





Numerical Ability

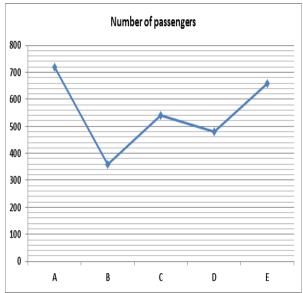
Directions (1-5): What value should come in the place of (?) in the following number series?

- 1) 17, 19, 28, 48, 83, ?
- **A**.137
- B.147
- **C**.159
- **D**.130
- E.141
- 2) 25, 78, 137, 198, 265, ?
- A.298
- **B**.312
- C.336
- **D**.328
- E.284
- 3) 13, 31, 66, ?, 272, 545
- **A**.128
- **B**.124
- **C**.130
- D.135
- E.138
- 4) 4, 8, 20, 60, ?, 840
- A.190
- **B**.210
- C.200
- D.240
- **E**.180
- 5) 2, 26, 54, 88, 130, ?
- **A**.169

- **B**.172
- C.176
- D.182
- E.193

Directions (6-10): Study the following information carefully and answer the questions given below.

The given line graph shows the number of passengers in five different trains – A, B, C, D and E.



6) The number of male and female passengers in E and A in the ratio of 9:11 and 5:4 respectively. Find the number of male passengers in E and A?

- A.692
- **B**.697
- C.684
- **D**.689
- **E**.677

7) The number of female passengers in F is the average number of passengers in A, C and E. If







the total number of passengers in F is 1040,
then find the number of male passengers in F?

- **A**.400
- **B**.450
- C.480
- **D**.520
- **E**.560
- 8) If the number of passengers in F is the average number of passengers in B and D and out of 40% of the total number of passengers in F are male, then find the number of female passengers in F?
- A.256
- **B** 248
- C.252
- D.242
- **E**.262
- 9) The number of passengers in C to F is 9:11.

Find the difference between the number of passengers in E and F?

- **A**.40
- **B**.50
- **C**.45
- D 55

E.None of these

- 10) The number of male to female passengers in each train is 3:2. Find the number of male passengers in all the trains together?
- A.1656

B.1658

- C.1662
- D.1664
- **E**.1672

Directions (11-15): What value should come in the place of (?) in the following questions.

- 11) $\sqrt{324 * 13} + ? * 5 = 79 * \sqrt{121}$
- **A**.114
- **B**.118
- C.122
- D.127
- E.110

12)
$$8*(?+25) = 16^2$$

- **8.A**
- **B**.5
- **C**.7
- **D**.9
- **E**.2

13)
$$(8)$$
? * 4 = 64² ÷ (16) ^(1/4)

- **A**.1
- **B**.3
- **C**.2
- **D**.4
- **E**.5

14)
$$(741 \div 19) * \sqrt{25 + 2520} \div \sqrt{196} = ?^2 - \sqrt{625}$$

- **A**.23
- B.24
- **C**.18
- **D**.16
- _ __







15) $18 * 14 + ?^2 - 281 = 13 * 20$

A.17

B.19

C.13

D.21

E.15

Directions (16-20): The following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give the answer as,

16)

I)
$$x^2 - 32x + 256 = 0$$

II)
$$y^2 + 5y - 336 = 0$$

A.x > y

B.x ≥ y

C.x = y or relationship can't be determined.

D.x < y

E.x ≤ y

17)

I)
$$x^2 + x - 156 = 0$$

II)
$$y^2 + 13y - 140 = 0$$

A.x > y

B.x≥v

C.x = y or relationship can't be determined.

D.x < y

E.x ≤ y

18)

I) $x^2 - 4x - 21 = 0$

II)
$$y^2 + 8y + 15 = 0$$

A.x > y

 $B.x \ge y$

C.x = y or relationship can't be determined.

D.x < y

E.x ≤ y

19)

I)
$$x^2 - 3x + 2 = 0$$

II)
$$y^2 - 2y + 1 = 0$$

A.x > y

 $B.x \ge y$

C.x = y or relationship can't be determined.

D.x < y

E.x ≤ y

20)

I)
$$3x + y = 13$$

II)
$$2x + 3y = 18$$

A.x > y

 $B.x \ge y$

C.x = y or relationship can't be determined.

D.x < y

 $E.x \le y$

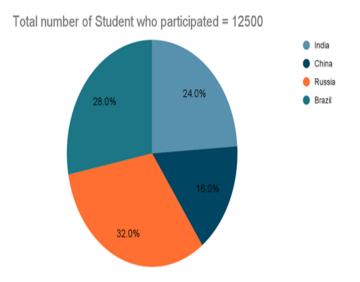
Directions (21-25): Study the following information carefully and answer the questions given below.

