

Quantitative questions

1 ,27,125,?,729,1331.Find da no missing in dis sequence.

Ans. 343

Hint.

$1^3, 3^3, 5^3, 7^3, 9^3, \dots$

2) 7, 19,31,43, ? , 77,89,101

Hint: add 12 to each

3) y w v t r p n

Find next letter

4) There is a rectangular Garden whose length and width are 60m X 20m. There is a walkway of uniform width around garden. Area of walkway is 516m^2 . Find width of walkway

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

Ans: 3

10^{10}

5) ----- =

$10^4 + 10^2$

Ans: 10^4

6) If a certain sum of money at SI doubles itself in 5 yrs then what is the rate?

a)5% b) 10% c)25% d)20%

Ans: 20% check answer

7) Fresh Grapes contain 90% water by wt. Dried grapes contain 20% water by %age. What will be wt of dried grapes when we begin with 20 kg fresh grapes?

8. A man engaged a servant on a condition that he'll pay Rs 90 and also give him a bag at the end of the yr. He served for 9 months and was given a turban and Rs 65. So the price of turban is

Rs 10 / 19 / 0 / 55

9). The sum of six consecutive odd nos. is 888. What is the average of the nos.?

i. 147 ii. 148 iii. 149 iv. 146

10. In a race from pt. X to pt Y and back, Jack averages 30miles/hr to pt Y and 10 miles/hr back to pr X.Sandy averages 20 miles/hr in both directions. If Jack and Sandy start race at same tym, who'll finish 1st

Jack/Sandy/they tie/Impossible to tell

11. A man engaged a servant on a condition that he'll pay Rs 90 and also give him a bag at the end of the yr. He served for 9 months and was given a turban and Rs 65. So the price of turban is

Rs 10 / 19 / 0 / 55

22. Three wheels make 36, 24, 60 rev/min. Each has a black mark on it. It is aligned at the start of the qn. When does it align again for the first tym?

14/20/22/5 sec

23. If $1 = \frac{3}{4}(1 + \frac{y}{x})$ then

i. $x=3y$ ii. $x=y/3$ iii. $x=(2/3)y$ iv. None

REASONING

Direction for Qn 15-18

An employee has to allocate offices to 6 staff members. The offices are no. 1-6. the offices are arranged in a row and they are separated from each other by dividers>hence voices, sounds and cigarette smoke flow easily from one office to another

Miss R needs to use the telephone quite often throughout the day. Mr. M and Mr. B need adjacent offices as they need to consult each other often while working. Miss H is a senior employee and his to be allotted the office no. 5, having the biggest window.

Mr D requires silence in office next to his. Mr. T, Mr M and Mr. D are all smokers. Miss H finds tobacco smoke allergic and consecutively the offices next to hers are occupied by non-smokers. Unless specifically stated all the employees maintain an atmosphere of silence during office hrs.

The ideal candidate to occupy office farthest from Mr. B will be

i. Miss H ii. Mr. M iii. Mr. T iv. Mr. D

The three employees who are smokers should be seated in the offices

i. 1 2 4 ii. 2 3 6 iii. 1 2 3 iv. 1 2 3

The ideal office for Mr. M would be

i. 2 ii. 6 iii. 1 iv. 3

In the event of what occurrence within a period of one month since the assignment of the offices would a request for a change in office be put forth by one or more employees?

- i. Mr D quitting smoking
- ii. Mr. T taking over duties formally taken care of by Miss R
- iii. The installation of a water cooler in Miss H's office
- iv. Mr. B suffering from anemia

Direction for Ques no. 24-25

Elle is 3 times older than Zaheer. Zaheer is $\frac{1}{2}$ as old as Waheeda. Yogesh is elder than Zaheer. What is sufficient to estimate Elle's age?

- i. Zaheer is 10 yrs old
- ii. Yogesh and Waheeda are both older than Zaheer by the same no of yrs.
- iii. Both of the above
- iv. None of the above

Which one of the following statements can be inferred from the info above

- i. Yogesh is elder than Waheeda
- ii. Elle is older than Waheeda
- iii. Elle's age may be less than that of Waheeda
- iv. None of the above

Quantitative Section (Maths)

1) Find the next term in series ?

25 16 9 4 1 0 ?

Ans. $(-1)^2 = 1$

2) If $2^5 = 32$ then $2^{10} = ?$ a) 1 b) 2 c) 4 d) 8

Ans.: opt. (d) 8

3) There are 2 problems on surface area & volume of triangle

B 10m A and angle of BAC=30 degree

C 10m

4) The Parallelogram ABCD, the line CD has midpoint E from line AB, then the ratio of Triangle AED / parallelogram ABCD =

a) 2:1 b) 1:2 c) 4:1 d) 1:4

Ans: (d) 1:4

5) Train A starts from X at 12:00 pm & reach at Y on 2:30 pm & train B starts from Y at 12:15 pm reach at X on 2:15 so, when both trains crosses each other.

Ans: 1:15 pm

6) In election two candidate, one who loss got 42%, 112 votes so how many voters are their.

Ans. 650 voters (check)

7) Boat in 2 km downstream in just 20min 7 come back again in 1 hour. Then what is the speed of river?

Ans: 1km(plz chk)

8) $(Ax)^2 + (Bx) + (c) = 0$ in these eqn. someone changes the value of b & c, but there is no change in result, so what is that value ?

Ans: 2,1

9) There are three coins of Re 1, 50 ps, 25 ps having ratio of 13:11:3. the total sum of money is 77 ,then find out hw many rupees 1 coins is there?

Ans: 52

10) some interchanging problem

11) Interest problem. A got Rs. 150 more on sum amt as a rate of 3%, then wht is the amout?

Ans: 5000

12) The numerator by 4 gets 1.5 times more than original number then wht is the numerator value?

Ans : 6 (I thnk)

13) $X + Y = 6$, then $XY=?$ a) 36 b) 8 c) 3 4) 30

Ans. 8 $x=4,y=2$ bcome 6 & $4*2=8$

14) The addition of 2 number difference of 2 number is a perfect square 7 the difference of both perfect square also a perfect square. Then find out this no.

Ans: 6 , 2 bcoz $6+2= 8$, $6-2= 4$ and $8-4 = 4$

15) Two problems on profit & loss

17) Height problem 18) series prob.

19) venn diagram problem

II) Logical Questions:

1. There is a family of six persons P,Q,R,S,T and U.They are Lawyer, Doctor, Teacher, Salesman, Engineer and Accountant. There are two married couples in the family. S, the

salesman is married to the Lady Teacher. The Doctor is married to the Lawyer U, The Accountant is the son of Q and brother of T. R, the Lawyer is the daughter-in-law of P. T is the unmarried Engineer. P is the Grandmother of U. Which is the profession of P? (4 questions on this)

a)Lawyer b)Teacher c)Doctor d)Accountant

5) blood relations problem (4 questions)

10) S I R S

+ K I L S

S M O K E (6 ques)

I got value of each above letter

S = 1 E = 2 L = 3 I = 4

R = 6 O = 8 K = 9 M = 0 (200 % sure)

17) Who is the tallest among six person n some condn given (4 Qs)

Tallest person = A

22) Nidhi hve some ant of money. As she is going to market she meet person A she gave him half of money & remaining half of money he gave Person B & remaining of half of money, likewise she gave all money to 7 person, finally 1st one person (7) got no money means Rs. 0, so based on that 6 ques is asked?

1) Nidhi hve total amt of money = 127

1st = 63 2nd = 31 3rd = 15

4th = 7 5th = 3 6th = 1

7th = 0

III) Verbal Questions Section:

1) 2 synonyms

2) 2 antonyms

3) 2 questions on choose correct phrase

4) Logical. To make sentence (4 Qs)

e.g 1) $x + y ? z + t$ then a) $x + y + t$ is even b) $Z*t$ is odd

5) Complete the paragraph

Choosing correct sentence frm option (4 Ques)

6) Paragraph reading (6 Qs)

**Sample Questions: 1. Find min value of fn: $|-5-x| + |2-x| + |6-x| + |10-x|$; where x is an integer
0/17/23/19**

Ans) 19

2. units digit in expansion os 2 raised to 51 is:

2

4

6

8

Ans) 8

3. 2 men at same tym start walking towards each other from A n B 72 kms apart. sp of A is 4kmph. Sp of B is 2 kmph in 1st hr, 2.5 in 2nd, 3 in rd. n so on...when will they meet i in 7 hrs ii at 35 kms from A iii in 10 hrs iv midway in a 2 digit no unit's place is halved and tens place is doubled. diff bet the nos is 37. digit in unit's place is 2 more than tens place.

24

46

42

none

4. if $x-y + z = 19$, $y + z = 20$, $x-z=3$, find d value of $x+4y-5z$

22

38

17

none

5. Find approx value of $39.987/0.8102+1.987*18.02$

72

56

86
44

6. If the ratio of prod of 3 diff comp's A B & C is 4:7:5 and of overall prod last yr was 4lac tones and if each comp had an increase of 20% in prod level this yr what is the prod of Comp B this yr?

2.1L
22.1L
4.1L
none

7. $(8*76+19*?-60) / (?*7*12+3-52)=1 \frac{5}{2}/\frac{1}{3}$ In Aptitude paper there r 2 sections usually viz. Quant n Logical 25 qs in each section. to be solved in 60 mins. Apt is followed by a

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a)Lawyer b)Teacher c)Doctor d)Accountant

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+ K I L S

????????

S M O K E (6 ques)

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5) Complete the paragraph

Choosing correct sentence from option (4 Ques)

6) Paragraph reading (6 Qs)

IT WAS ONLINE TEST HAVING 2 SECTION & 50 QUES. 25 EACH OF APTITUDE & L.R.

APTITUDE QUESTIONS WERE O.K. TYPE QUES, MEANS ONE CAN EASILY ATTEMPT 20 OUT OF 25

THERE WERE QUES LIKE FIND X IF $15+2X+3Y/25+9X-8Y=7X-6Y+85/3X+2Y+76$

2. CALCULATE UNIT DIGIT OF 2^{51} ???????

3. PICK D ODD ONE OUT

4. 2 QUES 4M BOAT & STREAM PROB.

2-3 QUES 4M TRAIN PROB MEANS TIME SPEED & DISTANCE

ETC. WERE THERE U CAN DO IT EASILY

LR PORTION WAS BIT TOUGH & TIME CONSUMING

THERE WERE SITUATIONS GIVEN & ONLY 1 QUES. WAS THERE 4M EVERY SITUATION SO IT WAS TIME CNSUMING & CONFUSING BUT I'LL SAY U NEED 2 PRACTICE 4M BARRON THEN U CAN DO IT.

THERE WERE SCTIONALCUTOFF FOR EACH SECTION & A OVERALL CUTOFF(UPPER & LOWER CUT OFF)

I THINK THERE WAS LOWER CUT OFF OF 21 & UPPER CUT OFF OF 28

I GOT 27 WRIGHT AS I WAS TOLD IN MY HR INTERVIEW. AFTER WRITTEN TEST 58 OUT OF 205 WERE SHORT LISTED 4 GD

2ND WAS GD ROUND

IT WAS A EASY ONE TOPICS WERE GENERAL LIKE PRESENT STATUS OF INDIAN CRICKET TEAM , & SHOULD KISSING BE ALLOWED IN INDIAN CULTURE OPENELY(SHILPA SHETTY CASE) , LIKewise...

THERE WERE 2 PANNELS 4 TECHNICAL INTERVIEW I GOT THE BETTER ONE(ONE WHO WAS SELECTING MOST)

I WAS ASKES QUES.->

1 TELL ME SOMETHING ABT UR SELF.

2 HOW MANY LANGGUAGES U KNOW???

3 QUES 4M "C".

4 HE ASKED ME MY FAVOURATE SUBJECT I SAID "DATA COMMUNICATION"
HE ASKED ME SOME QUES 4M DATA COMM. & GAVE ME "HR FORM"

THERE WAS A LADY HR ONLY 2 TAKE HR INTERVIEW 28 STUDENTS WERE THERE
4 HR ROUND

IN HR INTERVIEW I WAS MOSTLY ASKED G.K. QUES LIK
WHAT IS D CURRENCY OF FRANCE(AS IT WAS FRANCE BASED CO.)
WHAT IS THE CURRENCY OF UK
HOW MANY CONTINENTS ARE THERE
WHO IS PRIME MINISTER OF UK???

