

# APTITUDE

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**Question 1** A car dealer sells varun a car at a 20% profit and then varun sells it to Deepak at a 15% profit. after using a car for 2 years Deepak sells it back to varun at a loss of 10%, whereas varun sells it back to the dealer at a loss of 5% the profit percentage that the dealer makes in this transaction is:

- a 18.75%
- b 16.82%
- c 17.99%
- d 15.62%

**Question 2** P is 5 times as efficient as Q in respect of doing a work. together they complete it in 20 days. what is the time of P?

- a. 26
- b. 30
- c. 28
- d. 24

**Question 3** You want to pick 2 distinct numbers from the set {1,2,3,4} in how many ways can you do this so that the product is even?

**Question 4** They were 36 students in a class and their average height was 4 feet 6 inches. at the end of the year 4 students with an average height students got admitted to this class, their average height being 4 feet 6 inches. the average height in feet of students currently in

- a.  $4 \frac{1}{6}$
- b.  $4 \frac{3}{4}$
- c.  $4 \frac{1}{3}$
- d.  $4 \frac{2}{3}$

**Question 5** An express train is 150 meters. and it is running at a speed of 90 km per hour. it crosses a mail train on a parallel track in the opposite direction in 6.3 seconds when these two trains are travelling on parallel tracks in the same direction, with the same speeds as before, they take 50.4 seconds to cross each other. the length in meters, of the mail train is..

**Question 6** If the length and breadth of a rectangle are both increased by 20% then what is the length and breadth of the rectangle

**Question 7** While presenting a data in the form of positive number  $i$  committed a mistake on monitoring the cube of the number if the error due to this mistake was 800% what was the number?

- a. 4
- b. 5
- c. 3
- d. 2

**Question 8** Lohit invested sum of money for 290 years at  $x\%$  rate of interest per annum at simple interest and obtained the sum after 20 years the value of  $x$  is?

- a. 6
- b. 5
- c. 8
- d. 101

**Question 9** A retailer gives a discount of 20% on an item and yet makes a profit as 10% what is the ratio of the price of retailer?

- a. 7:12
- b. 1:2
- c. 8:11
- d. 4:5

**Question 10** X goes to the office by driving at  $\frac{5}{7}$  times his usual speed. If he normally takes half an hour to reach his office by how many times will he be late?

- a. 12
- b. 10.5
- c. 13.5
- d. 8

**Question 11** You have 2 black socks 3 white socks and 5 brown socks in your suitcase. It is dark and you pick out 3 socks from the suitcase without looking at the colour. What is the probability that you do NOT have a pair of same colour?

- a.  $\frac{1}{4}$
- b.  $\frac{3}{10}$
- c.  $\frac{1}{10}$
- d.  $\frac{1}{5}$

**Question 12** What is the least multiple of 13 which is divided by 3, 4, 5, 8 and 10 leaves remainder 2 in each case?

**Question 13** The population of the town grows at a fixed rate per year, the current population is 60,000 and it would increase by 4896 after exactly 2 years if instead of growing at this rate per year the population would have decreased at this rate per year, its population after exactly 2 years would have decreased by?

**Question 14** In a music talent show has 100 contestants and 10,000 viewers. Each viewer picks their top 5 performers. Any performer who is nominated by at least 20% of viewers gets a prize. What is the maximum number of prizes that would be awarded?

- a. 50
- b. 10
- c. 5
- d. 25

**Question 15** A father is 24 years older than his daughter and at present the age of the father is four times the age of the daughter. What is the present age of the daughter?

**Question 16** In case of after transaction there was a loss of 18.75%. What was the ratio of the cost price to the selling price?

- a. 4:3
- b. 8:5

c.16:13

d.32:25

**Question 17**\_A set of mugs consists of 5 plastic mugs,each of a different designs and 2 glass mugs each of a different design in how many ways can these 7 mugs be arranged in a row if the glass mugs are separated from each other?

a.5040

b.3600

c.1440

d.4320

**Question 18**\_The product of a real number and its square is 1728.what is the number?

**Question 19**\_An express train is 150 meters long and it is running at a speed of 90km per hour it crosses a mail train which is running on a parallel track in the direction in 6.3 seconds when these trains are travelling on parallel tracks in the same direction with the same speeds as before they take it cross each other the length in meters of the mail train is?

**Question 20**\_They were 36 students in a class and their average height was 4 feet 6 inches.at the end of the year 4 students with an average height students got admitted to this class,their average height being 4 feet 6 inches.the average height in feet of students currently in

a.4 ( 1/6)

b.4 (3/4)

c.4(1/3)

d.4(2/3)

**Question 21**\_I asked my daughter how many students are there in her class .she said it is equal to the sum of the 3 consecutive natural numbers,moreover it is also equal to the sum of the two natural numbers following those 3 consecutive natural numbers .what is the answer to my question

**Question 22\_** X had taken a loan from y on simple interest at the rate of 5% per annum, and x was supposed to pay back rs,23000 at the end of 3 years. He paid back rs.9450 and rs 4400 respectively, at the end of the first and second year. How much (in rs) did x owe y at the end of third year?

- a.9150
- b.8050
- c.10665
- d.7500

**Question 23\_** While presenting a data in the form of the positive number, i committed a mistake by mentioning the cube of the number. If the error due to his mistake was 800% what was the number?

- a.2
- b.3
- c.4
- d.5

**Question 24\_** The sum of 10 numbers is zero. At most, how many of them can be positive?

**Question 25\_** A sum of rs1000000 was invested in a scheme where it got compounded annually and the sum increased to rs.11,06,704 in 2 years. What was the rate of interest?