The given pie chart shows the % distribution of the total number of students who participated in two different racing games (PUBG and NFS) in four different countries.









The given table shows the % of students who participated in PUBG out of the total number of students who participated in PUBG and NFS in four different countries.

Countries	PUBG
India	46(2/3)%
China	37.5%
Russia	56.25%
Brazil	35(5/7)%

21) Out of the total number of students who participated in PUBG in India and China together, 20% of the students have left the participation. Find the remaining number of students who participated in PUGB in India and China?

A.1680

B.1700

C.1720

D.1740

E.1760

22) The number of students who participated in PUBG in the UK is 20% more than that of in Brazil. If the total number of students

who participated in PUBG and NFS together in the UK is equal to the total number of students who participated in PUBG and NFS in Brazil and Russia together, then find the number of students who participated in NFS in the UK?

A.6000

B.6400

C.6800

D.5600

E.7200

23) Find the average number of students participated in NFS in India and Russia?

A.1670

B.1680

C.1675

D.1685

E.1690

24) The number of students who participated in PUBG in Russia is what percent of the number of students who participated in NFS in China?

A.120%

B.150%

C.160%

D.140%

E.180%

25) What is the ratio of the number of students who participated in NFS in Brazil to the total number of students who participated in India and China together?

A.9:20







B.9:22

C.11:20

D.1:2

E.None of these

26) A boat covers 126 km against the stream in 14 hours. If the average speed of the boat and current is 10.5 kmph, then find the speed of current?

A.5 kmph

B.7 kmph

C.4 kmph

D.6 kmph

E.10 kmph

27) Pooja goes to school from her house at the speed of 36 kmph and reached school 30 minutes late. The next day she increased the speed by 9 kmph and then reached the school on time. Find the distance between house and school?

A.90 km

B.100 km

C.120 km

D.80 km

E.75 km

28) Train A crosses a 200 m long tunnel in 20 seconds and also crosses a car running in the opposite direction at the speed of 30 kmph in 9 seconds. If the ratio of the length of train A to train B is 2:1 and the speed of train B is 60

kmph, then what is the time taken by train A to cross train B running in the same direction?

A.48 seconds

B.54 seconds

C.36 seconds

D.72 seconds

E.60 seconds

29) Ratio of the radius of the cylinder to the cone is 2:1 and the ratio of the height of the cylinder to the cone is 3:4. What is the ratio of the volume of the Cylinder and cone?

A.9:1

B.3:4

C.1:9 D.4:3

E.1:2

30) Present age of Bala is 50% more than that of Beela and the ratio of the present age of Beela and Divya is 5:4. If the average ages of Bala and Divya is 34.5 years, then find the present age of Beela?

A.30

B.24

C.15

D.60

E.45

Directions (31-35): What approximate value should come in the place of (?) in the following questions.

31) 39.891% of 224.91 + $\sqrt{961}$ = ?2







A.11

B.13

C.15

D.18

32) $\sqrt{8650}$ *? + 13.12² = 175.09% of 520.195

A.5

B.8

C.10

D.11

E.3

33) $(38.19 * 14.98) \div (\sqrt{5040} - \sqrt{2700}) = ?$

A.28

B.25

C.30

D.36

E.39

34) $(2847.17 \div \sqrt{530}) * (3587.91 \div 72.94) = ?^2$

A.78

B.75

C.81

D.84

E.87

35) Rahul invests Rs.x in a simple interest scheme at the rate of 18% per annum for 4 years and after 4 years he received the interest of Rs.3960. If he invests the same amount in a compound interest scheme at the rate of interest 15% per annum for 2 years, then find the amount received by Rahul after 2 years?

A.Rs.7273.75

B.Rs.7238.25

C.Rs.7268.50

D.Rs.7248.25

E.None of these

36) 15 men or 30 women can do a piece of the work in 45 days. The ratio of the efficiency of man and boy is 2:1, in how many days will 25 men, 9 women and 15 boys do the work?

A.24(9/37) days

B.22(9/37) days

C.20(9/37) days

D.19(9/37) days

E.18(9/37) days

37) A box contains three red, four yellow and one green balls. If three balls are drawn at random, what is the probability that two of them are red and one green?

A.1/56

B.1/28

C.3/56

D.1/14

E.5/56

38) Ram sold 45% of his shirts at a profit of 10% and the remaining at a profit of 15%. The overall profit Ram gets is S%. If Ramesh sold his item at a profit of S% he gets a profit of Rs.637.5, then find the cost price of Ramesh's item?