Written Exam held on 20th September In Writtern Exam there are 50 Questions..

25 - Apptitude

25 - LR

For clearing the written exam you must do the previous year papers (R.S Aggarwal) An employee has to allocate offices to 6 staff members. The offices are no. 1-6. the offices are arranged in a row and they are separated from each other by dividers>hence voices, sounds and cigarette smoke flow easily from one office to another Miss R needs to use the telephone quite often throughout the day. Mr. M and Mr. B need adjacent offices as they need to consult each other often while working. Miss H is a senior employee and his to be allotted the office no. 5, having the biggest window. Mr. D requires silence in office next to his. Mr. T, Mr. M and Mr. D are all smokers. Miss H finds tobacco smoke allergic and consecutively the offices next to hers are occupied by non-smokers. Unless specifically stated all the employees maintain an atmosphere of silence during office hrs.

The ideal candidate to occupy office farthest from Mr. B will be

i. Miss H ii. Mr. M iii. Mr. T iv. Mr. D

The three employees who are smokers should be seated in the offices

i. 1 2 4 ii. 2 3 6 iii. 1 2 3 iv. 1 2 3

The ideal office for Mr. M would be

i. 2 ii. 6 iii. 1 iv. 3

In the event of what occurrence within a period of one month since the assignment of the offices would a request for a change in office be put forth by one or more employees?

- i. Mr. D quitting smoking
- ii. Mr. T taking over duties formally taken care of by Miss R
- iii. The installation of a water cooler in Miss H's office
- iv. Mr. B suffering from anemia

Direction for Qn

Elle is 3 times older than Zaheer. Zaheer is $\frac{1}{2}$ as old as Waheeda. Yogesh is elder than Zaheer. What is sufficient to estimate Elle's age?

- i. Zaheer is 10 yrs old
- ii. Yogesh and Waheeda are both older than Zaheer by the same no of yrs.
- iii. Both of the above
- iv. None of the above

Which one of the following statements can be inferred from the info above

- i. Yogesh is elder than Waheeda
- ii. Elle is older than Waheeda
- iii. Elle's age may be less than that of Waheeda
- iv. None of the above

Ten coins are distr. Among 4 people P, Q, R, S such that one of them gets a coin, another gets 2 coins, 3rd gets 3 coins, and 4th gets 4 coins. It is known that Q gets more coins than P, and S gets fewer coins than R

a. If the no. of coins distr. To Q is twice the no. distr. to P then which one. is necessarily true?

- i. R gets even no. of coins
- ii. R gets odd no. of coins
- iii. S gets even no. of coins
- iv. S gets odd no. of coins

b. If R gets at least two more coins than S which one of the following is necessarily true?

- i. Q gets at least 2 more coins than S
- ii. Q gets more coins than P
- iii. P gets more coins than S
- iv. P and Q together get at least five coins

QUANTITATIVE:

1. Find min value of fn: $| -5-x | + | 2-x | + | 6-x | + | 10-x |$; where x is an integer

0 17 23 19

2. units digit in expansion of 2 raised to 51 is:

2 4 6 8

3. 2 men at same time start walking towards each other from A and B 72 kms apart. sp of A is 4kmph. Sp of B is 2 kmph in 1st hr, 2.5 in 2nd, 3 in rd. and so on... when will they meet i in 7 hrs ii at 35 kms from A iii in 10 hrs iv midway

4. $(8*76+19*?-60) / (?*7*12+3-52)=1$

5 2 1 3

5. 45 grinders brought @ 2215/-. transport expense 2190/-. 2760/- on octroi. Find SP/piece to make profit of 20%

2585 2225 2670 3325

6. in a 2 digit no unit's place is halved and tens place is doubled. diff bet the nos is 37. digit in unit's place is 2 more than tens place.

24 46 42 none

7. if $x-y+z=19$, $y+z=20$, $x-z=3$, find d value of $x+4y-5z$

22 38 17 none

8. Find approx value of $39.987/0.8102+1.987*18.02$

72 56 86 44

9. If the ratio of prod of 3 diff comp's A B & C is 4:7:5 and of overall prod last yr was 4lac tones and if each comp had an increase of 20% in prod level this yr what is the prod of Comp B this yr?

2.1L 22.1L 4.1L none

10. If 70% of a no. is subtracted from itself it reduces to 81. what is two fifth of that no.?

108/54/210/none

11. If a certain sum of money at SI doubles itself in 5 yrs then what is d rate?

5% 20% 25% 14.8%

12. If radius of cylinder and sphere r same and vol of sphere and cylinder r same what is d ratio betn the radius and height of the cylinder

i. $R=H$

ii. $R=(3/4)H$

iii. $R=(4/3)H$

iv. $R=2/3H$

13. Which one of the foll fractions is arranged in ascending order

i. $9/11, 7/9, 11/13, 13/14$

ii $7/8, 9/11, 11/13, 13/14$

iii $9/11, 11/13, 7/8, 13/14$

iv none

14. A is 4 yrs old and B is thrice A>when A is 12 yrs, how old will B be?

16 20 24 28

15. Boat goes downstream from P to Q in 2hrs, upstream in 6hrs and if speed of stream was $\frac{1}{2}$ of boat in still water. Find dist PQ

6 4 10 none

16. Fresh Grapes contain 90% water by wt. Dried grapes contain 20% water by %age. What will b wt of dried grapes when we begin with 20 kg fresh grapes? 2kg 2.4kg 2.5kg
none

17. How many 5 digit no. can b formed wit digits 1, 2, 3,4,5,6 which r divisible by 4 and digits not repeated

144 168 192 none

18. Asish was given Rs. 158 in denominations of Rs 1 each. He distributes these in diff bags, such that ne sum of money of denomination betn 1 and 158 can be given in bags. The min no. of such bags reqd :

10 17 15 none

19. There is a rectangular Garden whose length and width are 60m X 20m. There is a walkway of uniform width around garden. Area of walkway is $516m^2$. Find width of walkway:

- 1 2 3 4

20. In a race from pt. X to pt Y and back, Jack averages 0 miles/hr to pt Y and 10 miles/hr back to pr X. Sandy averages 20 miles/hr in both directions. If Jack and Sandy start race at same tyme, who'll finish:

- i. 1st Jack ii. Sandy iii. they tie iv. Impossible to tell

21. A man engaged a servant on a condn that he'll pay Rs 90 and also give him a bag at the end of the yr. He served for 9 months and was given a turban and Rs 65. So the price of turban is i. Rs :

- 10 19 0 55

22. Three wheels make 36, 24, 60 rev/min. Each has a black mark on it. It is aligned at the start of the qn. When does it align again for the first tyme?

- 14 20 22 5sec

23. If $1 = \frac{3}{4}(1 + \frac{y}{x})$ then

- i. $x=3y$ ii. $x=y/3$ iii. $x=(2/3)y$ iv. none

24. The sum of six consecutive odd nos. is 888. What is the average of the nos.? i. 147 ii. 148 iii. 149 iv. 146

25. $1010/104 * 102 = 10?$

- i. 8 ii. 6 iii. 4 iv. none

ANALYTICAL:

Direction for Question 1-8

Ans A using I only Ans B using II only Ans C using both I and II Ans D not solvable

1. Raman and Gaurav Brought eggs from a vendor. How many eggs were bought by each of them

- i. Raman bought half as many as Gaurav
ii. The dealer had a stock of 500 eggs at the beginning of day

2. What is the age of Ramprakash?

- i. Ramprakash was born when his father was 26 yrs old
ii. Ramprakash's mothers age is 3yrs less than his father's

3. How much time is reqd for downloading the software?

- i. The Data transfer rate is 6 kbps
ii. The size of the software is 4.5 megabytes

4. Sanjay and Vijay started their journey from Mumbai to Pune. Who reached Pune first?

- i. Sanjay overtakes two times Vijay and Vijay overtakes Sanjay two times
ii. Sanjay started first

5. Is the GDP of country X higher than Country Y? i. GDP's of X and Y has been increasing at a compounded annual growth rate of 5% and 6% over the past 5 yrs ii. 5 yrs ago GDP of X was 1.2 times Y
6. A boat can ferry 1500 passengers across a river in 12 hrs. How many round trips does it make during the journey? i. The boat can carry 400 passengers at a time ii. During its journey, the boat takes 40 mins time each way and 20 mins waiting time at each end.
7. What are the values of m and n? i. n is an even integer, m is odd integer and m is greater than n. ii. The product of m and n is 30
8. How much is the weight of 20 mangoes and 30 oranges?
 i. 1 orange weighs twice that of 1 mango
 ii. 2 mangoes and 3 oranges weigh 2 kg

Direction for Question 9-12

Five teams participated in Pepsi Cup. Each team played against each other. The top teams played finals. A win fetched 2 pts and a tie 1 point

- 1) South Africa were in the finals
 - 2) India defeated SA but failed to reach the finals
 - 3) Australia lost only one match in the tournament
 - 4) The match between India and Sri Lanka was a tie
 - 5) The undefeated team in the league matches lost in the finals
 - 6) England was one of the best teams that did not qualify
9. Who were the finalists?
 i. SA & India
 ii. Aus & SL
 iii. SA & SL
 iv. none
10. Who won the finals?
 i. Aus
 ii. SL
 iii. SA
 iv. Can't be determined
11. How many matches did India Win?
 i. 0
 ii. 1
 iii. 2
 iv. can't be determined
12. What was the outcome of the India England Match
 i. India won
 ii. England won
 iii. It was a tie
 iv. Can't be determined

Direction for Qn 13-14

These qns are based on situations given below:

7 Uni crick players are to be honored at a special luncheon. The players will be seated on a dais along one side of a single rectangular table. A and G have to leave the luncheon early and must be seated at the extreme right end of table, which is closest to exit. B will receive Man of the Match and must be in the centre chair C and D who are bitter rivals for the position of Wicket keeper dislike one another and should be seated as far apart as possible E and F are best friends and want to seat together.

13. Which of the foll may not be seated at either end of the table?

- i. C ii. D iii. G iv. F

14. Which of the foll pairs may not be seated together?

- i. E & A ii. B & D iii. C & F iv. G & D

Direction for Qn 15-18

An employee has to allocate offices to 6 staff members. The offices are no. 1-6. the offices are arranged in a row and they are separated from each other by dividers>hence voices, sounds and cigarette smoke flow easily from one office to another Miss R needs to use the telephone quite often throughout the day. Mr. M and Mr. B need adjacent offices as they need to consult each other often while working.

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iv. Mr. B suffering from anemia

Direction for Qn 19-20

A robot moves on a graph sheet with x-y axes. The robot is moved by feeding it with a sequence of instructions. The different instructions that can be used in moving it, and their meanings are:
Instruction Meaning GOTO(x,y) move to pt with co-ord (x,y) no matter where u are currently
WALKX(P) move parallel to x-axis through a distance of p, in the +ve direction if p is +ve and

in -ve if p is -ve WALKY(P) move parallel to y-axis through a distance of p, in the +ve direction if p is +ve and in -ve if p is -ve

19. The robot reaches point (5,6) when a sequence of 3 instr. Is executed, the first of which is GOTO(x,y) , WALKY(2), WALKY(4). What are the values of x and y??

- i. 2,4 ii. 0,0 iii. 3,2 iv. 2,3

20. The robot is initially at (x,y), $x > 0$ and $y < 0$.

- i. 2 ii. 1 iii. $x + y$ iv. 0

Direction for Qn 21-23

Ten coins are distr. Among 4 people P, Q, R, S such that one of them gets a coin, another gets 2 coins, 3rd gets 3 coins, and 4th gets 4 coins. It is known that Q gets more coins than P, and S gets fewer coins than R

21. If the no. of coins distr. To Q is twice the no. distr. to P then which one of the foll. is necessarily true?

- i. R gets even no. of coins
ii. R gets odd no. of coins
iii. S gets even no. of coins
iv. S gets odd no. of coins

22. If R gets at least two more coins than S which one of the foll is necessarily true?

- i. Q gets at least 2 more coins than S
ii. Q gets more coins than P
iii. P gets more coins than S
iv. P and Q together get at least five coins

23. If Q gets fewer coins than R, then which one of the foll. is not necessarily true?

- i. P and Q together get at least 4 coins
ii. Q and S together get at least 4 coins
iii. R and S together get at least 5 coins
iv. P and R together get at least 5 coins

Direction for Qn 24-25

Elle is 3 times older than Zaheer. Zaheer is $\frac{1}{2}$ as old as Waheeda. Yogesh is elder than Zaheer.