- a.4.4%
- b.4.8%
- c.5.2%
- d.5.4%

**Question 26\_** An express train is 150 meters long and it is running at a speed of 90 km per hour. It crosses a mail train which is running on a parallel track in the same direction in 6.3 seconds when these trains are travelling on parallel tracks in the same direction with the same speeds as before they take to cross each other. The length in meters of the mail train is the average

**Question 27** \_age of 5 persons in a group is 18 yeras .the group as an additional numbers ,such that the new average is 25 years less than the age of the new members,what is the age (in yeras )of the new member?

- a.42
- b.38
- c.50
- d.48

**Question 28** \_In a birthday party , there are 20 identical slices of cake that have to be distributed among four children .if every children is to get atleast 2 slices ,then in how many ways can these distribution be done?

**Question 29** \_A set of mugs consists of 5 plastic mugs,each of a different designs and 2 glass mugs each of a different design in how many ways can these 7 mugs be arranged in a row if the glass mugs are separated from each other?

- a.5040
- b.3600
- c.1440
- d.4320

**Question 30** \_If the length and breadth of a rectangle are both increases by 20% then what is the length and breadth of the rectangle

**Question 31** \_X goes to the office by driving at  $\frac{5}{7}$  times his usual speed .if he normally takes half an hour to reach is office by now many times will he be late?

- a.12
- b.10.5
- c.13.5
- d.8

**Question 32** \_The sum of 10 numbers is zero.atmost ,how many of them can be positive?

**Question 33** X had taken a loan from y on simple interest at the rate of 5% per annum, and x was supposed to pay back rs.23000 at the end of 3 years. He paid back rs.9450 and rs.4400 respectively, at the end of the first and second year. How much (in rs) did x owe y at the end of the third year?

- a. 9150
- b. 8050
- c. 10665
- d. 7500

**Question 34** A car dealer sells Varun a car at a 20% profit and then Varun sells it to Deepak at a 15% profit. After using a car for 2 years, Deepak sells it back to Varun at a loss of 10%, whereas Varun sells it back to the dealer at a loss of 5%. The profit percentage that the dealer makes in this transaction is:

- a. 18.75%
- b. 16.82%
- c. 17.99%
- d. 15.62%

**Question 35** While presenting a data in the form of the positive number, I committed a mistake by mentioning the cube of the number. If the error due to his mistake was 800%, what was the number?

- a. 2
- b. 3
- c. 4
- d. 5

**Question 36** Anil buys cashews and raisins from a farmer, the per kg price of cashews being four times that of raisins. He sells 8 kg cashews at 20% profit and 12 kg raisins at 30% profit to Sunil. Now, Sunil sells 5 kg of cashews at rs.120 per kg and then mixes the remaining cashews and raisins and sells this mixture at rs.95 per kg. If Sunil makes a total profit of 25%, the price, in rs per kg paid by Anil for cashews is:

**Question 37**\_A sum of rs1000000 was investing in a scheme where it got compounded annually and the sum increased to rs.11,06,704 i 2 years.what was the rate of intrest?

- a.4.4%
- b.4.8%
- c.5.2%
- d.5.4%

**Question 38**\_A sum invested at simple intrest increased to rs 18375 and rs.20125 in 5 & 7 years, respectively .what wasthe intrest (in rs) earned in 1 yera?

- a.976
- b.875
- c.925
- d.950

**Question 39**\_ I was supposed to completed a task in 12 h, but i took more time and the error was 6.25 percentage.how much time did i take to complete the task?

- a.12 h 45 min
- b.12h 20 min
- c.12 h 15 min
- d.12 h 30 min

**Question 40**\_Of 2000 adult inhabitants of a village , 60 % are males , of each 80 percentage are illiterate . if of all the inhabitants , 24% are illiterate ,what present of the females of the village are literate?

**Question 41**\_Anil buys cashews and rasins from a farmers ,the per kg rice of cashews being four times that of rasins . he sells 8 kg cashews at 20 percentage profit,and 12 rasins at 30% profit to sunil.now,sunil sells 5kg of cashews at rs120 per kg,and then mixes the remaining cashews and rasins and sells ihis mixer at



rs.95 per kg.if sunil makes a total profit of 25% ,the price, in rs per kg paid by anil for cashews is :

**Question 42**\_Anil buys cashews and rasins from a farmers ,the per kg price of cashews being four times that of rasins . he sells 8 kg cashews at 20 percentage profit,and 12 rasins at 30% profit to sunil.now,sunil sells 5kg of cashews at rs120 per kg,and then mixes the remaining cashews and rasins and sells this mixer at rs.95 per kg.if sunil makes a total profit of 25% ,the price, in rs per kg paid by anil for cashews is :

**Question 43**\_You want to pick 2 distinct numbers from the set {1,2,3,4}in how many ways can you do this so that the product is even?

**Question 44**\_A sum of rs1000000 was investing in a scheme where it got compounded annually and the sum increased to rs.11,06,704 in 2 years.what was the rate of interest?

**Question 45**\_p is 5 times as efficient as Q in respect of doing a work .together they complete it in 20 days .what is the time of P?

- a. 26
- b.30
- c.28
- d.24

**Question 46**\_A set of mugs consists of 5 plastic mugs,each of a different design and 2 glass mugs each of a different design in how many ways can these 7 mugs be arranged in a row if the glass mugs are separated from each other?