A.Rs.3000

B.Rs.4000







C.Rs.2000

D.Rs.5000

E.Rs.6000

39) A boat covers D km along with stream in 8 hours and the same boat covers (D + 30) km against the stream in 30 hours. If the speed of the boat in still water is double of the speed of the current, then find the speed of the stream?

A.3 kmph

B.5 kmph

C.10 kmph

D.4 kmph

E.8 kmph

40) Area of the square is 1 cm² more than the area of the rectangle. If the breadth of the rectangle is 1 cm less than the side of the square and the length of the rectangle is 18 cm, then what is the difference between the perimeter of the rectangle and the square?

A.5 cm

B.8 cm

C.10 cm

D.7 cm

E.None of these

Reasoning Ability

Directions (41-45): Answer the questions based on the information given below.

Eight persons viz. A, B, C, D, E, F, G and H are living in a four storey building such that the bottom-most floor is 1 and the floor just above it

is 2 and so on till the topmost floor is numbered as 4. Each floor has two flats – Flat A and Flat B. Flat A is to the west of Flat B. Flat A of floor 2 is immediately above flat A of floor 1 whereas flat B of floor 2 is immediately above flat B of floor 1 and so on. All the information is not necessarily in the same order.

E lives in the flat immediately above D but on the same flat. B lives in one of the flats to the southeast of D.H lives in the flat two floors above B.G lives on the floor adjacent to H and immediately above the floor on which F lives. At least one floor gap is between the floors of F and A, who doesn't live on an odd-numbered floor. C is not living in the same flat as D.

41) Who among the following person lives on the same floor with G?

A.H

B.A

C.D

D.B

E.None of these

42) In which of the following floor and flat does C live?

A.Flat A floor 2

B.Flat A floor 4

C.Flat B floor 3

D.Flat B floor 4

E.None of these

43) Which of the following statement is/are true with respect to the final arrangement?







I. Both F and C live on the same flat.

II. A lives on the floor immediately above H.

III. F lives in the flat immediately below D

A.Only II

B.Both I and II

C.Both II and III

D.Both I and III

E.All of these

44) If A is related to G and F is related to H in a certain way, then who among the following person is related to B?

A.G

B.E

CD

D.C

E.None of these

45) Who among the following person lives two floors above D but not on the same flat?

A.The one who lives on the same floor with A

B.A

C.E

D.The one who lives immediately below E

E.No such person

Directions (46-50): Answer the questions based on the information given below.

M % 7 O P 0 T # H G 9 * 5 Y J 8 B 6 @ R 2 V Z

\$1C3EL^F\$W4UN¥I£

46) If all the symbols are dropped from the series, then how many letters are immediately

preceded and immediately followed by a number?

A.One

B.Two

C.Three

D.More than three

E.None

47) Which of the following element is twelfth to the left of nineteenth from the right end in the series?

A.#

B.H

C.9

D.W

E.None of these

48) How many symbols are immediately preceded by a letter and immediately followed by a number in the series?

A.One

B.Two

C.Three

D.More than three

E.None

49) Fill the following sequence.

7PT, H95, J_@, 2Z_

A.R. 2

B.V, \$

C.1, 3

D.B, 1

E.None of these







50) Four of the following five are alike in a certain way and hence form a group. Find the one that doesn't belong to that group.

A.E

B.U

C.J

D.P

E.R

Directions (51-55): Answer the questions based on the information given below.

Nine persons viz. P, Q, R, S, T, U, V, W and X are seated in a circular table such that all of them are facing towards the center, but not necessarily in the same order. The consecutive alphabetically named person doesn't sit adjacent to each other.

One person sits between P and T who sits adjacent to Q. Four persons sit between Q and R who doesn't sit adjacent to P.S sits to the immediate right of V. The number of persons between V and R is one less than the number of persons between U and W, when counted from the right of both V and U.

51) Who among the following person sits second to the right of V?

A.The one who sits to the immediate left of R

B. The one who sits third to the right of P

C.The one who sits fourth to the left of T

D. The one who sits second to the left of W

E.None of these

52) How many persons sit between X and T when counted from the left of T?

A.As many persons from the right of W to Q

B.Three

C.As many persons from the left of P to U

D.Five

E.None of these

53) If all the persons are made to sit in alphabetical order in a clockwise direction with respect to P, then how many persons remain unchanged in their position, excluding P?

A.One

B.Two

C.Three

D.More than three

E.None

54) Which of the following statement is/are true with respect to the final arrangement?

A. Five persons sit between X and U

 $\boldsymbol{B}.Both\;V$ and T are the immediate neighbours of

Q

C.S sits third to the right of X

D.Both U and P are immediate neighbours

E.None of these

55) What is the position of R with respect to W?