24. What is sufficient to estimate Elle's age?

- i. Zaheer is 10 yrs old
ii. Yogesh and Waheeda are both older than Zaheer by the same no of yrs.
iii. Both of the above iv. None of the above

25. Which one of the foll. statements can be inferred from the info above

- i. Yogesh is elder than Waheeda
ii. Elle is older than Waheeda
iii. Elle's age may be less than that of Waheeda
iv. None of the above

Placement Paper

1. Find min value of fn:

$|-5-x| + |2-x| + |6-x| + |10-x|$; where x is an integer
0/17/23/19

2. units digit in expansion of 2 raised to 51 is:

2/4/6/8

3. 2 men at same time start walking towards each other from A and B 72 kms apart. sp of A is 4kmph. Sp of B is 2 kmph in 1st hr, 2.5 in 2nd, 3 in rd. and so on? when will they meet i in 7 hrs ii at 35 kms from A iii in 10 hrs iv midway

4. $(8*76+19*-60) / (?*7*12+3-52)=1$

5/2/1/3

5. 45 grinders brought @ 2215/-. transport expense 2190/-. 2760/- on octroi. Find SP/piece to make profit of 20%

2585/2225/2670/3325

6. in a 2 digit no unit's place is halved and tens place is doubled. diff bet the nos is 37. digit in unit's place is 2 more than tens place.

24/46/42/none

7. if $x-y+z=19$, $y+z=20$, $x-z=3$, find the value of $x+4y-5z$

22/38/17/none

8. Find approx value of $39.987/0.8102+1.987*18.02$

72/56/86/44

9. If the ratio of prod of 3 diff comp's A B & C is 4:7:5 and of overall prod last yr was 4lac tones and if each comp had an increase of 20% in prod level this yr what is the prod of Comp B this yr?

2.1L/22.1L/4.1L/none

10. If 70% of a no. is subtracted from itself it reduces to 81. what is two fifth of that no.?

108/54/210/none

11. If a certain sum of money at SI doubles itself in 5 yrs then what is the rate?

5%/20%/25%/14.8%

12. If radius of cylinder and sphere r same and vol of sphere and cylinder r same what is d ratio betn the radius and height of the cylinder

- i. $R = H$
- ii. $R = \frac{3}{4}H$
- iii. $R = \frac{4}{3}H$
- iv. $R = \frac{2}{3}H$

13. Which one of the foll fractions is arranged in ascending order

- i. $\frac{9}{11}, \frac{7}{9}, \frac{11}{13}, \frac{13}{14}$
- ii. $\frac{7}{8}, \frac{9}{11}, \frac{11}{13}, \frac{13}{14}$
- iii. $\frac{9}{11}, \frac{11}{13}, \frac{7}{8}, \frac{13}{14}$
- iv. none

14. A is 4 yrs old and B is thrice A>when A is 12 yrs, how old will B be?

16/20/24/28

15. Boat goes downstream from P to Q in 2hrs, upstream in 6hrs and if speed of stream was ? of boat in still water. Find dist PQ

6/4/10/none

16. Fresh Grapes contain 90% water by wt. Dried grapes contain 20% water by %age. What will b wt of dried grapes when we begin with 20 kg fresh grapes?

2kg / 2.4kg / 2.5kg / none

17. How many 5 digit no. can b formed wit digits 1, 2, 3,4,5,6 which r divisible by 4 and digits not repeated

144 / 168 / 192 / none

18. Asish was given Rs. 158 in denominations of Rs 1 each. He distributes these in diff bags, such that ne sum of money of denomination betn 1 and 158 can be given in bags. The min

no. of such bags reqd

10 / 17 / 15 / none

19. There is a rectangular Garden whose length and width are 60m X 20m. There is a walkway of uniform width around garden. Area of walkway is $516m^2$. Find width of walkway

1/2/3/4

20. In a race from pt. X to pt Y and back, Jack averages 0 miles/hr to pt Y and 10 miles/hr back to pr X.Sandy averages 20 miles/hr in both directions. If Jack and Sandy start race at same tym, who?ll finish 1st Jack/Sandy/they tie/Impossible to tell

21. A man engaged a servant on a condn that he?ll pay Rs 90 and also give him a bag at the end of the yr. He served for 9 months and was given a turban and Rs 65. So the price of turban is

i. Rs 10 / 19 / 0 / 55

22. Three wheels make 36, 24, 60 rev/min. Each has a black mark on it. It is aligned at the start of the qn. When does it align again for the first tym?

14/20/22/5 sec

23. If $1 = \frac{3}{4}(1 + \frac{y}{x})$ then

i. $x=3y$

ii. $x=y/3$

iii. $x=(2/3)y$

iv. none

24. The sum of six consecutive odd nos. is 888. What is the average of the nos.?

i. 147

ii. 148

iii. 149

iv. 146

25. $1010/104*102=10?$

i. 8

ii. 6

iii. 4

iv. none

Section B

Direction for Qn 1-8

Ans A using I only

Ans B using II only

Ans C using both I and II

Ans D not solvable

1. Raman and Gaurav Brought eggs from a vendor. How many eggs were bought by each of them

- i. Raman bought half as many as Gaurav
- ii. The dealer had a stock of 500 eggs at the beginning of day

2. What is the age of Ramprakash?

- i. Ramprakash was born when his father was 26 yrs old
- ii. Ramprakash's mother's age is 3 yrs less than his father's

3. How much time is reqd for downloading the software?

- i. The Data transfer rate is 6 kbps
- ii. The size of the software is 4.5 megabytes

4. Sanjay and Vijay started their journey from Mumbai to Pune. Who reached Pune first?

- i. Sanjay overtakes two times Vijay and Vijay overtakes Sanjay two times
- ii. Sanjay started first

5. Is the GDP of country X higher than Country Y?

- i. GDP's of X and Y has been increasing at a compounded annual growth rate of 5% and 6% over the past 5 yrs
- ii. 5 yrs ago GDP of X was 1.2 times Y

6. A boat can ferry 1500 passengers across a river in 12 hrs. How many round trips does it make during the journey?

- i. The boat can carry 400 passengers at a time
- ii. During its journey, the boat takes 40 mins time each way and 20 mins waiting time at each end.

7. What are the values of m and n?

- i. n is an even integer, m is odd integer and m is greater than n.
- ii. The product of m and n is 30

8. How much is the weight of 20 mangoes and 30 oranges?

- i. 1 orange weighs twice that of 1 mango
- ii. 2 mangoes and 3 oranges weigh 2 kg

Direction for Qn 9-12

Five teams participated in Pepsi Cup. Each team played against each other. The top teams played finals. A win fetched 2 pts and a tie 1 point

- 1) South Africa were in the finals**
- 2) India defeated SA but failed to reach the finals**
- 3) Australia lost only one match in the tournament**
- 4) The match between India and Sri Lanka was a tie**
- 5) The undefeated team in the league matches lost in the finals**
- 6) England was one of the best teams that did not qualify**

9. Who were the finalists?

- i. SA & India
- ii. Aus & SL
- iii. SA & SL
- iv. none

10. Who won the finals?

- i. Aus
- ii. SL
- iii. SA
- iv. Can?t be determined

11. How many matches did India Win?

- i. 0
- ii. 1
- iii. 2
- iv. can?t be determined

12. What was the outcome of the India England Match

- i. India won
- ii. England won
- iii. It was a tie
- iv. Can?t be determined

Direction for Qn 13-14

These qns are based on situations given below:

7 Uni crick players are to be honored at a special luncheon. The players will be seated on a dais along one side of a single rectangular table.

A and G have to leave the luncheon early and must be seated at the extreme right end of table, which is closest to exit.

B will receive Man of the Match and must be in the centre chair

C and D who are bitter rivals for the position of Wicket keeper dislike one another and should be seated as far apart as possible

E and F are best friends and want to seat together.

13. Which of the foll may not be seated at either end of the table?

- i. C
- ii. D
- iii. G
- iv. F

14. Which of the foll pairs may not be seated together?

- i. E & A
- ii. B & D
- iii. C & F
- iv. G & D

Direction for Qn 15-18

An employee has to allocate offices to 6 staff members. The offices are no. 1-6. the offices are arranged in a row and they are separated from each other by dividers>hence voices, sounds and cigarette smoke flow easily from one office to another

Miss R needs to use the telephone quite often throughout the day. Mr. M and Mr. B need adjacent offices as they need to consult each other often while working. Miss H is a senior employee and his to be allotted the office no. 5, having the biggest window.

Mr D requires silence in office next to his. Mr. T, Mr M and Mr. D are all smokers. Miss H finds tobacco smoke allergic and consecutively the offices next to hers are occupied by non-smokers. Unless specifically stated all the employees maintain an atmosphere of silence during office hrs.

15. The ideal candidate to occupy office farthest from Mr. B will be

- i. Miss H
- ii. Mr. M
- iii. Mr. T
- iv. Mr. D

16. The three employees who are smokers should be seated in the offices

- i. 1 2 4
- ii. 2 3 6
- iii. 1 2 3
- iv. 1 2 3

17. The ideal office for Mr. M would be

- i. 2
- ii. 6
- iii. 1
- iv. 3

18. In the event of what occurrence within a period of one month since the assignment of the offices would a request for a change in office be put forth by one or more employees?

- i. Mr D quitting smoking
- ii. Mr. T taking over duties formally taken care of by Miss R
- iii. The installation of a water cooler in Miss H's office
- iv. Mr. B suffering from anemia

Direction for Qn 19-20

A robot moves on a graph sheet with x-y axes. The robot is moved by feeding it with a sequence of instructions. The different instructions that can be used in moving it, and their meanings are:

Instruction Meaning

GOTO(x,y) move to pt with co-ord (x,y) no matter where u are currently

WALKX(P) move parallel to x-axis through a distance of p, in the +ve direction if p is +ve and in ?ve if p is ?ve

WALKY(P) move parallel to y-axis through a distance of p, in the +ve direction if p is +ve and in ?ve if p is ?ve

19. The robot reaches point (5,6) when a sequence of 3 instr. Is executed, the first of which is GOTO(x,y) , WALKY(2), WALKY(4). What are the values of x and y??

- i. 2,4
- ii. 0,0
- iii. 3,2
- iv. 2,3

20. The robot is initially at (x,y) , $x > 0$ and $y < 0$.

- i. 2
- ii. 1
- iii. $x + y$
- iv. 0

Direction for Qn 21-23

Ten coins are distr. Among 4 people P, Q, R, S such that one of them gets a coin, another gets 2 coins, 3rd gets 3 coins, and 4th gets 4 coins. It is known that Q gets more coins than P, and S gets fewer coins than R

21. If the no. of coins distr. To Q is twice the no. distr. to P then which one of the foll. is necessarily true?

- i. R gets even no. of coins
- ii. R gets odd no. of coins
- iii. S gets even no. of coins
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22. If R gets at least two more coins than S which one of the foll is necessarily true?

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- iii. P gets more coins than S
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- i. P and Q together get at least 4 coins
- ii. Q and S together get at least 4 coins
- iii. R and S together get at least 5 coins
- iv. P and R together get at least 5 coins

Direction for Qn 24-25

Elle is 3 times older than Zaheer. Zaheer is ? as old as Waheeda. Yogesh is elder than Zaheer.

24. What is sufficient to estimate Elle's age?

- i. Zaheer is 10 yrs old
- ii. Yogesh and Waheeda are both older than Zaheer by the same no of yrs.
- iii. Both of the above
- iv. None of the above

25. Which one of the foll. statements can be inferred from the info above

- i. Yogesh is elder than Waheeda
- ii. Elle is older than Waheeda
- iii. Elle's age may be less than that of Waheeda
- iv. None of the above

for GD they had asked to select ur own topic and give 5 min for that show ur participation there also that will help u to fatch some more marks

plz don't select any easy topic like 'dowry system?', 'dress codes in collg?' etc. because this gonna select only 1or 2 candidate from ur group so try to take some good topic so that max can get cleared the GD

- **Paper: Capgemini Placement Paper 25 July 2006 (Quantitative, Reasoning, Technical & HR)**
- It consists of 3 round. (1) Written (2) Technical Interview (3) HR Interview.
- **Quantitative Section:**

Q1. Find the nest term in series ?

25 16 9 4 1 0 ?