- a.5040
- b.3600
- c.1440
- d.4320

**Question 47**\_A group of women can finish a piece of work in 50 days.in how many days will 1-3<sup>rd</sup> the number of women be able to finish 2-3<sup>rd</sup> of the work>

- a.150 days
- b.75 days
- c.50 days
- d.100 days

**Question 48**\_In a music talent show has 100 contestants and 10000 viewers .each viewer picks their top 5 performers any performer who is nominated by at least 20 % of viewers get a prize what is the maximum number of prizes that would be awarded?

- a.50
- b.10
- c.5
- d.25

**Question 49**\_What is the lowest multiple of 13 which when divided by 3,4,5,8,and 10 leaves remainder 2 in each case?

**Question 50**\_A valuable sword belonging to the grand king was stolen , and the three suspects were Ibn, hasan,abu. Ibn claimed that hasan stole it, and hasan claimed that abu stole it . it was not clear that one of them stole it,but it was later learnt that no innocent person lied . it was also learnt that sword was stolen by only one person . who stole sword?

- a.Hasan
- b.Ibn
- c.Abu
- d.None of them

**Question 51**\_I asked my daughter how many students are there in her class .she said it is equal to the sum of the 3 consecutive natural numbers,moreover it is also

equal to the sum of the two natural numbers following those 3 consecutive natural numbers. What is the answer to my question

**Question 52** Lohit invested sum of money for 290 years at  $x\%$  rate of interest per annum at simple interest and obtained the sum after 20 years. The value of  $x$  is?

- a. 6
- b. 5
- c. 8
- d. 10

**Question 53** I want to get the peel of an apple. I can only make straight cuts with a knife. What is the least number of cuts needed to make to get all the peel off?

**Question 54** A box contains 3 orange flavoured, 5 lemon flavour and 3 apple flavour candies. If 3 candies are taken from the box randomly then what is the probability of getting all 3 as apple flavoured candies?

**Question 55** While presenting a data in the form of the positive number, I committed a mistake by mentioning the cube of the number. If the error due to his mistake was 800% what was the number?

- a. 2
- b. 3
- c. 4
- d. 5

**Question 56** A box contains 3 orange flavoured, 5 lemon flavour and 3 apple flavour candies. If 3 candies are taken from the box randomly then what is the probability of getting all 3 as apple flavoured candies?

**Question 57** Find the number of different ways in which the 8 letters of the word STACCATO can be arranged in a sequence if the first letter is O?

- a. 630
- b. 2570
- c. 5040

d.24

**Question 58**\_What is the average of the all the natural number from 31 to 50 , both inclusive?

a.38

b.39.5

c.40

d.40.5

**Question 59**\_For a group of 8 students ,the scores obtained in an English test recorded , each score being a 2 digit number. By mistake , for one student , the 2 digit of the correct score were interchanged and this incorrect score was recorded . the average score was then found to be 38.50 when this mistake was found ,the incorrect score was replaced by the correct score , and the average score came to be 45.25 .a possible value for this code id ?

a.82

b.72

c.81

d.76

**Question 60**\_asked my daughter how many students are there in her class .she said it is equal to the sum of the 3 consecutive natural numbers,moreover it is also equalto the sum of the two natural numbers following those 3 consecutive natural numbers .what is the answer to my question

**Question 61**\_what comes next in the series 1,2,5,20,16,.....?

a.48

b.55,90

c.25

d.21,60

**Question 62** In case of after transaction there was a loss of 18.75% what was the ratio of the cost price to the selling price?

- a. 4:3
- b. 8:5
- c. 16:13
- d. 32:25

**Question 63** In a birthday party, there are 20 identical slices of cake that have to be distributed among four children. If every child is to get at least 2 slices, then in how many ways can this distribution be done?

**Question 64** 3 identical cans of cola, 2 identical cans of iced tea and three identical cans of orange juice are arranged in a row. Calculate the number of arrangements if the three cans of cola are next to each other and 2 cans of iced tea are not next to each other.

- a. 720
- b. 600
- c. 80
- d. 40

**Question 65** A restaurant serves small pieces of pizzas of 6 inch diameter and regular pizzas of 9 inch diameter. If a small piece has a price at Rs. 200, then what is a fair price of a large pizza of the same type?

- a. Rs. 450
- b. Rs. 300
- c. Rs. 400
- d. Rs. 350

**Question 66** The population of the town grows at a fixed rate per year, the current population is 60,000 and it would increase by 4896 after exactly 2 years if instead of growing at this rate per year the population would have decreased at this rate per year, its population after exactly 2 years would have decreased by?

**Question 67** A retailer gives a discount of 20% on an item and yet makes a profit of 10% what is the ratio of the price of the retailer?

- a.7:12
- b.1:2
- c.8:11
- d.4:5

**Question 68**\_Anil buys cashews and rasins from a farmers ,the per kg rice of cashews being four times that of rasins . he sells 8 kg cashews at 20 percentage profit,and 12 rasins at 30% profit to sunil.now,sunil sells 5kg of cashews at rs120 per kg,and then mixes the remaining cashews and rasins and sells ihis mixer at rs.95 per kg.if sunil malkes a total profit of 25% ,the price, in rs per kg paid by anil for cashews is :

**Question 68**\_What is the value of the following expression?

$$7.465+126.6+421.287+3.5+52.14$$

- a.614.528
- b.591.821
- c.621.521
- d.610.992

**Question 69\_ Question 1**\_An express train is 150 meters long and it is running at a speed of 90km per hour it crosses a mail train which is running on a parlleltrackin the direction in 6.3 seconds when these trains are travelling on parallel tracks in the same direction with the same speeds as before they take it cross each other the length in meters of the mail train is?