A.Third to the right

B.Second to the left

C.Immediate right

D.Third to the left

E.None of these







Directions (56-60): Study the following statements and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

56) Statements:

Only a few chemicals are Mechanical.

No Mechanical is Zoological.

All Zoological are Biological.

Some Products are Biologic

Conclusion:

- I. No Chemical is Biological.
- II. Some Products are Zoological.
- A.Only I follows
- **B**.Only II follows
- C.Either I or II follows
- D.Neither I nor II follows
- E.Both I and II follow

57) Statements:

Some Minors are Major.

All Majors are Voter.

No Voter is Elder.

Only a few Elder are Retired.

Conclusion:

- I. No Minor is retired.
- II. Some Majors are not elder.
- A.Only I follows
- **B**.Only II follows
- C.Either I or II follows
- D.Neither I nor II follows
- E.Both I and II follow

58) Statements:

All Pharmacies are Hospital.

Only a few Pharmacies are Medical.

Some Medicals are Dental.

No Dental is Laboratory.

Conclusion:

- I. Some Hospitals are Medical.
- II. Some Hospitals are not Medical.
- A.Only I follows
- **B**.Only II follows
- C.Either I or II follows
- D.Neither I nor II follows
- E.Both I and II follow

59) Statements:

No Philosophy is Mentality.

All Mentalities are Literature.

Only a few Literature are English.

Some English are Poetry.

Conclusion:

- I. Some Mentality is English.
- II. No English is Mentality
- A.Only I follows
- B.Only II follows
- C.Either I or II follows
- D.Neither I nor II follows
- E.Both I and II follow
- 60) Seven persons viz. A, B, C, D, E, F and G are visiting a place in different months from January to July of the same year, but not necessarily in the same order. G visits in the month having less than 31 days and three







persons before B who visits immediately after F.
D visits in a month having an odd number of
days and immediately after A. C doesn't visit
before D. Who among the following person visits
first?

A.A

B.D

C.E

D.G

E.None of these

Directions (61-65): Answer the questions based on the information given below.

In a certain language,

"Personality development raises person" is coded as "njvnvrvku itg"

"Person include illiterate qualification" is coded as "bif vku sae zsr"

"Mental development leads success" is coded as "krfitg usa iow"

"Qualification include raises success" is coded as "nvr sae bif usa"

61) Which of the following word denotes the code "zsr"?

A.Include

B.Qualification

C.Person

D.Illiterate

E.None of these

62) Which of the following code denotes the word "mental"?

A.usa

B.iow

C.itg

D.krf

E.Either b or d

63) What is the code for the word "personality"?

A.njv

B.nvr

C.itg

D.vku

E.None of these

64) If "Beauty Qualification" is coded as "sar bif" then which of the following word denotes the code "sae"?

A.Person

B.Include

C.Development

D.Success

E.None of these

Directions (65-69): Answer the questions based on the information given below.

Seven exams viz. Botany, Chemistry, English, Physics, Social, Tamil and Zoology were conducted on different days of the same week from Sunday to Saturday, but not necessarily in the same order.

Not more than two exams were conducted before English which was conducted immediately before Physics. Only one exam was conducted between Physics and Botany which is not conducted on the adjacent days of English.







The number of days between English and
Botany is the same as the number of days
between Chemistry and Social which was
conducted immediately after Tamil. Zoology was
not conducted the last.

- 65) Which of the following exam was conducted the last?
- A.The one conducted immediately after Tamil
- **B**.The one conducted three exams after Botany
- C.The one conducted two exams after Chemistry
- D.The one conducted four exams after English
- E.None of these
- 66) On which of the following day does the Chemistry exam was conducted?
- A.Monday
- **B**.Thursday
- C.Wednesday
- **D**.Tuesday
- E.None of these
- 67) The number of exams conducted before English is one less than the number of exams conducted after ____.
- A.Zoology
- **B**.Botany
- C.Tamil
- **D**.Chemistry
- E.None of these
- 68) Which of the following statement is/are true with respect to the final arrangement?

- A.Only two exams were conducted between
- Physics and Botany
- **B**.English was conducted the first among all
- C.Tamil was conducted two days after Botany
- D.Social was conducted four days after Physics
- E.None of these
- 69) How many exams were conducted between Tamil and English?
- A.One
- B.Two
- C.Three
- D.More than three
- E.None
- 70) Find the odd one out?
- A.CFH
- **B**.JMO
- C.PRS
- D.SVX
- **E**.ADF
- 71) If in the given number "463728519" the digits are arranged in ascending order from left to right then which of the following digits unchanged in their positions?
- **A**.1
- **B**.2
- **C**.3
- **D**.4
- E.None of these







72) If it is possible to make a four-letter meaningful word by using the first, third, fifth and seventh letters of the word "VIOLENCE" then what is the first letter of the newly formed word? Mark X as your answer if more than one word is formed. Mark Z as your answer if no meaningful word can be formed.