Ans. $(-1)^2 = 1$

Q2. If $(NM)^2 = RRM$ where N.M & R are distinct digits. Then possible values for R are

(a) 1 (b) 2 (c) 3 (d) none of these

Ans (b) -2

Q3. A man buys spirit at Rs. 60 per letter, adds water to it and then sells it at Rs. 75 per litter. What is the ratio of spirit to water if his profit in the feal is 37.5%?

(a) 9:1 (b) 10:1 (c) 11:1 (d) None of these.

Ans (b) 10.1

Q4. A certain quantity of petrol is found to be adulterated to the extent of 10%. What proportion of the adulterated petrol should be replaced with pure petrol to take the purity level to 98%?

(a) 80% (b) 32% (c) 66.67% (d) cannot be determined.

Ans (a) 80%

Q5. Two trains are traveling from point A to point B such that the speed of first train is 65 kmph and the speed of 2 train is 29 kmph. Where is the distance b/w A&B such that the slower train reached 5 hrs late compared to the faster.

Q6. A motorboat whose speed is 15 kmph in still water goes 30 kmph downstream and comes back in a total of 4hrs 30min the speed of the stream in kmph is (5kmph).

Logical Reasoning Section:

1. There is a family of six persons P,Q,R,S,T and U.They are Lawyer, Doctor, Teacher, Salesman, Engineer and Accountant. There are two married couples in the family. S, the salesman is married to the Lady Teacher. The Doctor is married to the Lawyer U, The Accountant is the son of Q and brother of T. R, the Lawyer is the daughter-in-law of P. T is the unmarried Engineer. P is the Grandmother of U. Which is the profession of P?

a)Lawyer b)Teacher c)Doctor d)Accountant

Q:2 My mother gave me money to buy stamps of price 2paise, 7 paise,15 paise, 10paise and 20 paise. I had to buy 5 each of three types and 6 each of the other 2 types . But on my way to the post office i forgot how many of stamps of each type were to be brought . My mother had given me rupees 3 . So i had no problem in finding out the exact amount of each one . Can you tell me which stamps were 5 in number , n whic were 6 in number

Ans . 5 stamps each of 2paise, 7 paise, 15 paise

Q:3 A man traveled a certain distance at the rate of 15 miles an hour and came back at the rate of 10 miles an hour. What is his average speed ?

Ans . 12 miles an hour

Q. Salad problem.. Four girls Robin, Mandy, Stacy, Erica of four families Miller, Jacob, Flure and Clark prepare four salads using the fruits Apples cherries bananas, grapes .Each girls uses 3 fruits in her salad. No body have the same combination.

- 1)Robin not a Miller girl uses apples.
- 2) Miller and Mandy uses apples and cherries.
- 3) Clark uses cherries and grapes but Flure uses only one of them.
- 4)Erica is not Clark nor Flure. htt

Then 4 questions asked.

1. Which is robins family:

a. Miller b. Jacob c.Flure d.Clark

2. Which fruit is not used by Mandy? aa

- a. Cherries
- b. Grapes
- c. Apples
- d. Bananas

3. Which is the combination by Erica?

- a. Apples, cherries, Bananas
- b. Apples, Cherries, Grapes
- c. Apples, Grapes, Bananas
- d. Cherries, Grapes, Bananas

4. Which is robin's fruit combination?

- a. Apples, cherries, Bananas
- b. Apples, Cherries, Grapes
- c. Apples, Grapes, Bananas
- d. Cherries, Grapes, Bananas

q5. Relation Related questions an blood relation.

q6. Conclusion of Sentences-Base question.

q7. Refer to the following data & Ans was the following questions.

S L I D E

(-) D E A N

3 6 5 1

each of 7 digits from 1,2,3,4,5,6 & 9 is represented by letter in the subtraction of problem above.

Q7. (a) Which letter is represented by the number “3”

Ans : Solution:-

3 6 5 1

(+) D E A N

S L I D E

It is given in the question that each of 7 digits 1,2,3,4,5, 6 & 9 is represented by a. Different letter in the above problem it is clear that $3+D+\text{carry}$ [If any] is equal to SL. But as it is clear that highest sum of there given no. can be $(9+6+1)=16$ so $S = 1$

Now it is also clear that D is either 6 or 9 but D cannot be 6, because in that case L, is equal to 0, which is not possible.

So $D = 9$

Now from that it is clear that L Letter is either 2 or 3 & $A=4$, It is also clear that E cannot be equal to 5,4,3,2,1

So $E=6$

Now we can help of above conclusions.

Ans. to question no.

(a) = L

(b) Which letter is represented by the no "5" ?

Ans (b) N

(c) Which no is presented by the letter "E" ?

Ans. (d) 6

(d) Which letter is presented by the no "6"

Ans. E

(e) Which letter is presented by the no "1"

Ans. S

You have to be quick in solving them, because thy are bit tricky & time consuming part.

Verbal Section

It is the easiest part, only when you are familiar with words. So start learning Barron's Wordlist.

Q. (1) Choose the word closest in meaning to the given word ?

(1) Dudgeon ?

(a) Resentment (b) Small fish (c) Under ground cell

(II) Eviscerate

(1) Disembowel (b) Bigfoot Into (c) extract (d) make less

Q. 2. There was one passage related to agriculture and development. In (b/w) the sentences No's in sequence was potted and given below was, which word most appropriately fits in it.

Q1. Find the next term in series ?

25 16 9 4 1 0 ?

Ans. $(-1)^2 = 1$

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Ans (b) N

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(1) Disembowel (b) Bigfoot Into (c) extract (d) make less

Q. 2. There was one passage related to agriculture and development. In (b/w) the sentences No's in sequence was potted and given below was, which word most appropriately fits in it.

Lastly

1. Sum of three even consecutive numbers is 48, which is the least number

- 1) 16
- 2) 18
- 3) 20
- 4) 14

Sol: Let the numbers be $2n$, $2n+2$ and $2n+4$

$$2n + (2n+2) + (2n+4) = 48$$

$$6n = 48 - 6 = 42, n = 7$$

Hence the numbers are $\rightarrow 14, 16$ and 18

The least number is 14 .

2. The L.C.M of two numbers is 2310 and their H.C.F is 30 . If one number is 210 the Other is
The other number

$$= \text{L.C.M} \times \text{H.C.F} / \text{given number}$$

$$= 2310 \times 30 / 210 = 330$$

15)

3. Five years ago the average age of a family of 3 members was 27 years. A child has Been born, dueto which the average age of the family is 25 years today. What is the Present age of the child?

Average age of the family of 3 members

$$5 \text{ years ago} = 27 \text{ years}$$

Sum of the ages of the 3 members now

$$= (27 + 5) \times 3 = 96 \text{ years}$$

Average age of the family of 4 members now

$$= 25 \text{ years}$$

Sum of the ages of the 4 numbers now

$$= 25 \times 4 = 100 \text{ years}$$

$$\text{Age of child} = 100 - 96 = 4 \text{ years}$$

4. A boy was asked to find the value of $3/8$ of a sum of money. Instead of multiplying The sum by $3/8$ he divided it by $3/8$ and then his answer exceeded by Rs. 55 . Find the Correct be x .

Sol: Let amount be x

$$8/3 \times x - 3/8 \times x = 55$$

$$\rightarrow 64x - 9x/24 = 55 \rightarrow 55x/24 = 55$$

$$\rightarrow x = 24 \times 55 / 55 = 24$$

$$\therefore 3/8 \text{ of } x = 3/8 \times 24 = \text{Rs.}9$$

5. In a boat 25 persons were sitting. Their average weight increased one kilogram when One man goes and a new man comes in. The weight of the new man is 70 kgs. Find the Weight of the man who is going.

Sol: Weight increased per person is 1 kg.

Total increase in weight = 25 kgs

Weight of new man is 70 kgs,

(Which means his weight is 25 kgs heavier)

The weight of the old man was $70 - 25 = 45$ kgs

6. M men agree to purchase a gift for Rs. D . If three men drop out how much more
Will each have to contribute towards the purchase of the gift

- a) $D/(M-3)$
- b) $MD/3$
- c) $M/(D-3)$
- d) $3D/(M^2-3M)$

Ans. D

7. In a class composed of x girls and y boys what part of the class is composed of girls

- a) $y/(x + y)$
- b) x/xy
- c) $x/(x + y)$
- d) y/xy

Ans.C

8. I drove 60 km at 30 kmph and then an additional 60 km at 50 kmph. Compute my average speed over my 120 km.

- (a) 40
- (b) $37 \frac{1}{2}$
- (c) $25 \frac{1}{2}$
- (d) 50

Ans.B

9. If the wheel of a bicycle makes 560 revolutions in travelling 1.1 km, what is its radius?

- (1) 31.25 cm
- (2) 37.75 cm
- (3) 35.15 cm
- (4) 11.25 cm

Correct Answer - (1)

10. A trader gets a profit of 25% on an article. If he buys the article at 10% lesser price and sells it for Rs. 2 less, he still gets 25% profit. Find the actual CP of the article.

Soln: 25% gain \Rightarrow $SP = 1.25CP$1.

Now, CP is 10% less $\Rightarrow 0.9CP$ and SP is Rs. 2 less $\Rightarrow (SP-2)$.

Still, profit is 25% $\Rightarrow (SP-2)=1.25(0.9CP)$, where $SP = 1.25CP$ (From 1)

ø CP = Rs. 16.

11. Which word does NOT belong with the others?

- a. cornea
- b. retina
- c. pupil
- d. vision**

Q.) For Q12. and Q13. find the word that names a *necessary* part of the underlined word.

12. monopoly

- a. corrupt
- b. exclusive**
- c. rich
- d. gigantic

13. facsimile
a. picture
b. image
c. mimeograph
d. copier

14. OIL PAINTING : CANVAS ::
A. etching : acid
B. violin : bow
C. fresco : plaster
D. building : architecture
E. watercolor : brush

15. CHECKERS : CHESS ::
A. tennis : soccer
B. field hockey : ice hockey
C. basketball : gymnastics
D. hearts : bridge
E. square : diamond

Aptitude Questions

Solve the following and check with the answers given at the end.

1. It was calculated that 75 men could complete a piece of work in 20 days. When work was scheduled to commence, it was found necessary to send 25 men to another project. How much longer will it take to complete the work?
2. A student divided a number by $\frac{2}{3}$ when he required to multiply by $\frac{3}{2}$. Calculate the percentage of error in his result.
3. A dishonest shopkeeper professes to sell pulses at the cost price, but he uses a false weight of 950gm. for a kg. His gain is ...%.
4. A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour?
5. A man was engaged on a job for 30 days on the condition that he would get a wage of Rs. 10 for the day he works, but he have to pay a fine of Rs. 2 for each day of his absence. If he gets Rs. 216 at the end, he was absent for work for ... days.
6. A contractor agreeing to finish a work in 150 days, employed 75 men each working 8 hours daily. After 90 days, only $\frac{2}{7}$ of the work was completed. Increasing the number of men by _____ each working now for 10 hours daily, the work can be completed in time.
7. what is a percent of b divided by b percent of a?
(a) a (b) b (c) 1 (d) 10 (d) 100
8. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs. _____ for the horse and Rs. _____ for the cart.
9. A tennis marker is trying to put together a team of four players for a tennis tournament out of seven available. males - a, b and c; females – m, n, o and p. All players are of equal ability and there must be at least two males in the

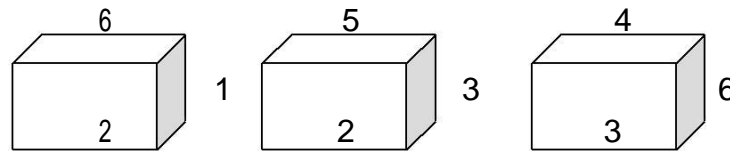
team. For a team of four, all players must be able to play with each other under the following restrictions:

- b should not play with m,
- c should not play with p, and
- a should not play with o.

Which of the following statements must be false?

1. b and p cannot be selected together
2. c and o cannot be selected together
3. c and n cannot be selected together.

10-12. The following figure depicts three views of a cube. Based on this, answer questions 10-12.