**Question 70**\_Sethu deposited a sum of rupees 1500 for 9 months in a bank which pays her 12% intrest compounded quarterly. What amount (in rs) does she received (rounded of in rs)?

- a. 1650
- b.1340
- c.1639
- d.1525

**Question 71** Two pipes can fill a reservoir in 9 hrs and 12 hrs ,respectively whereas an outlet pipe can empty the full reservoir in 20 hrs if all three pipes ,how much the tank to be filled?

- a.7h
- b.4h
- c. $6\frac{12}{13}$ h
- d. $8\frac{1}{13}$ h

**Question 72** On selling cheeses at rs.340 per kg , a dairy farmer incurred a loss of 5% .how many kg of cheese were sold if the total loss was rs 85?

- a.4.5
- b.4.75
- c.8
- d.6

**Question 73** An investment earns 4 paisa per rupee invested if at the end of the year,the interest earned by an investment is rs.100 then the investment is equal to

- a.Rs.2000
- b.Rs.2200
- c.Rs.1000
- d.Rs.2500
- Rs.4000

**Question 74** In a box , 15 tickets numbered 1 to 15 are mixed up,one number on one ticket. If a ticket is drawn at random what is the probability that the ticket drawn as a number that is a multiple of 4/5

**Question 75** The effective speed of a boat upstream is 50km by h and downstream is 25 km by h . what is the speed of the stream

- a.8km/h
- b.8km/h

c.7km/h

d.5km/h

**Question 76**\_Find the sum of the reciprocals of the roots of the equation  $x^2 - 8x + 7 = 0$

(express the answer as fraction p/q)

**Question 77**\_The incomes of 2 persons p ,q of the ratio is 4:7 and their expenses are in the ratio of 1:2 if each of them saves rs.2000 then the income of p in rs is :

a.8000

b.3690

c.2000

d.6500

**Question 78**\_A value of air cooler was rs 41500 in the year 2017, and it is depreciating at the rate of 12% per annum the value of it after two years was (rounded off in rs)

a.Rs.36100

b.Rs.21380

c.Rs.32138

d.Rs.35286

## quants

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**Question 1**\_ a girl is towards west she turns 45 in the clockwise direction and then 135 in the anticlockwise direction which direction is she facing now?

a. Southwest

b. Northwest

c. South

d. West



**Question 2\_** Stella and abus on;y child is abdul abu has to grandchildren how is Abduls wife related to meghnas son if meghnas son and Abduls grandmothers only great grand daughter are married to each other?

- A .daughter
- b. daughter in law
- c.mother in law
- d. sister in law

**Question 3\_** given a set of letter {a,b,c,d,e,f,g,h,i,j,k,l,m} we can list how tall permutation of these letter in lexicographics (dictionary) order the first 3 permutations in this list are abcdefghijklm abcdefghijkml and abcdefghijlkm and the last one is mlkjihgfedcba what permutation would appear immediately after the following one in this lexicographically ordered list of permutations

- a. Bcjameglkihfd
- b. Bcjamegdfhikl
- c. Bejameflkihdg
- d. Bcjalefmkihgd

**Question 3\_** How is amys great grand fathers only daughter in law related to her only son in law wife related to amy ?

- A. Daughter
- B. Grand daughter
- C. Mother
- D. Grand mother

**Question 4\_** The kings summer house is being rewired the house has 11 rooms to avoid wires getting entangled and creating short circuit, the electricaians has been asked to observe the following rules.

Room 1 must be rewired before rooms 3 and 4

Room 2 must be rewired before room 6

Room 3 must be rewired before room 5

Room 5 must be rewired before room 8 and 9

Room 6 must be rewired before room 7

Room 7 must be rewired before room 5

Room 8 must be rewired before rooms 10

Room 9 must be rewired before rooms 11

it takes one full day to rewired a room there are enough electricians to rewired as many rooms as can be rewired in parallel keeping in mind the constrains above what is the minimum number of days required to complete the job?

9. The average age of five persons in a group is 18 years. The group has an additional member, such that the new average is 25 years less than the age of the new member. What is the age(in years) of the new member?
- a. 48
  - b. 38
  - c. 50
  - d. 42

**Answer: Option A**

**48**

10. What is the average of all the natural numbers from 31 to 50, both inclusive?
- a. 39.5
  - b. 40.5
  - c. 40
  - d. 38

**Answer: Option b**

**40.5**

11. A restaurant serves small pizzas of 6-inch diameter and regular pizzas of 9-inch diameter. If a small pizza is priced at ₹200, then what is a fair price for a larger pizza of the same type?
- a. ₹450
  - b. ₹300
  - c. ₹350
  - d. ₹400.

**Answer: Option a**

**₹450**

12. While presenting a data in the form of a positive number, I committed a mistake by mentioning the cube of the number. If the error due to this mistake was 800%, what was the number?
- a. 2
  - b. 4
  - c. 5
  - d. 3

**Answer: Option D**

**3**

13. A retailer gives a discount of 20% on an item, and yet makes a profit of 10%. What is the ratio of the cost price to the list price?