A.D

B.C

C.A

D.X

E.Z

Directions (73-75): Study the following information carefully and answer the below questions.

Five persons A, B, C, D and E are arranged based on their heights. A is taller than B who is shorter than D. E is taller than C but shorter than B. D is not the tallest. The second tallest and the second shortest person's heights are 172cm and 154cm respectively.

73) Who is the second tallest person in the group?

A.B

BF

C.A

D.Cannot be determined

E.Other than the given option

74) How many persons are taller than the one whose possible height is 167cm?

A.One

B.Two

C.Three

D.Four

E.Cannot be determined

75) What is the possible height for B?

A.173 cm

B.145 cm

C.162 cm

D.157 cm

E.Eitherc or d

Directions (76-80): Answer the questions based on the information given below.

Eight persons viz. Jeeva, Kavi, Meera, Nisha, Priya, Reethu, Sofi and Thiru are buying groceries one after another in sequential order. The one who buys first is numbered as 1 and the one who buys immediately after the first person is numbered as 2 and so on but not necessarily in the same order.

Jeeva buys in an odd prime numbered position and immediately before Priya. Only two persons buy between Priya and Sofi who buys immediately after Nisha. Only one person buys between Nisha and Kavi who buys three persons away from Thiru. Neither Thiru nor Reethu buys at first whereas Meera doesn't buy immediately before Reethu.

76) Who among the following person buys first?

A.Nisha

B.Sofi

C.Thiru







D.Meera

E.None of these

77) How many people buys between Priya and Reethu?

A.One

B.Two

C.Three

D.More than three

E.None

78) If Jeeva is related to Reethu and Kavi is related to Thiru in a certain way, then who among the following person is related to Priya?

A.Meera

B.Sofi

C.Kavi

D.Reethu

E.None of these

79) Which of the following statement is/are true with respect to the final arrangement?

I. Only two persons buy after Priya.

II. Kavi buys in an odd numbered position.

III. As many persons buy between Meera and Sofi as between Thiru and Jeeva.

A.Only I

B.Only II

C.Both I and III

D.Both I and II

E.Both II and III

80) In which of the following position does Thiru buy?

Duy:

A.5th

B.3rd

C.6th

D.8th

E.None of these

Answer With Explanation

$$19 + 3 * 3 = 28$$

$$48 + 5 * 7 = 83$$

$$25 + 53 = 78$$

$$137 + 61 = 198$$

$$198 + 67 = 265$$

$$265 + 71 = 336$$

3) Answer: D

$$13 * 2 + 5 = 31$$

$$31 * 2 + 4 = 66$$







4) Answer: B

$$8 * 2.5 = 20$$

5) Answer: D

$$2 + 24 = 26$$

$$26 + 28 = 54$$

$$88 + 42 = 130$$

6) Answer: B

Required total =
$$9/20 * 660 + 5/9 * 720$$

7) Answer: A

Number of female passengers in
$$F = (720 + 540)$$

Number of male passengers in F = 1040 - 640 =

400

8) Answer: C

Number of passengers in
$$F = (360 + 480)/2$$

$$= 420$$

Number of female passengers in F = 420 *

60/100

= 252

9) Answer: E

Number of passengers in F = 11/9 * 540 = 660

Difference =
$$660 - 660 = 0$$

10) Answer: A

Number of male passengers = 3/5 * (720 + 360)

$$+540 + 480 + 660$$
)

11) Answer: D

$$\sqrt{324 * 13} + ? * 5 = 79 * \sqrt{121}$$

12) Answer: C

$$8*(?+25)=16^2$$

$$? = 7$$

13) Answer: B

$$(8)$$
? * 4 = 64² ÷ (16) ^(1/4)

$$? = 3$$

14) Answer: E

$$(741 \div 19) * \sqrt{25} + 2520 \div \sqrt{196} = ?^2 - \sqrt{625}$$

$$195 + 180 = ?^2 - 25$$

$$400 = ?^2$$

$$? = 20$$

15) Answer: A

$$18 * 14 + ?^2 - 281 = 13 * 20$$

16) Answer: B

$$x^2 - 32x + 256 = 0$$

$$x^2 - 16x - 16x + 256 = 0$$







$$x(x-16) - 16(x-16) = 0$$

$$x = 16, 16$$

$$y^2 + 5y - 336 = 0$$

$$y^2 + 21y - 16y - 336 = 0$$

$$y(y + 21) - 16(y + 21) = 0$$

$$y = -21, 16$$

$$x \ge y$$

17) Answer: C

$$x^2 + x - 156 = 0$$

$$x^2 + 13x - 12x - 156 = 0$$

$$x(x + 13) - 12(x + 13) = 0$$

$$x = 12, -13$$

$$y^2 + 13y - 140 = 0$$

$$y^2 + 20y - 7y - 140 = 0$$

$$y(y + 20) - 7(y + 20) = 0$$

$$y = 7, -20$$

Relationship between x and y cannot established.