10. The number on the face opposite to the face carrying 1 is _____ .
11. The number on the faces adjacent to the face marked 5 are _____ .
12. Which of the following pairs does not correctly give the numbers on the opposite faces.
(1) 6,5 (2) 4,1 (3) 1,3 (4) 4,2
13. Five farmers have 7, 9, 11, 13 & 14 apple trees, respectively in their orchards. Last year, each of them discovered that every tree in their own orchard bore exactly the same number of apples. Further, if the third farmer gives one apple to the first, and the fifth gives three to each of the second and the fourth, they would all have exactly the same number of apples. What were the yields per tree in the orchards of the third and fourth farmers?
14. Five boys were climbing a hill. J was following H. R was just ahead of G. K was between G & H. They were climbing up in a column. Who was the second?
- 15-18 John is undecided which of the four novels to buy. He is considering a spy thriller, a Murder mystery, a Gothic romance and a science fiction novel. The books are written by Rothko, Gorky, Burchfield and Hopper, not necessary in that order, and published by Heron, Piegon, Blueja and sparrow, not necessary in that order.
 - 1 (1) The book by Rothko is published by Sparrow.
 - 2 (2) The Spy thriller is published by Heron.

(3) The science fiction novel is by Burchfield and is not published by Blueja. 3 (4)The Gothic romance is by Hopper.

4

15. Pigeon publishes _____.
16. The novel by Gorky _____.
17. John purchases books by the authors whose names come first and third in alphabetical order. He does not buy the books _____.
18. On the basis of the first paragraph and statement (2), (3) and (4) only, it is possible to deduce that
1. Rothko wrote the murder mystery or the spy thriller
 2. Sparrow published the murder mystery or the spy thriller
 3. The book by Burchfield is published by Sparrow.
19. If a light flashes every 6 seconds, how many times will it flash in $\frac{3}{4}$ of an hour?
20. If point P is on line segment AB, then which of the following is always true?
(1) $AP = PB$ (2) $AP > PB$ (3) $PB > AP$ (4) $AB > AP$ (5) $AB > AP + PB$
21. All men are vertebrates. Some mammals are vertebrates. Which of the following conclusions drawn from the above statement is correct.
All men are mammals
All mammals are men
Some vertebrates are mammals. None
22. Which of the following statements drawn from the given statements are correct?
Given:
All watches sold in that shop are of high standard. Some of the HMT watches are sold in that shop.
a) All watches of high standard were manufactured by HMT. b) Some of the HMT watches are of high standard.
c) None of the HMT watches is of high standard.
d) Some of the HMT watches of high standard are sold in that shop.
- 23-27.
1. Ashland is north of East Liverpool and west of Coshocton.
 2. Bowling green is north of Ashland and west of Fredericktown.
 3. Dover is south and east of Ashland.
 4. East Liverpool is north of Fredericktown and east of Dover.
 5. Fredericktown is north of Dover and west of Ashland.

-
6. Coshocton is south of Fredericktown and west of Dover.
23. Which of the towns mentioned is furthest of the north – west
(a) Ashland (b) Bowling green (c) Coshocton
(d) East Liverpool (e) Fredericktown
24. Which of the following must be both north and east of Fredericktown?
(a) Ashland (b) Coshocton (c) East Liverpool
I a only II b only III c only IV a & b V a & c
25. Which of the following towns must be situated both south and west of at least one other town?
A. Ashland only
B. Ashland and Fredericktown
C. Dover and Fredericktown
D. Dover, Coshocton and Fredericktown
E. Coshocton, Dover and East Liverpool.
26. Which of the following statements, if true, would make the information in the numbered statements more specific?
(a) Coshocton is north of Dover.
(b) East Liverpool is north of Dover
(c) Ashland is east of Bowling green.
(d) Coshocton is east of Fredericktown
(e) Bowling green is north of Fredericktown
27. Which of the numbered statements gives information that can be deduced from one or more of the other statements?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 6
28. Eight friends Harsha, Fakis, Balaji, Eswar, Dhinesh, Chandra, Geetha, and Ahmed are sitting in a circle facing the center. Balaji is sitting between Geetha and Dhinesh. Harsha is third to the left of Balaji and second to the right of Ahmed. Chandra is sitting between Ahmed and Geetha and Balaji and Eshwar are not sitting opposite to each other. Who is third to the left of Dhinesh?
29. If every alternative letter starting from B of the English alphabet is written in small letter, rest all are written in capital letters, how the month “ September” be written.
(1) SeptEMbEr (2) SEpTeMBEr (3) SeptemberR
(4) SepteMber (5) None of the above.
30. The length of the side of a square is represented by $x+2$. The length of the side of an equilateral triangle is $2x$. If the square and the equilateral triangle have equal perimeter, then the value of x is _____.

-
31. It takes Mr. Karthik y hours to complete typing a manuscript. After 2 hours, he was called away. What fractional part of the assignment was left incomplete?
32. Which of the following is larger than $\frac{3}{5}$?
 (1) $\frac{1}{2}$ (2) $\frac{39}{50}$ (3) $\frac{7}{25}$ (4) $\frac{3}{10}$ (5) $\frac{59}{100}$
33. The number that does not have a reciprocal is _____.
34. There are 3 persons Sudhir, Arvind, and Gauri. Sudhir lent cars to Arvind and Gauri as many as they had already. After some time Arvind gave as many cars to Sudhir and Gauri as many as they have. After sometime Gauri did the same thing. At the end of this transaction each one of them had 24. Find the cars each originally had.
35. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs. _____ for the horse and Rs. _____ for the cart.

Answers:

1. **Answer:**

30 days.

Explanation:

Before:

$$\text{One day work} = \frac{1}{20}$$

$$\text{One man's one day work} = \frac{1}{(20 * 75)}$$

Now:

$$\text{No. Of workers} = 50$$

$$\text{One day work} = 50 * \frac{1}{(20 * 75)}$$

$$\text{The total no. of days required to complete the work} = \frac{75 * 20}{50} =$$

30

2. **Answer:**

0 %

Explanation:

$$\text{Since } 3x / 2 = x / (2 / 3)$$

3. **Answer:**

5.3 %

Explanation:

He sells 950 grams of pulses and gains 50 grams.

$$\text{If he sells 100 grams of pulses then he will gain } (50 / 950) * 100 =$$

5.26

4. **Answer:**

250 lines of codes

5. **Answer:**
7 days

Explanation:

The equation portraying the given problem is:
 $10 * x - 2 * (30 - x) = 216$ where x is the number of working days. Solving this we get $x = 23$
Number of days he was absent was 7 (30-23) days.

6. **Answer:**
150 men.

Explanation:

One day's work = $2 / (7 * 90)$
One hour's work = $2 / (7 * 90 * 8)$
One man's work = $2 / (7 * 90 * 8 * 75)$

The remaining work (5/7) has to be completed within 60 days, because the total number of days allotted for the project is 150 days.

So we get the equation

$(2 * 10 * x * 60) / (7 * 90 * 8 * 75) = 5/7$ where x is the number of men working after the 90th day.

We get $x = 225$

Since we have 75 men already, it is enough to add only 150 men.

7. **Answer:**
(c) 1

Explanation:

a percent of b : $(a/100) * b$
b percent of a : $(b/100) * a$
a percent of b divided by b percent of a : $((a / 100) * b) / (b/100) * a$)
= 1

8. **Answer:**

Cost price of horse = Rs. 400 & the cost price of cart = 200.

Explanation:-

Let x be the cost price of the horse and y be the cost price of the cart. In the first sale there is no loss or profit. (i.e.) The loss obtained is equal to the gain.

$$\begin{aligned} \text{Therefore } (10/100) * x &= (20/100) * y \\ X &= 2 * y \text{ ----- (1)} \end{aligned}$$

In the second sale, he lost Rs. 10. (i.e.) The loss is greater than the profit by Rs. 10.

$$\text{Therefore } (5 / 100) * x = (5 / 100) * y + 10 \text{ -----(2)}$$

Substituting (1) in (2) we get

$$(10 / 100) * y = (5 / 100) * y + 10$$

$$(5 / 100) * y = 10$$

$$\mathbf{y = 200}$$

$$\text{From (1) } 2 * 200 = \mathbf{x = 400}$$

9. **Answer:**

3.

Explanation:

Since inclusion of any male player will reject a female from the team. Since there should be four member in the team and only three males are available, the girl, n should included in the team always irrespective of others selection.

10. **Answer:**

5

11. **Answer:**

1,2,3 & 4

12. **Answer:**

B

13. **Answer:**

11 & 9 apples per tree.

Explanation:

Let a, b, c, d & e be the total number of apples bored per year in A, B, C, D & E 's orchard. Given that $a + 1 = b + 3 = c - 1 = d + 3 = e - 6$

But the question is to find the number of apples bored per tree in C and D 's orchard. If is enough to consider $c - 1 = d + 3$.

Since the number of trees in C's orchard is 11 and that of D's orchard is 13. Let x and y be the number of apples bored per tree in C & d 's orchard respectively.

$$\text{Therefore } 11x - 1 = 13y + 3$$

By trial and error method, we get the value for x and y as 11 and 9

14. **Answer:**

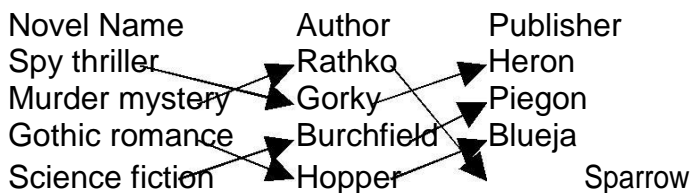
G.

Explanation:

The order in which they are climbing is R - G - K - H - J

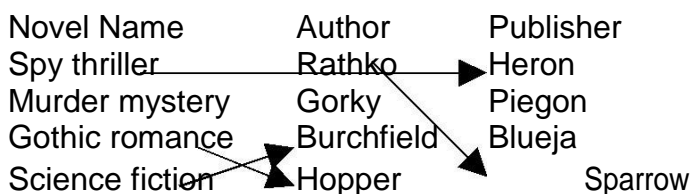
15 - 18

Answer:



Explanation:

Given



Since Blueja doesn't publish the novel by Burchfield and Heron publishes the novel spy thriller, Piegon publishes the novel by Burchfield.

Since Hopper writes Gothic romance and Heron publishes the novel spy thriller, Blueja publishes the novel by Hopper.

Since Heron publishes the novel spy thriller and Heron publishes the novel by Gorky, Gorky writes Spy thriller and Rathko writes Murder mystery.

19. **Answer:**

451 times.

Explanation:

There are 60 minutes in an hour.

In $\frac{3}{4}$ of an hour there are $(60 * \frac{3}{4})$ minutes = 45

minutes. In $\frac{3}{4}$ of an hour there are $(60 * 45)$ seconds

= 2700 seconds. Light flashed for every 6 seconds.

In 2700 seconds $2700/6 = 450$ times.

The count start after the first flash, the light will flashes 451 times in $\frac{3}{4}$ of an hour.

20. **Answer:**

(4)

Explanation:

P

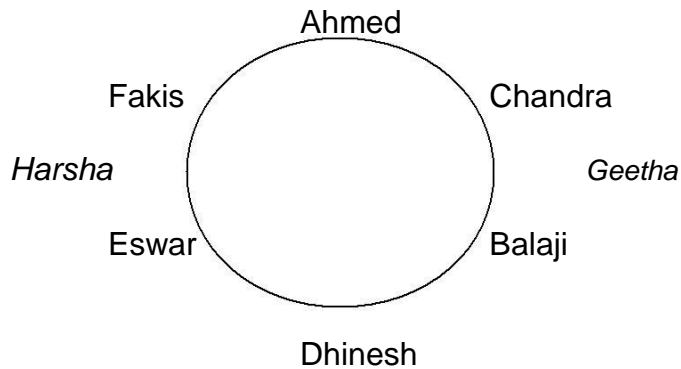
A B Since p is a point on the line segment AB, $AB > AP$

21. **Answer:** (c)

22. **Answer:** (b) & (d).

23 - 27. **Answer:**

28. **Answer:** Fakis
Explanation:



29. **Answer:**
(5).

Explanation:

Since every alternative letter starting from B of the English alphabet is written in small letter, the letters written in small letter are b, d, f...

In the first two answers the letter E is written in both small & capital letters, so they are not the correct answers. But in third and fourth answers the letter is written in small letter instead capital letter, so they are not the answers.

30. **Answer:**
 $x = 4$

Explanation:

Since the side of the square is $x + 2$, its perimeter = $4(x + 2) = 4x + 8$ Since the side of the equilateral triangle is $2x$, its perimeter = $3 * 2x = 6x$ Also, the perimeters of both are equal.