- a. 7 : 12
- b. 8 : 11
- c. 4 : 5
- d. 1 : 2

**Answer: Option b**

**8 : 11**

14. There were 36 students in a class and their average height was 4 feet 6 inches. At the end of the year, 4 students, with an average height of 3 feet 3.5 inches left the class. Moreover, 6 new students got admitted to this class, their average height being 4 feet 9 inches. The average height, in feet, of the students currently in the class is: a.  $4\frac{1}{6}$

- b.  $4\frac{2}{3}$
- c.  $4\frac{3}{4}$
- d.  $4\frac{1}{3}$

**Answer: Option b**

**$4\frac{2}{3}$**

15. X goes to the office by driving at  $\frac{5}{7}$  times his usual speed. If he normally takes half an hour to reach his office by how many minutes will he be late?

- a. 12
- b. 8
- c. 10.5
- d. 13.5

**Answer: Option a**

**12**

16. A set of mugs consists of 5 plastic mugs each of a different design and 2 glass mugs each of a different design. In how many ways can these 7 mugs be arranged in a row if the glass mugs are separated from each other?

- a. 4320
- b. 1440
- c. 3600
- d. 5040

**Answer: Option c**

**3600**

17. The product of a real number and its square is 1728. What is the number?

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 12**

18. Anil buys cashews and raisins from a farmer, the per kg price of cashews being four times that of raisins. He sells 8 kg cashews at 20% profit, and 12 kg raisins at 30% profit to Sunil. Now, Sunil sells 5 kg of cashews at ₹120 per kg, and then mixes the remaining cashews and raisins and sells this mixture at ₹95 per kg. If Sunil makes a total profit of 25% the price, in ₹ per kg, paid by Anil for cashews is:

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 120**

19. What is the least multiple of 13 which divided by 3, 4, 5, 8 and 10 leaves remainder 2 in each case?

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 962**

20. In a birthday party, there are 20 identical slices of cake that have to be distributed among 4 children. If every child is to get at least two slices, then in how many ways can this distribution be done?

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 455**

## Quants

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2. In case of a transaction, there was a loss of 18.75%. What was the ratio of the cost price to the selling price?

- a. 4 : 3
- b. 8 : 5
- c. 32 : 25
- d. 16 : 13

**Answer: D**

**16:13**

3. A valuable sword belonging to the Grand King was stolen, and the three suspects were Ibn, Hasan and Abu. Ibn claimed that Hasan stole it, and Hasan claimed that Abu stole it. It was not clear that one of them stole it, but it was later learnt that no innocent person had

lied. It was also learnt that the sword was stolen by only one person.  
Who stole the sword?

- a. Hasan
- b. Abu
- c. Ibn
- d. None of them

**Answer: A**

**Hasan**

4. A sum of ₹10,00,000 was invested in a scheme where it got compounded annually and the sum increased to ₹11,06,704 in 2 years. What is the rate of interest?

- a. 5.2%
- b. 5.4%
- c. 4.8%
- d. 4.4%

**Answer: Option A**

**5.2%**

5. Mita and Geeta jointly start a small business Mita invests ₹15,000, whereas Geeta invests ₹10,000. After 2 months, Mita withdraws ₹2,500 from her investment in the business. After 8 more months, Mita again withdraws ₹2,500. Geeta does not withdraw any money in 1 year. After 1 year, they make a profit of ₹8,100 from their business. If they want to share this profit in the ratio of their money in the business, then how much money, in ₹, should Mita get as her share of the profit?

- a. 4400
- b. 4200
- c. 4500
- d. 4300

**Answer: C**

**4500**

6. Given a set of letters {a, b, c, d, e, f, g, h, i, j, k, l, m}, we can list out all permutations of these letters in lexicographic (dictionary) order. The first three permutations in this list are abcdefghijklm, abcdefghijkml and abcdefghijlkm and the last one is mlkjihgfedcba. What permutation would appear immediately after the following one in this

lexicographically ordered list of permutations?

**bcjameflkihgd**

- a. bcjameglkihfd
- b. bcjamegdfhikl
- c. bcjalefmkihgd
- d. bcjameflkihgd

**Answer: B**

**bcjamegdfhikl**

7. A music talent show has 100 contestants and 10,000 viewers. Each viewer picks their top 5 performers. Any performer who is nominated

by at least 20% of the viewers gets a prize. What is the maximum number of prizes that could be awarded?

- a. 50
- b. 25
- c. 10
- d. 5

**Answer: B**

**25**

8. A sum invested at simple interest to ₹18375 and ₹20125 in 5 and 7 years, respectively. What was the interest (in ₹) earned in 1 year?

- a. 950
- b. 925
- c. 875
- d. 975

**Answer: C**

**875**

9. The average age of five persons in a group is 18 years. The group has an additional member, such that the new average is 25 years less than the age of the new member. What is the age (in years) of the new member?

- a. 42
- b. 50
- c. 48
- d. 38

**Answer: C**

**48**

10. An express train is 150 metres long and it is running at a speed of 90 km per hour. It crosses a mail train, which is running on a parallel track in the opposite direction, in 6.3 seconds. When these two trains are travelling on parallel tracks in the same direction, with the same speeds as before, they take 50.4 seconds to cross each other. The length, in meters, of the mail train is:

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 130**

11. I asked my daughter how many students there are in her class. She said it is equal to the sum of 3 consecutive natural numbers. Moreover, it is also equal to the sum of the two natural numbers following those 3 consecutive natural numbers. What is the answer to my question?

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 15**

12. You want to pick two distinct numbers from the set  $\{1, 2, 3, 4\}$ . In how many ways can you do this so that the product is even?

*Enter your answer ONLY as NUMERAL in the box.*

**Answer: 5**

13. I was supposed to complete a task in 12 h, but I took more time and the error was 6.25%. How much time did I take to complete the task?