18) Answer: B

$$x^2 - 4x - 21 = 0$$

$$x^2 - 7x + 3x - 21 = 0$$

$$x(x-7) + 3(x-7) = 0$$

$$x = 7, -3$$

$$y^2 + 8y + 15 = 0$$

$$v^2 + 5v + 3v + 15 = 0$$

$$y(y + 5) + 3(y + 5) = 0$$

$$y = -5, -3$$

$$x \ge y$$

19) Answer: B

$$x^2 - 3x + 2 = 0$$

$$x^2 - 2x - x + 2 = 0$$

$$x(x-2) - 1(x-2) = 0$$

$$x = 1.2$$

$$y^2 - 2y + 1 = 0$$

$$y^2 - y - y + 1 = 0$$

$$y(y-1) - 1(y-1) = 0$$

$$y = 1, 1$$

$$x \ge y$$

20) Answer: D

$$3x + y = 13$$
 ----(1)

$$2x + 3y = 18 -----(2)$$

From (1) and (2)

$$7x = 21$$

$$x = 3$$

$$y = 13 - 9 = 4$$

Directions (21-25):

Number of students who participated in PUBG in

Number of students who participated in NFS in

1600

Number of students who participated in PUBG in

Number of students who participated in NFS in

1250

Number of students who participated in PUBG in







Number of students who participated in NFS in

1750

Number of students who participated in PUBG in

Number of students who participated in NFS in

2250

21) Answer: C

Required total = 80/100 * (1400 + 750)

= 1720

22) Answer: A

Number of students who participated in PUBG in

UK = 120/100 * 1250 = 1500

Total number of students who participated in UK

$$= (32 + 28)/100 * 12500 = 7500$$

Number of students who participated in NFS in

UK = 7500 - 1500 = 6000

23) Answer: C

Required average = (1600 + 1750)/2

= 1675

24) Answer: E

Required % = 2250/1250 * 100

= 180%

25) Answer: A

Required ratio = 2250:((24 + 16)/100 * 12500)

= 9:20

26) Answer: D

Speed of upstream = 126/14 = 9 kmph

Speed of downstream = 10.5 * 2 = 21 kmph

Speed of current = (21 - 9)/2

= 6 kmph

27) Answer: A

Distance = ((36 * 45) * 30/60)/9

 $= 90 \, \text{km}$

28) Answer: B

Length of train A = 2x

Length of train B = x

Speed of train A = y

2x + 200 = y * 5/18 * 20

18x + 1800 = 50y ----(i)

2x = (y + 30) * 5/18 * 9

4x = 5y + 150 --- (ii)