(i.e.) $4x + 8 = 6x$

(i.e.) $2x = 8 \rightarrow x = 4.$

31. **Answer:**
 $5(y - 2) / y.$

Explanation:

To type a manuscript karthik took y hours.

Therefore his speed in typing = $1/y.$

He was called away after 2 hours of typing.

Therefore the work completed = $1/y * 2.$

Therefore the remaining work to be completed = 1

$- 2/y.$ (i.e.) work to be completed = $(y-2)/y$

32. **Answer:**
(2)

33. **Answer:**

1

Explanation:

One is the only number exists without reciprocal because the reciprocal of one is one itself.

34. **Answer:**

Sudhir had 39 cars, Arvind had 21 cars and Gauri had 12 cars.

Explanation:

	Sudhir	Arvind	Gauri
Finally	24	24	24
Before Gauri's transaction	12	12	48
Before Arvind's transaction	6	42	24
Before Sudhir's transaction	39	21	12

35. **Answer:**

Cost price of horse: Rs. 400 &

Cost price of cart: Rs. 200

Explanation:

Let x be the cost of horse & y be the cost of the cart.

10 % of loss in selling horse = 20 % of gain in selling the cart
Therefore $(10 / 100) * x = (20 * 100) * y$

$$\rightarrow x = 2y \text{ -----(1)}$$

5 % of loss in selling the horse is 10 more than the 5 % gain in selling the cart.

$$\text{Therefore } (5 / 100) * x - 10 = (5 / 100) * y$$

$$\rightarrow 5x - 1000 = 5y$$

Substituting (1)

$$10y - 1000 = 5y$$

$$5y = 1000$$

$$y = 200$$

$$x = 400 \quad \text{from (1)}$$

Exercise 2.1

For the following, find the next term in the series

1. 6, 24, 60, 120, 210

- a) 336 b) 366 c) 330 d) 660

Answer : a) 336

Explanation : The series is 1.2.3, 2.3.4, 3.4.5, 4.5.6, 5.6.7, ('.' means product)

2. 1, 5, 13, 25

Answer : 41

Explanation : The series is of the form $0^2+1^2, 1^2+2^2, \dots$

3. 0, 5, 8, 17

Answer : 24

Explanation : $1^2-1, 2^2+1, 3^2-1, 4^2+1, 5^2-1$

4. 1, 8, 9, 64, 25 (Hint : Every successive terms are related)

Answer : 216

Explanation : $1^2, 2^3, 3^2, 4^3, 5^2,$

6^3 5. 8,24,12,36,18,54

Answer : 27

6. 71,76,69,74,67,72

Answer : 67

7. 5,9,16,29,54

Answer : 103

Explanation : $5*2-1=9; 9*2-2=16; 16*2-3=29; 29*2-4=54; 54*2-5=103$

8. 1,2,4,10,16,40,64 (Successive terms are related)

Answer : 200

Explanation : The series is powers of 2 ($2^0, 2^1, \dots$).

All digits are less than 8. Every second number is in octal number system. 128 should follow 64. $128 \text{ base } 10 = 200 \text{ base } 8$.

Exercise 2.2

Find the odd man out.

1. 3,5,7,12,13,17,19

Answer : 12

Explanation : All but 12 are odd numbers

2. 2,5,10,17,26,37,50,64

Answer : 64

Explanation : $2+3=5; 5+5=10; 10+7=17; 17+9=26; 26+11=37; 37+13=50;$
 $50+15=65;$

3. 105,85,60,30,0,-45,-90

Answer : 0

Explanation : $105-20=85$; $85-25=60$; $60-30=30$; $30-35=-5$; $-5-40=-45$; $-45-45=-90$;

Exercise 3

Solve the following.

1. What is the number of zeros at the end of the product of the numbers from 1 to 100?

Answer : 127

2. A fast typist can type some matter in 2 hours and a slow typist can type the same in 3 hours. If both type combinely, in how much time will they finish?

Answer : 1 hr 12 min

Explanation : The fast typist's work done in 1 hr = $1/2$

The slow typist's work done in 1 hr = $1/3$

If they work combinely, work done in 1 hr = $1/2+1/3 = 5/6$

So, the work will be completed in $6/5$ hours. i.e., $1+1/5$ hours = 1hr 12 min

3. Gavaskar's average in his first 50 innings was 50. After the 51st innings, his average was 51. How many runs did he score in his 51st innings. (supposing that he lost his wicket in his 51st innings)

Answer : 101

Explanation : Total score after 50 innings = $50*50 = 2500$

Total score after 51 innings = $51*51 = 2601$

So, runs made in the 51st innings = $2601-2500 = 101$

If he had not lost his wicket in his 51st innings, he would have scored an unbeaten 50 in his 51st innings.

4. Out of 80 coins, one is counterfeit. What is the minimum number of weighings needed to find out the counterfeit coin?

Answer : 4

5. What can you conclude from the statement : All green are blue, all blue are red. ?

- (i) some blue are green
 - (ii) some red are green
 - (iii) some green are not red
 - (iv) all red are blue
- (a) i or ii but not both
 - (b) i & ii only
 - (c) iii or iv but not both
 - (d) iii & iv

Answer : (b)

6. A rectangular plate with length 8 inches, breadth 11 inches and thickness 2 inches is available. What is the length of the circular rod with diameter 8 inches and equal to the volume of the rectangular plate?

Answer : 3.5 inches

Explanation : Volume of the circular rod (cylinder) = Volume of the rectangular plate

$$\begin{aligned} (22/7) * 4 * 4 * h &= \\ 8 * 11 * 2 h &= 7/2 = 3.5 \end{aligned}$$

7. What is the sum of all numbers between 100 and 1000 which are divisible by 14 ?

Answer : 35392

Explanation : The number closest to 100 which is greater than 100 and divisible by 14 is 112, which is the first term of the series which has to be summed.

The number closest to 1000 which is less than 1000 and divisible by 14 is 994, which is the last term of the series.

$$112 + 126 + \dots + 994 = 14(8+9+ \dots + 71) = 35392$$

8. If $s(a)$ denotes square root of a , find the value of $s(12+s(12+s(12+\dots)$ upto infinity.

Answer : 4

Explanation : Let $x = s(12+s(12+s(12+\dots$

We can write $x = s(12+x)$. i.e., $x^2 = 12 + x$. Solving this quadratic equation, we get $x = -3$ or $x=4$. Sum cannot be -ve and hence sum = 4.

9. A cylindrical container has a radius of eight inches with a height of three inches. Compute how many inches should be added to either the radius or height to give the same increase in volume?

Answer : 16/3 inches

Explanation : Let x be the amount of increase. The volume will increase by the same amount if the radius increased or the height is increased.

So, the effect on increasing height is equal to the effect on increasing the radius.

$$\text{i.e., } (22/7) * 8 * 8 * (3+x) = (22/7) * (8+x) * (8+x) * 3$$

Solving the quadratic equation we get the $x = 0$ or $16/3$. The possible increase would be by $16/3$ inches.

10. With just six weights and a balance scale, you can weigh any unit number of kgs from 1 to 364. What could be the six weights?

Answer : 1, 3, 9, 27, 81, 243 (All powers of 3)

11. Diophantus passed one sixth of his life in childhood, one twelfth in youth, and one seventh more as a bachelor; five years after his marriage a son was born who died four years before his father at half his final age. How old is Diophantus?

Answer : 84 years

Explanation : $x/6 + x/12 + x/7 + 5 + x/2 + 4 = x$

12 . If time at this moment is 9 P.M., what will be the time 23999999992 hours later?

Answer : 1 P.M.

Explanation : 24 billion hours later, it would be 9 P.M. and 8 hours before that it would be 1 P.M.

13. How big will an angle of one and a half degree look through a glass that magnifies things three times?

Answer : 1 1/2 degrees

Explanation : The magnifying glass cannot increase the magnitude of an angle.

14. Divide 45 into four parts such that when 2 is added to the first part, 2 is subtracted from the second part, 2 is multiplied by the third part and the fourth part is divided by two, all result in the same number.

Answer: 8, 12, 5, 20

Explanation: $a + b + c + d = 45$; $a + 2 = b - 2 = 2c = d/2$; $a = b - 4$; $c = (b - 2)/2$; $d = 2(b - 2)$; $b - 4 + b + (b - 2)/2 + 2(b - 2) = 45$;

15. I drove 60 km at 30 kmph and then an additional 60 km at 50 kmph. Compute my average speed over my 120 km.

Answer : 37 1/2

Explanation : Time reqd for the first 60 km = 120 min.; Time reqd for the second 60 km = 72 min.; Total time reqd = 192 min

Avg speed = $(60 \times 120) / 192 = 37 \frac{1}{2}$

Questions 16 and 17 are based on the following :

Five executives of European Corporation hold a Conference in

Rome Mr. A converses in Spanish & Italian

Mr. B, a Spaniard, knows English also

Mr. C knows English and belongs to Italy

Mr. D converses in French and Spanish

Mr. E, a native of Italy knows French

16. Which of the following can act as interpreter if Mr. C & Mr. D wish to converse a) only Mr. A b) Only Mr. B c) Mr. A & Mr. B d) Any of the other three

Answer : d) Any of the other three.

Explanation : From the data given, we can infer the following. A knows Spanish, Italian
B knows Spanish, English
C knows Italian, English D
knows Spanish, French E
knows Italian, French

To act as an interpreter between C and D, a person has to know one of the combinations Italian&Spanish, Italian&French, English&Spanish, English&French

A, B, and E know atleast one of the combinations.

17. If a 6th executive is brought in, to be understood by maximum number of original five he should be fluent in
a) English & French b) Italian & Spanish c) English & French d) French & Italian

Answer : b) Italian & Spanish

Explanation : No of executives who know

i) English is 2

ii) Spanish is 3

iii) Italian is 3

iv) French is 2

Italian & Spanish are spoken by the maximum no of executives. So, if the 6th executive is fluent in Italian & Spanish, he can communicate with all the original five because everybody knows either Spanish or Italian.

18. What is the sum of the first 25 natural odd numbers?

Answer : 625

Explanation : The sum of the first n natural odd nos is square(n).

$$1+3 = 4 = \text{square}(2) \quad 1+3+5 = 9 = \text{square}(3)$$

19. The sum of any seven consecutive numbers is divisible by

a) 2 b) 7 c) 3 d) 11

Exercise 3

Try the following.

1. There are seventy clerks working in a company, of which 30 are females. Also, 30 clerks are married; 24 clerks are above 25 years of age; 19 married clerks are above 25 years, of which 7 are males; 12 males are above 25 years of age; and 15 males are married. How many bachelor girls are there and how many of these are above 25?
2. A man sailed off from the North Pole. After covering 2,000 miles in one direction he turned West, sailed 2,000 miles, turned North and sailed ahead another 2,000 miles till he met his friend. How far was he from the North Pole and in what direction?
3. Here is a series of comments on the ages of three persons J, R, S by themselves.
S : The difference between R's age and mine is three years. J : R is the youngest.
R : Either I am 24 years old or J 25 or S 26. J : All are above 24 years of age.
S : I am the eldest if and only if R is not the youngest. R : S is elder to me.
J : I am the eldest.

R : S is not 27 years old.

S : The sum of my age and J's is two more than twice R's age.

One of the three had been telling a lie throughout whereas others had spoken the truth. Determine the ages of S,J,R.

4. In a group of five people, what is the probability of finding two persons with the same month of birth?
5. A father and his son go out for a 'walk-and-run' every morning around a track formed by an equilateral triangle. The father's walking speed is 2 mph and his running speed is 5 mph. The son's walking and running speeds are twice that of his father. Both start together from one apex of the triangle, the son going clockwise and the father anti-clockwise. Initially the father runs and the son walks for a certain period of time. Thereafter, as soon as the father starts walking, the son starts running. Both complete the course in 45 minutes. For how long does the father run? Where do the two cross each other?
6. The Director of Medical Services was on his annual visit to the ENT Hospital. While going through the out patients' records he came across the following data for a particular day : " Ear consultations 45; Nose 50; Throat 70; Ear and Nose 30; Nose and Throat 20; Ear and Throat 30; Ear, Nose and Throat 10; Total patients 100." Then he came to the conclusion that the records were bogus. Was he right?
7. Amongst Ram, Sham and Gobind are a doctor, a lawyer and a police officer. They are married to Radha, Gita and Sita (not in order). Each of the wives have a profession. Gobind's wife is an artist. Ram is not married to Gita. The lawyer's wife is a teacher. Radha is married to the police officer. Sita is an expert cook. Who's who?
8. What should come next?
1, 2, 4, 10, 16, 40, 64,

Questions 9-12 are based on the following :

Three adults – Roberto, Sarah and Vicky – will be traveling in a van with five children – Freddy, Hillary, Jonathan, Lupe, and Marta. The van has a driver's seat and one passenger seat in the front, and two benches behind the front seats, one bench behind the other. Each bench has room for exactly three people. Everyone must sit in a seat or on a bench, and seating is subject to the following restrictions: An adult must sit on each bench.

