running on parallel tracks in the same direction at 46 km/h and 36 km/h, respectively. The faster train passes the slower train in 36 sec. The length of each train is

- | | |
|----------|----------|
| (a) 50 m | (b) 80 m |
| (c) 72 m | (d) 82 m |

Question-104

A train 110 m in length travels at 60 km/h. How much time does the train take in passing a man walking at 6 km/h against the train?

- | | |
|----------|----------|
| (a) 6 s | (b) 12 s |
| (c) 10 s | (d) 18 s |

Question-105

Two trains 137 metres and 163 metres in length are running towards each other on parallel lines, one at the rate of 42 kmph and another at 48 kmph. In what time will they be clear of each other from the moment they meet?

- | | |
|------------|--------------------------|
| (a) 10 sec | (b) 12 sec |
| (c) 14 sec | (d) Cannot be determined |

12. BOATS AND STREAMS

Question-106

A boat is rowed down a river 28 km in 4 hours and up a river 12 km in 6 hours. Find the speed of the boat and the river.

Question-107

A man can row 6 km/h in still water. When the river is running at 1.2 km/h, it takes him 1 hour to row to a place and back. How far is the place?

Question-108

Vikas can row a certain distance downstream in 6 hours and return the same distance in 9 hours. If the stream flows at the rate of 3 km/h, find the speed of Vikas in still water.