Subs (i) in (ii)*10

40x = 18x + 1800 + 1500

22x = 3300

x = 150

Length of train A = 2 * 150 = 300

Length of train B = 150

Required time = (300 + 150)/(90 - 60) * 5/18

= 54 seconds

29) Answer: A

Required ratio = (22/7 * 2x * 2x * 3y):(1/3 * 22/7 *

x * x * 4y

= 9:1

30) Answer: A

Beela = 5x

Divya = 4x







Bala =
$$5x * 150/100 = 7.5x$$

$$4x + 7.5x = 34.5 * 2$$

$$x = 6$$

Present age of Beela = 5 * 6 = 30 years

31) Answer: A

39.891% of 224.91 +
$$\sqrt{961}$$
 = ?2

$$90 + 31 = ?^2$$

32) Answer: B

$$\sqrt{8650}$$
 *? + 13.12² = 175.09% of 520.195

$$? = 8$$

33) Answer: C

$$(38.19 * 14.98) \div (\sqrt{5040} - \sqrt{2700}) = ?$$

34) Answer: A

$$(2847.17 \div \sqrt{530}) * (3587.91 \div 72.94) = ?^{2}$$

$$? = 78$$

35) Answer: A

$$3960 = x * 18 * 4/100$$

$$x = 5500$$

CA received by Rahul = $5500 * (1 + 15/100)^2$

= Rs.7273.75

36) Answer: E

$$15m = 1/45$$

$$m = 1/675$$

$$w = 1/30 * 45 = 1/1350$$

$$b = 1/(675 * 2) = 1/1350$$

25 men, 9 women and 15 boys =
$$25/675 +$$

$$= 1/27 + 1/150 + 1/90$$

$$= (50 + 9 + 15)/1350$$

Required time = 18(9/37) days

37) Answer: C

Required probability = $(3C_2 * 1C_1)/8C_3$

= 3/56

38) Answer: D

Number of shirts = 100x

Cost price of each shirt = Rs.y

Total cost of Ram's shirt = 100x * y

Total SP of 45% of shirts = 45/100 * 100x *

110y/100 = 49.5xy

Total SP of 55% of shirts = 55/100 * 100x *

115y/100 = 63.25xy

S = ((49.5xy + 63.25xy) - 100xy)/100xy * 100

= 12.75

CP of Ramesh's item = 100/12.75 * 637.5 =

Rs.5000

39) Answer: B

Speed of Current = x

Speed of boat = 2x

D/3x = 8

D = 24x

(D + 30)/x = 30

D + 30 = 30x

D = 30x - 30







$$24x = 30x - 30$$

$$x = 5$$

Speed of stream = 5 kmph

40) Answer: E

Side of the square = a

Breadth of the rectangle = a - 1

$$a * a = (18 * (a - 1)) + 1$$

$$a^2 = 18a - 18 + 1$$

$$a^2 - 18a + 17 = 0$$

$$a^2 - 17a - a + 17 = 0$$

$$a(a - 17) - 1(a - 17) = 0$$

a = 17, 1 (1 is not possible because breadth

becomes 0)

Perimeter of the square = 17 * 4 = 68

Perimeter of rectangle = 2 * (18 + 16) = 68 cm

Difference = 68 - 68 = 0

Directions (41-45):

Floor	Flat A	Flat B
4	Α	С
3	E	Н
2	D	G
1	F	В

1. E lives in the flat immediately above D but on the same flat. B lives in one of the flats to the southeast of D.

	Case 1		Case 1 Case 2		Cas	se 3
Floor	Flat A	Flat B	Flat A	Flat B	Flat A	Flat B
4	Е		Е			
3	D		D		Е	
2		В			D	
1				В		В

2. H lives in the flat two floors above B. G lives on the floor adjacent to H and immediately above the floor on which F lives.

	Cas	Case 1		se 2	Cas	se 3
Floor	Flat A	Flat B	Flat A	Flat B	Flat A	Flat B
4	Е	Н	E			
3	D	G	D	Н	Е	Н
2	F	В		G	D	G
1			F	В	F	В

3. At least one floor gap is between the floors of F and A, who doesn't live on an odd-numbered floor. C is not living in the same flat as D. Hence, cases 1 and 2 get eliminated.

	Case 1		Case 1 Case 2		Cas	se 3
Floor	Flat A	Flat B	Flat A	Flat B	Flat A	Flat B
4	E	Н	Е	А	А	С
3	D	G	D	Н	Е	Н
2	F	В		G	D	G
1			F	В	F	В

41) Answer: C

42) Answer: D

43) Answer: C

44) Answer: B

45) Answer: A







46) Answer: C

M % 7 O P O T # H G 9 * 5 Y J 8 B 6 @ R 2 V Z \$ 1 C 3 E L ^ F \$ W 4 U N ¥ I £ M 7 O P O T H G 9 5 Y J 8 B 6 R 2 V Z 1 C 3 E L F W 4 U N I

47) Answer: B

M % 7 O P 0 T # H G 9 * 5 Y J 8 B 6 @ R 2 V Z \$ 1 C 3 E L ^ F \$ W 4 U N ¥ I £

48) Answer: B

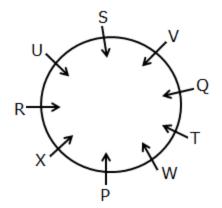
M % 7 O P 0 T # H G 9 * 5 Y J 8 B 6 @ R 2 V Z \$ 1 C 3 E L ^ F \$ W 4 U N ¥ I £

49) Answer: D

50) Answer: E

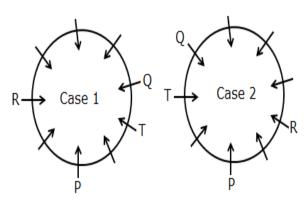
M % 7 O P 0 T # H G 9 * 5 Y J 8 B 6 @ R 2 V Z \$ 1 C 3 E L ^ F \$ W 4 U N ¥ I £ All the letters are adjacent to a letter and a number except R which is adjacent to a symbol and a number.