- a. 12 h 15 min
- b. 12 h 30 min
- c. 12 h 20 min
- d. 12 h 45 min

**Answer: D**

**12 h 45 min**

### Quantitative Aptitude:

**Question 9:** The average age of five persons in a group is 18 years. The group has an additional member, such that the new average is 25 years less than the age of the new member. What is the age(in years) of the new member?

- A. 48
- B. 38
- C. 50
- D. 42

**Answer:** Option A

48

**Question 10:** What is the average of all the natural numbers from 31 to 50, both inclusive?

- A. 39.5
- B. 40.5
- C. 40
- D. 38

**Answer:** Option B

40.5

**Question 11:** A restaurant serves small pizzas of 6-inch diameter and regular pizzas of 9-inch diameter. If a small pizza is priced at ₹200, then what is a fair price for a larger pizza of the same type?

₹450  
₹300  
₹350  
₹400

**Answer:** Option A  
₹450

**Question 12:** While presenting data in the form of a positive number, I committed a mistake by mentioning the cube of the number. If the error due to this mistake was 800%, what was the number?

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

**Answer:** Option D  
3

**Question 13:** A retailer gives a discount of 20% on an item, and yet makes a profit of 10%. What is the ratio of the cost price to the list price?

- A. 7 : 12
- B. 8 : 11
- C. 4 : 5
- D. 1 : 2

**Answer:** Option B  
8 : 11

**Question 14:** There were 36 students in a class and their average height was 4 feet 6 inches. At the end of the year, 4 students, with an average height of 3 feet 3.5 inches left the class. Moreover, 6 new students got admitted to this class, their average height being 4 feet 9 inches. The average height, in feet, of the students currently in the class is:

- A.  $4\frac{1}{6}$
- B.  $4\frac{2}{3}$
- C.  $4\frac{3}{4}$
- D.  $4\frac{1}{3}$

**Answer:** Option B  
 $4\frac{2}{3}$

**Question 15:** X goes to the office by driving at  $\frac{5}{7}$  times his usual speed. If he normally takes half an hour to reach his office by how many minutes will he be late?



- A. 12
- B. 8
- C. 10.5
- D. 13.5

**Answer:** Option A 12

**Question 16:** A set of mugs consists of 5 plastic mugs each of a different design and 2 glass mugs each of a different design. In how many ways can these 7 mugs be arranged in a row if the glass mugs are separated from each other?

- A. 4320
- B. 1440
- C. 3600
- D. 5040

**Answer:** Option C  
3600

**Question 17:** The product of a real number and its square is 1728. What is the number? Enter your answer ONLY as NUMERAL in the box.

**Answer:** 12

**Question 18:** Anil buys cashews and raisins from a farmer, the per kg price of cashews being four times that of raisins. He sells 8 kg cashews at 20% profit, and 12 kg raisins at 30% profit to Sunil. Now, Sunil sells 5 kg of cashews at ₹120 per kg, and then mixes the remaining cashews and raisins and sells this mixture at ₹95 per kg. If Sunil makes a total profit of 25% the price, in ₹ per kg, paid by Anil for cashews is:

Enter your answer ONLY as NUMERAL in the box

**Answer:** 120

**Question 19:** What is the least multiple of 13 which divided by 3, 4, 5, 8 and 10 leaves remainder 2 in each case?

Enter your answer ONLY as NUMERAL in the box.

**Answer:** 962

**Question 20:** In a birthday party, there are 20 identical slices of cake that have to be distributed among 4 children. If every child is to get at least two slices, then in how many ways can this distribution be done? Enter your answer ONLY as NUMERAL in the box.

**Answer:** 455

**Slot 2:**

**Quantitative Ability:**

**Question 1:** P is five times as efficient as Q in respect of doing work. Together, they complete it in 20 days. In how many days can P alone do it?

A. 28

- B. 24
- C. 25
- D. 30

**Answer:** B 24

**Question 2:** In case of a transaction, there was a loss of 18.75%. What was the ratio of the cost price to the selling price?

- A. 4 : 3
- B. 8 : 5
- C. 32 : 25
- D. 16 : 13

**Answer:** D

16:13

**Question 3:** A valuable sword belonging to the Grand King was stolen, and the three suspects were Ibn, Hasan and Abu. Ibn claimed that Hasan stole it, and Hasan claimed that Abu stole it. It was not clear that one of them stole it, but it was later learnt that no innocent person had lied. It was also learnt that the sword was stolen by only one person. Who stole the sword?

- A. Hasan
- B. Abu
- C. Ibn
- D. None of them

**Answer:** A

Hasan

**Question 4:** A sum of ₹10,00,000 was invested in a scheme where it got compounded annually and the sum increased to ₹11,06,704 in 2 years. What is the rate of interest?

- A. 5.2%
- B. 5.4%
- C. 4.8%
- D. 4.4%

**Answer:** Option A 5.2%

**Question 5:** Mita and Geeta jointly start a small business Mita invests ₹15,000, whereas Geeta invests ₹10,000. After 2 months, Mita withdraws ₹2,500 from her investment in the business. After 8 more months, Mita again withdraws ₹2,500. Geeta does not withdraw any money in 1 year. After 1 year, they make a profit of ₹8,100 from their business. If they want to share this profit in the ratio of their money in the business, then how much money, in ₹, should Mita get as her share of the profit? A. 4400

- B. 4200
- C. 4500
- D. 4300

**Answer:** C  
4500

**Question 6:** Given a set of letters {a, b, c, d, e, f, g, h, i, j, k, l, m}, we can list out all permutations of these letters in lexicographic (dictionary) order. The first three permutations in this list are abcdefghijklm, abcdefghijkml and abcdefghijlkm and the last one is mlkjihgfedcba. What permutation would appear immediately after the following one in this lexicographically ordered list of permutations?