Either Roberto or Sarah must sit in the driver's

seat. Jonathan must sit immediately beside Marta.

9. Of the following, who can sit in the front passenger seat ?
(a) Jonathan (b) Lupe (c) Roberto (d) Sarah (e) Vicky

-
10. Which of the following groups of three can sit together on a bench?
(a) Freddy, Jonathan and Marta (b) Freddy, Jonathan and Vicky
(c) Freddy, Sarah and Vicky (d) Hillary, Lupe and Sarah
(e) Lupe, Marta and Roberto
11. If Freddy sits immediately beside Vicky, which of the following cannot be true ?
a. Jonathan sits immediately beside Sarah
b. Lupe sits immediately beside Vicky
c. Hillary sits in the front passenger seat
d. Freddy sits on the same bench as Hillary
e. Hillary sits on the same bench as Roberto
12. If Sarah sits on a bench that is behind where Jonathan is sitting, which of the following must be true ?
a. Hillary sits in a seat or on a bench that is in front of where Marta is sitting
b. Lupe sits in a seat or on a bench that is in front of where Freddy is sitting
c. Freddy sits on the same bench as Hillary
d. Lupe sits on the same bench as Sarah
e. Marta sits on the same bench as Vicky
13. Make six squares of the same size using twelve match-sticks. (Hint : You will need an adhesive to arrange the required figure)
14. A farmer has two rectangular fields. The larger field has twice the length and 4 times the width of the smaller field. If the smaller field has area K , then the area of the larger field is greater than the area of the smaller field by what amount?
(a) $6K$ (b) $8K$ (c) $12K$ (d) $7K$
15. Nine equal circles are enclosed in a square whose area is 36sq units . Find the area of each circle.
16. There are 9 cards. Arrange them in a 3×3 matrix. Cards are of 4 colors. They are red, yellow, blue, green. Conditions for arrangement: one red card must be in first row or second row. 2 green cards should be in 3rd column. Yellow cards must be in the 3 corners only. Two blue cards must be in the 2nd row. At least one green card in each row.
17. Is z less than w ? z and w are real numbers.
(I) $z^2 = 25$
(II) $w = 9$
To answer the question,
a) Either I or II is sufficient

-
- b) Both I and II are sufficient but neither of them is alone sufficient
 - c) I & II are sufficient
 - d) Both are not sufficient

18. A speaks truth 70% of the time; B speaks truth 80% of the time. What is the probability that both are contradicting each other?
19. In a family 7 children don't eat spinach, 6 don't eat carrot, 5 don't eat beans, 4 don't eat spinach & carrots, 3 don't eat carrot & beans, 2 don't eat beans & spinach. One doesn't eat all 3. Find the no. of children.
20. Anna, Bena, Catherina and Diana are at their monthly business meeting. Their occupations are author, biologist, chemist and doctor, but not necessarily in that order. Diana just told the neighbour, who is a biologist that Catherina was on her way with doughnuts. Anna is sitting across from the doctor and next to the chemist. The doctor was thinking that Bena was a good name for parent's to choose, but didn't say anything. What is each person's occupation?

Aptitude Questions

SET-1

1. One of the following is my secret word: AIM DUE MOD OAT TIE. With the list in front of you, if I were to tell you any one of my secret word, then you would be able to tell me the number of vowels in my secret word. Which is my secret word?

Ans. TIE

2. In the following figure: A B C

D
E F G
H
I

Each of the digits 1, 2, 3, 4, 5, 6, 7, 8, and 9 is:

- a) Represented by a different letter in the figure above.
- b) Positioned in the figure above so that each of $A + B + C$, $C + D + E$, $E + F + G$, and $G + H + I$ is equal to 13.

Which digit does E represent?

Ans. E is 4

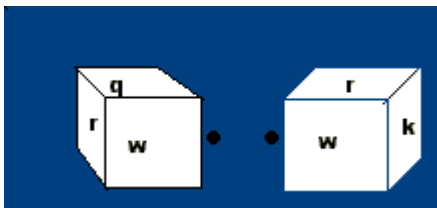
3. One of Mr. Horton, his wife, their son, and Mr. Horton's mother is a doctor and another is a lawyer.

- a) If the doctor is younger than the lawyer, then the doctor and the lawyer are not blood relatives.
- b) If the doctor is a woman, then the doctor and the lawyer are blood relatives.
- c) If the lawyer is a man, then the doctor is a man.

Whose occupation you know?

Ans. Mr. Horton: he is the doctor.

4. Here is a picture of two cubes:



- a) The two cubes are exactly alike.
 - b) The hidden faces indicated by the dots have the same alphabet on them.
- Which alphabet- q, r, w, or k is on the faces indicated by the dots?

Ans. q

5. In the following figure:

A		D
B	G	E
C		F

Each of the seven digits from 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 is:

- a) Represented by a different letter in the figure above.
- b) Positioned in the figure above so that $A*B*C$, $B*G*E$, and $D*E*F$ are equal.

Which digit does G represent?

Ans. G represents the digit 2.

6. Mr. and Mrs. Aye and Mr. and Mrs. Bee competed in a chess tournament. Of the three games played:

- a) In only the first game were the two players married to each other.
- b) The men won two games and the women won one game.
- c) The Ayes won more games than the Bees.
- d) Anyone who lost a game did not play the subsequent game.

Who did not lose a game?

Ans. Mrs. Bee did not lose a game.

7. Three piles of chips--pile I consists one chip, pile II consists of chips, and pile III consists of three chips--are to be used in game played by Anita and Brinda. The game requires:

- a) That each player in turn take only one chip or all chips from just one pile.
- b) That the player who has to take the last chip loses.
- c) That Anita now have her turn.

From which pile should Anita draw in order to win?

Ans. Pile II

8. Of Abdul, Binoy, and Chandini:

- a) Each member belongs to the Tee family whose members always tell the truth or to the El family whose members always lie.
- b) Abdul says "Either I belong or Binoy belongs to a different family from the other two."

Whose family do you name of?

Ans. Binoy's family--El.

9. In a class composed of x girls and y boys what part of the class is composed of girls

- A. $y/(x + y)$
- B. x/xy
- C. $x/(x + y)$
- D. y/xy

Ans.C

10. What is the maximum number of half-pint bottles of cream that can be filled with a 4-gallon can of cream (2 pt. = 1 qt. and 4 qt. = 1 gal)

- A. 16
- B. 24
- C. 30
- D. 64

Ans.D

11. If the operation, \wedge is defined by the equation $x \wedge y = 2x + y$, what is the value of a in $2 \wedge a = a \wedge 3$

- A. 0
- B. 1
- C. -1
- D. 4

Ans.B

12. A coffee shop blends 2 kinds of coffee, putting in 2 parts of a 33p. a gm. grade to 1 part of a 24p. a gm. If the mixture is changed to 1 part of the 33p. a gm. to 2 parts of the less expensive grade, how much will the shop save in blending 100 gms.

- A. Rs. 90
- B. Rs. 1.00
- C. Rs. 3.00
- D. Rs. 8.00

Ans.C

13. There are 200 questions on a 3 hr examination. Among these questions are 50 mathematics problems. It is suggested that twice as much time be spent on each maths problem as for each other question. How many minutes should be spent on mathematics problems

- A. 36
- B. 72
- C. 60
- D. 100

Ans.B

14. In a group of 15, 7 have studied Latin, 8 have studied Greek, and 3 have not studied either. How many of these studied both Latin and Greek

- A. 0
- B. 3
- C. 4
- D. 5

Ans. B

15. If $13 = 13w/(1-w)$, then $(2w)^2 =$

- A. 1/4
- B. 1/2
- C. 1
- D. 2

Ans. C

16. If a and b are positive integers and $(a-b)/3.5 = 4/7$, then

- (A) $b < a$
- (B) $b > a$
- (C) $b = a$
- (D) $b \geq a$

Ans. A

17. In June a baseball team that played 60 games had won 30% of its games played. After a phenomenal winning streak this team raised its average to 50%. How many games must the team have won in a row to attain this average?

- A. 12
- B. 20
- C. 24
- D. 30

Ans. C

18. M men agree to purchase a gift for Rs. D . If three men drop out how much more will each have to contribute towards the purchase of the gift?

- A. $D/(M-3)$
- B. $MD/3$
- C. $M/(D-3)$
- D. $3D/(M^2-3M)$

Ans. D

19. A company contracts to paint 3 houses. Mr. Brown can paint a house in 6 days while Mr. Black would take 8 days and Mr. Blue 12 days. After 8 days Mr. Brown goes on vacation and Mr. Black begins to work for a period of 6 days. How many days will it take Mr. Blue to complete the contract?

- A. 7
- B. 8
- C. 11
- D. 12

Ans. C

20. 2 hours after a freight train leaves Delhi a passenger train leaves the same station travelling in the same direction at an average speed of 16 km/hr. After travelling 4 hrs the passenger train overtakes the freight train. The average speed of the freight train was?

- A. 30
- B. 40
- C. 58
- D. 60

Ans. B

21. If $9x - 3y = 12$ and $3x - 5y = 7$ then $6x - 2y = ?$

- A. -5
- B. 4
- C. 2
- D. 8

Ans. D

22. There are 5 red shoes, 4 green shoes. If one draw randomly a shoe what is the probability of getting a red shoe

Ans $\frac{5C_1}{9C_1}$

23. What is the selling price of a car? If the cost of the car is Rs.60 and a profit of 10% over selling price is earned

Ans: Rs 66/-

24. $\frac{1}{3}$ of girls , $\frac{1}{2}$ of boys go to canteen .What factor and total number of classmates go to canteen.

Ans: Cannot be determined.

25. The price of a product is reduced by 30% . By what percentage should it be increased to make it 100%

Ans: 42.857%

26. There is a square of side 6cm . A circle is inscribed inside the square. Find the ratio of the area of circle to square.

Ans. $\frac{11}{14}$

27. There are two candles of equal lengths and of different thickness. The thicker one lasts of six hours. The thinner 2 hours less than the thicker one. Ramesh lights the two candles at the same time. When he went to bed he saw the thicker one is twice the length of the thinner one. How long ago did Ramesh light the two candles .

Ans: 3 hours.

28. If $\frac{M}{N} = \frac{6}{5}$, then $3M+2N = ?$

29. If $\frac{p}{q} = \frac{5}{4}$, then $2p+q= ?$

30. If PQRST is a parallelogram what is the ratio of triangle PQS & parallelogram PQRST .

Ans: 1:2

31. The cost of an item is Rs 12.60. If the profit is 10% over selling price what is the selling price ?

Ans: Rs 13.86/-

32. There are 6 red shoes & 4 green shoes . If two of red shoes are drawn what is the probability of getting red shoes

Ans: $\frac{6c_2}{10c_2}$

33. To 15 lts of water containing 20% alcohol, we add 5 lts of pure water. What is % alcohol.

Ans : 15%

34. A worker is paid Rs.20/- for a full days work. He works $1, \frac{1}{3}, \frac{2}{3}, \frac{1}{8}, \frac{3}{4}$ days in a week. What is the total amount paid for that worker ?

Ans : 57.50

35. If the value of x lies between 0 & 1 which of the following is the largest?

- (a) x
- (b) x^2
- (c) $-x$
- (d) $\frac{1}{x}$

Ans : (d)

36. If the total distance of a journey is 120 km .If one goes by 60 kmph and comes back at 40kmph what is the average speed during the journey?

Ans: 48kmph

37. A school has 30% students from Maharashtra .Out of these 20% are Bombay students. Find the total percentage of Bombay?

Ans: 6%

38. An equilateral triangle of sides 3 inch each is given. How many equilateral triangles of side 1 inch can be formed from it?