Directions (51-55):

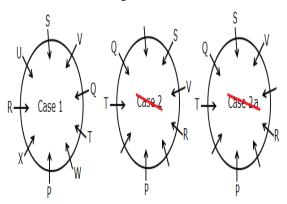


1. One person sits between P and T who sits adjacent to Q. Four persons sit between Q and

R who doesn't sit adjacent to P. The consecutive alphabetically named person doesn't sit adjacent to each other.



2. S sits to the immediate right of V. The number of persons between V and R is one less than the number of persons between U and W, when counted from the right of both V and U. Hence, cases 2 and 2a get eliminated.



51) Answer: A

52) Answer: C

53) Answer: A

54) Answer: B

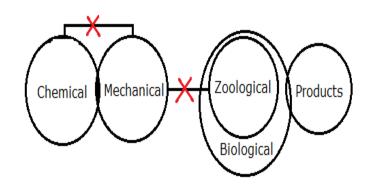
55) Answer: D

56) Answer: D

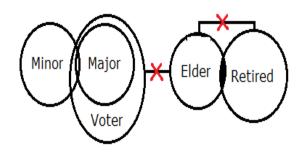




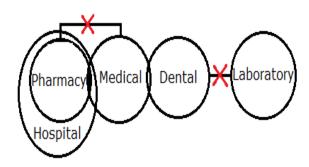




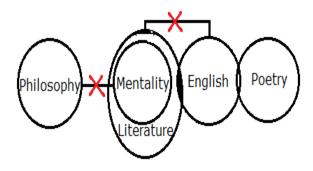
57) Answer: B



58) Answer: E



59) Answer: C



60) Answer: C

Month	Person
January	E
February	Α
March	D
April	G
May	С
June	F
July	В

Directions (61-64):

Word	Code
Person	vku
Development	itg
Raises	nvr
Success	usa
Personality	njv
Illiterate	zsr
Qualification/include	sae/bif
Mental/leads	krf/iow

61) Answer: D

62) Answer: E

63) Answer: A

64) Answer: B

Directions (65-69):

Da	y	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Exa	m	Zoology	English	Physics	Chemistry	Botany	Tamil	Social

Not more than two exams were conducted
 before English which was conducted
 immediately before Physics. Only one exam was







conducted between Physics and Botany which is not conducted on the adjacent days of English

	Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Case 1	Exam			English	Physics		Botany	
Case 2	Exam		English	Physics		Botany		
Case 3	Exam	English	Physics		Botany			

2. The number of days between English and Botany is the same as the number of days between Chemistry and Social which was conducted immediately after Tamil.Zoology was not conducted the last. Hence, cases 1 and 3 get eliminated

	Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Case 1	Exam	Tamil	Social	English	Physics	Chemistry	Botany	
Case 2	Exam	Zoology	English	Physics	Chemistry	Botany	Tamil	Social
Case 3	Exam	English	Physics	Chemistry	Botany	Tamil	Social	

65) Answer: A

66) Answer: C

67) Answer: B

68) Answer: D

69) Answer: C

70) Answer: C

There are two letters between the first and second letter and one letter between the second and third letter as per the alphabetical series except option c.

71) Answer: B

463728519

123456789

72) Answer: B Letters: VOEC Word that formed using the above letters is: "COVE"

Directions (73-75):

No	Persons	Heights
1	Α	
2	D	172cm
3	В	
4	E	154cm
5	С	

73) Answer: E

74) Answer: B

75) Answer: E

Directions (76-80):

Order	Person	
1	Meera	
2	Nisha	
3	Sofi	
4	Kavi	
5	Jeeva	
6	Priya	
7	Thiru	
8	Reethu	

1. Jeeva buys in an odd prime numbered position and immediately before Priya. Only two persons buy between Priya and Sofi who buys immediately after Nisha.







	Case 1	Case 2	Case 3
Order	Person	Person	Person
1			
2		Nisha	
3	Jeeva	Sofi	
4	Priya		Nisha
5		Jeeva	Sofi
6	Nisha	Priya	
7	Sofi		Jeeva
8			Priya

2. Only one person buys between Nisha and Kavi who buys three persons away from Thiru. Neither Thiru nor Reethu buys at first whereas Meera doesn't buy immediately before Reethu. Hence, cases 1 and 3 get eliminated.

	Case 1	Case 2	Case 3
Order	Person	Person	Person
1		Meera	
2	Reethu	Nisha	Reethu
3	Jeeva	Sofi	Thiru
4	Priya	Kavi	Nisha
5	Thiru	Jeeva	Sofi
6	Nisha	Priya	Kavi
7	Sofi	Thiru	Jeeva
8	Kavi	Reethu	Priya

76) Answer: D

77) Answer: A

78) Answer: B

79) Answer: C

80) Answer: E