**Bcjameflkihg**

- A. Bcjameglkihfd
- B. Bcjamegdfhikl
- C. Bcjalefmkihg
- D. Bcjameflkihdg

**Answer:** B  
Bcjamegdfhikl

**Question 7:** A music talent show has 100 contestants and 10,000 viewers. Each viewer picks their top 5 performers. Any performer who is nominated by at least 20% of the viewers gets a prize. What is the maximum number of prizes that could be awarded?

- A. 50
- B. 25

- C. 10
- D. 5

**Answer:** B 25

**Question 8:** A sum invested at simple interest to ₹18375 and ₹20125 in 5 and 7 years, respectively. What was the interest (in ₹) earned in 1 year?

- A. 950
- B. 925
- C. 875
- D. 975

**Answer:** C  
875

**Question 9:** The average age of five persons in a group is 18 years. The group has an additional member, such that the new average is 25 years less than the age of the new member. What is the age (in years) of the new member?

- A. 42
- B. 50
- C. 48
- D. 38

**Answer:** C  
48

**Question 10:** An express train is 150 metres long and it is running at a speed of 90 km per hour. It crosses a mail train, which is running on a parallel track in the opposite direction, in 6.3 seconds. When these two trains are travelling on parallel tracks in the same direction, with the same speeds as before, they take 50.4 seconds to cross each other. The length, in meters, of the mail train is:  
Enter your answer ONLY as NUMERAL in the box

**Answer:** 130

**Question 11:** I asked my daughter how many students there are in her class. She said it is equal to the sum of 3 consecutive natural numbers. Moreover, it is also equal to the sum of the two natural numbers following those 3 consecutive natural numbers. What is the answer to my question? Enter your answer ONLY as NUMERAL in the box.

**Answer:** 15

**Question 12:** You want to pick two distinct numbers from the set  $\{1, 2, 3, 4\}$ . In how many ways can you do this so that the product is even? Enter your answer ONLY as NUMERAL in the box.

**Answer:** 5

**Question 13:** I was supposed to complete a task in 12 h, but I took more time and the error was 6.25%. How much time did I take to complete the task?

- A. 12 h 15 min
- B. 12 h 30 min
- C. 12 h 20 min
- D. 12 h 45 min

**Answer:** D  
12 h 45 min

1. which of the following options has the lowest value?

- A.  $1.5/0.56$
- B.  $\sqrt[4]{4.41}$
- C.  $1/0.4$
- D.  $(1.732)^2$

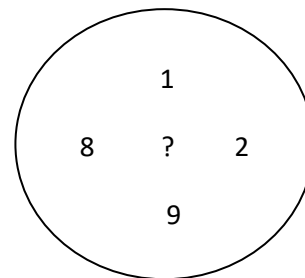
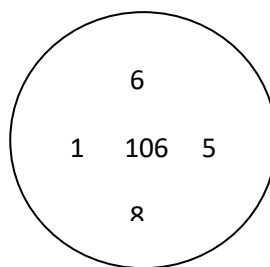
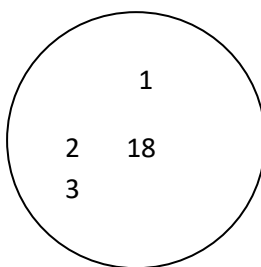
2. If all the digits in the given numbers are arranged in an ascending order and then the numbers as arranged in a descending order, then what is the highest digit in the number which is third in the order?

365 718 267 459 953 172

Options:

- A. 6
- B. 7
- C. 4
- D. None of the above

3. select that option as your answer?



Options:

- A. 25
- B. 50
- C. 75
- D. 16

4. Of 2000 adult inhabitants of a village, 60% are males, of which 80% are illiterate. If of all the inhabitants, 24% are literate, what percent of the females of the village are literate?

Enter your answer only as a numeral in the box.

5. If  $C=B>D=E$ ,  $H=G<F<E$  and  $F=M=N$ . then which of the following is not true?

Options:

- A.  $C>N$
- B.  $M>C$
- C.  $B>G$
- D.  $D>H$

6. The sum of 10 numbers is zero. At most how many of them can be positive?

7. In a box, 15 tickets numbered 1 to 15 are mixed up, one number on one ticket. If a ticket is drawn at random, then what is the probability that the ticket drawn has number that is a multiple of 4 or 5?

Express the answer as a fraction  $p/q$ .

Enter your answer only as a numeral in the box.

8. A girl towards west. She turn 45 in the clockwise direction and then 135 in the anticlockwise direction. Which directions is she facing now?

Options:

- A. South-west
- B. North-west
- C. South
- D. West

9. what is the value of the following expression?

$$7.465 + 126.6 + 421.287 + 3.5 + 52.14$$

Options:

- A. 614.528
- B. 591.821
- C. 621.521
- D. 610.992

10. you have two black socks, three white socks and five brown socks in your suitcase. It is dark and you pick out three socks from the suitcase without looking at the color. What is the probability that you do NOT have a pair of the same color?

Options:

- A.  $\frac{1}{4}$
- B.  $\frac{3}{10}$
- C.  $\frac{1}{10}$
- D.  $\frac{1}{5}$

11. How is Amy's great-grandfather's only daughter –in-law related to her only son-in-law's wife related to Amy?

Options:

- A. Daughter



- B. Granddaughter
- C. Mother
- D. Grandmother

12. A mobile app has four buttons arranged in  $2 \times 2$  grid on the touch screen. Each button can be on or off. If you touch the button when it is off, it turns on, and vice versa. Your fingers are fat and the screen is small, so each time you try to switch one button from on to off, you automatically switch one of its neighbours as well, either in the same row or in the same column of the grid.

Suppose the four buttons are all initially off. How many different on/off arrangement of the buttons can you reach by repeatedly pressing two adjacent buttons at a time?

Options:

- A. 16
- B. 12
- C. 5
- D. 8

13. Meghna and Abu's only child is Abdul. Abu has two grandchildren. How is Abdul's wife related to Meghna's son if Meghna's son and Abdul's grandmother's only great-granddaughter are married to each other?

Options:

- A. Daughter
- B. Daughter in law
- C. Mother in law
- D. Sister

14. For a group of 8 students the scores obtained in an English test are recorded, each score being a two-digit number. By mistake for one student the two digit of the correct score were interchanged and this incorrect score was recorded. The average score was then found to be 38.50. When this mistake was found, the incorrect score was replaced by the correct score and the average score came to be 45.25. A possible value for this correct score is:

Options:

- A. 82
- B. 72
- C. 81
- D. 76

15. The population of a town grows at a fixed rate per year. The current population is 60000 and it would increase by 4896 after exactly 2 years. If instead of growing at this rate per year, the population would have decreased at half this rate per year. Its population after exactly 2 years would have decreased by:

Enter your answer ONLY as a NUMERAL in the box.

16. Three identical cans of cola, two identical cans of iced tea and three identical cans of orange juice are arranged in a row. Calculate the number of arrangements if the three cans of cola are all next to each other and the two cans of iced tea are NOT next to each other.

Options:

- A. 80
- B. 40
- C. 720
- D. 600

17. what comes next in the series 1,2,5,20,16...?

Options:

- A. 48
- B. 55.90
- C. 25
- D. 21.60

17. Three suspects are accused of stealing a ring. They make the following statements.

(Suspect 1) I am not guilty.

(Suspect 2) suspect 1 is guilty.

(suspect 3) I am not guilty.

Only one of the suspects is telling the truth. The other two are lying. Which one is guilty?

Options:

- A. None of the given suspects are guilty
- B. Suspect 2
- C. Suspect 3
- D. Suspect 1

18. Two pipes can fill a reservoir in 9 h and 12 h, respectively, whereas an output pipe can empty the full reservoir in 20 hours. If all three pipes operate simultaneously in how much time will the tank be filled?

Options:

- A. 7h
- B. 4h
- C.  $6\frac{12}{13}$ h
- D.  $8\frac{1}{13}$  h

19. Of 2000 adult inhabitants of a village, 60% are males, of which 80% are illiterate. If of all the inhabitants, 24% are literate, what percent of the females of the village are literate?

20. An investment earns 4 paisa per rupee invested. If at the end of the year, the interest earned by an investment is Rs. 100 then the investment is equal to:

Options:

- A. 2000
- B. 2200
- C. 1000
- D. 2500
- E. 4000

21. The difference between the selling prices of a table when sold at profits of 6% and 8% is Rs. 106. Find the cost price of the table.

- A. 5618
- B. 5784
- C. 6100
- D. 5300

22. In how many ways can the letters of the word 'CONSTANT' be arranged such that the word always starts with a vowel?

Options:

- A. 5050
- B. 1440
- C. 2520
- D. 10080

23. Which of the following algorithms has the best time complexity?

- A. Hamilton path problem
- B. Travelling salesman problem
- C. Set cover
- D. Radix sort

24. The value of an air cooler was Rs. 41500 in the year 2017, and it is depreciating at the rate of 12% per annum. The value of it after 2 years was ?

Options:

- A. 36100
- B. 35286
- C. 32138
- D. 21380

25. If an integer can be written as  $P^2Q^2R^2$ , where P, Q and R are all distinct prime integers then find the number of factors of A.

26. A circus puts up 7 different acts on 7 days of the week. 1<sup>st</sup> act must be on Tuesday. 5<sup>th</sup> act can be held only after the 3<sup>rd</sup> and 4<sup>th</sup> happens. 2<sup>nd</sup> and 6<sup>th</sup> cannot happen on consecutive days and 2<sup>nd</sup> should always follow 5<sup>th</sup>. 7<sup>th</sup> act should happen only after the 6<sup>th</sup> act. When can the 7<sup>th</sup> act be done the earliest assuming the week starts Sunday?

Options:

- A. Sunday
- B. Monday
- C. Thursday
- D. Friday

27. A 250-m long train is running at a speed of 90km/h. In how much time (in seconds) will it cross bridge that is 150 m long?

Options:

- A. 16
- B. 10
- C. 25
- D. 18

28. The following message was formed by compression using the Greedy method analysis. How many bits does this message contain

"BCCABBDDAECCBBAEDDCC"

Options:

- A. 54
- B. 115
- C. 45
- D. 160

29. He \_\_\_\_\_ helped us if he really wanted to.

Options:

- A. Could have
- B. Should have
- C. Should
- D. Could

30. If a sum of RS>900 amounts to RS>992.25 in 2 years , interest being compounded annually, then the rate of interest per annum is:

Options:

- A. 4%
- B. 6%
- C. 8%
- D. 5%