Ans: 9

39. If $\frac{A}{B} = \frac{3}{5}$, then $15A = ?$

Ans : 9B

40. Each side of a rectangle is increased by 100% .By what percentage does the area increase?

Ans : 300%

41. Perimeter of the back wheel = 9 feet, front wheel = 7 feet on a certain distance, the front wheel gets 10 revolutions more than the back wheel .What is the distance?

Ans : 315 feet.

42. Perimeter of front wheel =30, back wheel = 20. If front wheel revolves 240 times. How many revolutions will the back wheel take?

Ans: 360 times

43. 20% of a 6 litre solution and 60% of 4 litre solution are mixed. What percentage of the mixture of solution

Ans: 36%

44City A's population is 68000, decreasing at a rate of 80 people per year. City B having population 42000 is increasing at a rate of 120 people per year. In how many years both the cities will have same population?

Ans: 130 years

45Two cars are 15 kms apart. One is turning at a speed of 50kmph and the other at 40kmph . How much time will it take for the two cars to meet?

Ans: $3/2$ hours

46A person wants to buy 3 paise and 5 paise stamps costing exactly one rupee. If he buys which of the following number of stamps he won't able to buy 3 paise stamps.

Ans: 9

47There are 12 boys and 15 girls, How many different dancing groups can be formed with 2 boys and 3 girls.

48Which of the following fractions is less than $1/3$

- (a) $22/62$
- (b) $15/46$
- (c) $2/3$
- (d) 1

Ans: (b)

49There are two circles, one circle is inscribed and another circle is circumscribed over a square. What is the ratio of area of inner to outer circle?

Ans: 1 : 2

50. Three types of tea the a,b,c costs Rs. 95/kg,100/kg and70/kg respectively. How many kgs of each should be blended to produce 100 kg of mixture worth Rs.90/kg, given that the quantities of brand c are equal

- a)70,15,15
- b)50,25,25
- c)60,20,20
- d)40,30,30

Ans. (b)

51. In a class, except 18 all are above 50 years. 15 are below 50 years of age. How many people are there

- (a) 30
- (b) 33
- (c) 36
- (d) none of these.

Ans. (d)

52. If a boat is moving in upstream with velocity of 14 km/hr and goes downstream with a velocity of 40 km/hr, then what is the speed of the stream ?

- (a) 13 km/hr
- (b) 26 km/hr
- (c) 34 km/hr
- (d) none of these

Ans. A

53. Find the value of $(0.75 * 0.75 * 0.75 - 0.001) / (0.75 * 0.75 - 0.075 + 0.01)$

- (a) 0.845
- (b) 1.908
- (c) 2.312
- (d) 0.001

Ans. A

54. A can have a piece of work done in 8 days, B can work three times faster than the A, C can work five times faster than A. How many days will they take to do the work together ?

- (a) 3 days
- (b) 8/9 days
- (c) 4 days
- (d) can't say

Ans. B

55. A car travels a certain distance taking 7 hrs in forward journey, during the return journey increased speed 12km/hr takes the times 5 hrs. What is the distance travelled

- (a) 210 kms
- (b) 30 kms
- (c) 20 kms
- (c) none of these

Ans. B

56. Instead of multiplying a number by 7, the number is divided by 7. What is the percentage of error obtained ?

57. Find $(7x + 4y) / (x-2y)$ if $x/2y = 3/2$?

- (a) 6
- (b) 8
- (c) 7
- (d) data insufficient

Ans. C

58. A man buys 12 lts of liquid which contains 20% of the liquid and the rest is water. He then mixes it with 10 lts of another mixture with 30% of liquid. What is the % of water in the new mixture?

59. If a man buys 1 lt of milk for Rs.12 and mixes it with 20% water and sells it for Rs.15, then what is the percentage of gain?

60. Pipe A can fill a tank in 30 mins and Pipe B can fill it in 28 mins. If $3/4$ th of the tank is filled by Pipe B alone and both are opened, how much time is required by both the pipes to fill the tank completely ?

61. If on an item a company gives 25% discount, they earn 25% profit. If they now give 10% discount then what is the profit percentage.

- (a) 40%
- (b) 55%
- (c) 35%
- (d) 30%

Ans. D

62. A certain number of men can finish a piece of work in 10 days. If however there were 10 men less it will take 10 days more for the work to be finished. How many men were there originally?

- (a) 110 men
- (b) 130 men
- (c) 100 men
- (d) none of these

Ans. A

63. In simple interest what sum amounts of Rs.1120/- in 4 years and Rs.1200/- in 5 years ?

- (a) Rs. 500
- (b) Rs. 600
- (c) Rs. 800
- (d) Rs. 900

Ans. C

64. If a sum of money compound annually amounts of thrice itself in 3 years. In how many years will it become 9 times itself.

- (a) 6
- (b) 8
- (c) 10
- (d) 12

Ans A

65. Two trains move in the same direction at 50 kmph and 32 kmph respectively. A man in the slower train observes the 15 seconds elapse before the faster train completely passes by him. What is the length of faster train ?

- (a) 100m
- (b) 75m
- (c) 120m
- (d) 50m

Ans B

66. How many mashes are there in 1 square meter of wire gauge if each mesh is 8mm long and 5mm wide ?

- (a) 2500
- (b) 25000
- (c) 250
- (d) 250000

Ans B

67. $x\%$ of y is $y\%$ of ?

- (a) x/y
- (b) $2y$
- (c) x
- (d) can't be determined

Ans. C

68. The price of sugar increases by 20%, by what % should a housewife reduce the consumption of sugar so that expenditure on sugar can be same as before ?

- (a) 15%
- (b) 16.66%
- (c) 12%
- (d) 9%

Ans B

69. A man spends half of his salary on household expenses, $\frac{1}{4}$ th for rent, $\frac{1}{5}$ th for travel expenses, the man deposits the rest in a bank. If his monthly deposits in the bank amount 50, what is his monthly salary ?

- (a) Rs.500
- (b) Rs.1500
- (c) Rs.1000
- (d) Rs. 900

Ans C

70. The population of a city increases @ 4% p.a. There is an additional annual increase of 4% of the population due to the influx of job seekers, find the % increase in population after 2 years ?

71. The ratio of the number of boys and girls in a school is 3:2 Out of these 10% the boys and 25% of girls are scholarship holders. % of students who are not scholarship holders.?

72. 15 men take 21 days of 8 hrs. each to do a piece of work. How many days of 6 hrs. each would it take for 21 women if 3 women do as much work as 2 men?

- (a) 30
- (b) 20
- (c) 19
- (d) 29

Ans. A

73. A cylinder is 6 cms in diameter and 6 cms in height. If spheres of the same size are made from the material obtained, what is the diameter of each sphere?

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

Ans C

74. A rectangular plank $(2)^{1/2}$ meters wide can be placed so that it is on either side of the diagonal of a square shown below.(Figure is not available)What is the area of the plank?

Ans : $7 \cdot (2)^{1/2}$

75. The difference b/w the compound interest payable half yearly and the simple interest on a certain sum lent out at 10% p.a for 1 year is Rs 25. What is the sum?

- (a) Rs. 15000
- (b) Rs. 12000
- (c) Rs. 10000
- (d) none of these

Ans C

76. What is the smallest number by which 2880 must be divided in order to make it into a perfect square ?

- (a) 3
- (b) 4
- (c) 5
- (d) 6

Ans. C

77. A father is 30 years older than his son however he will be only thrice as old as the son after 5 years
what is father's present age ?

- (a) 40 yrs
- (b) 30 yrs
- (c) 50 yrs
- (d) none of these

Ans. A

78. An article sold at a profit of 20% if both the cost price and selling price would be Rs.20/- the profit would be 10% more. What is the cost price of that article?

29. If an item costs Rs.3 in '99 and Rs.203 in '00.What is the % increase in price?

- (a) $200/3$ %
- (b) $200/6$ %
- (c) 100%
- (d) none of these

Ans. A

80. 5 men or 8 women do equal amount of work in a day. a job requires 3 men and 5 women to finish the job in 10 days how many woman are required to finish the job in 14 days.

- a) 10
- b) 7
- c) 6
- d) 12

Ans 7

81. A simple interest amount of rs 5000 for six month is rs 200. what is the anual rate of interest?

- a) 10%
- b) 6%

- c) 8%
- d) 9%

Ans 8%

82. In objective test a correct ans score 4 marks and on a wrong ans 2 marks are ---. a student score 480 marks from 150 question. how many ans were correct?

- a) 120
- b) 130
- c) 110
- d) 150

Ans130.

83. An artical sold at amount of 50% the net sale price is rs 425 .what is the list price of the artical?

- a) 500
- b) 488
- c) 480
- d) 510

Ans 500

84. A man leaves office daily at 7pm A driver with car comes from his home to pick him from office and bring back home

One day he gets free at 5:30 and instead of waiting for driver he starts walking towards home.

In the way he meets the car and returns home on car He reaches home 20 minutes earlier than usual.

In how much time does the man reach home usually??

Ans. 1hr 20min

85. A works thrice as much as B. If A takes 60 days less than B to do a work then find the number of days it would take to complete the work if both work together?

Ans. 22½days

86. How many 1's are there in the binary form of $8*1024 + 3*64 + 3$

Ans. 4

87. In a digital circuit which was to implement $(A B) + (A)XOR(B)$, the designer implements $(A B) (A)XOR(B)$

What is the probability of error in it ?

88. A boy has Rs 2. He wins or loses Re 1 at a time. If he wins he gets Re 1 and if he loses the game he loses Re 1.

He can lose only 5 times. He is out of the game if he earns Rs 5.

Find the number of ways in which this is possible?

Ans. 16

89. If there are 1024×1280 pixels on a screen and each pixel can have around 16 million colors

Find the memory required for this?

Ans. 4MB

90. On a particular day A and B decide that they would either speak the truth or will lie.

C asks A whether he is speaking truth or lying?

He answers and B listens to what he said. C then asks B what A has said. B says "A says that he is a liar"

What is B speaking ?

(a) Truth

(b) Lie

(c) Truth when A lies

(d) Cannot be determined

Ans. (b)

91. What is the angle between the two hands of a clock when time is 8:30

Ans. 75(approx)

92. A student is ranked 13th from right and 8th from left. How many students are there in totality ?

93. A man walks east and turns right and then from there to his left and then 45 degrees to his right. In which direction did he go

Ans. North west

94. A student gets 70% in one subject, 80% in the other. To get an overall of 75% how much should get in third subject.

95. A man shows his friend a woman sitting in a park and says that she is the daughter of my grandmother's only son. What is the relation between the two?

Ans. Daughter

96. How many squares with sides $\frac{1}{2}$ inch long are needed to cover a rectangle that is 4 ft long and 6 ft wide

- (a) 24
- (b) 96
- (c) 3456
- (d) 13824
- (e) 14266

97. If $a = \frac{2}{3}b$, $b = \frac{2}{3}c$, and $c = \frac{2}{3}d$ what part of d is b ?

- (a) $\frac{8}{27}$
- (b) $\frac{4}{9}$
- (c) $\frac{2}{3}$
- (d) 75%
- (e) $\frac{4}{3}$

Ans. (b)

2598 Successive discounts of 20% and 15% are equal to a single discount of

- (a) 30%
- (b) 32%
- (c) 34%
- (d) 35%
- (e) 36

Ans. (b)

99. The petrol tank of an automobile can hold g liters. If a liters was removed when the tank was full, what part of the full tank was removed?

- (a) $g-a$
- (b) $\frac{g}{a}$
- (c) $\frac{a}{g}$
- (d) $\frac{(g-a)}{a}$
- (e) $\frac{(g-a)}{g}$

Ans. (c)

100. If $\frac{x}{y} = 4$ and y is not '0' what % of x is $2x-y$

- (a) 150%
- (b) 175%
- (c) 200%
- (d) 250%

Ans. (b)

SET-II

1. If $2x-y=4$ then $6x-3y=?$

- (a)15
- (b)12
- (c)18
- (d)10

Ans. (b)

2.If $x=y=2z$ and $xyz=256$ then what is the value of x ?

- (a)12
- (b)8
- (c)16
- (d)6

Ans. (b)

3. $(1/10)^{18} - (1/10)^{20} = ?$

- (a) $99/10^{20}$
- (b) $99/10$
- (c) 0.9
- (d) none of these

Ans. (a)

4.Pipe A can fill in 20 minutes and Pipe B in 30 mins and Pipe C can empty the same in 40 mins.If all of them work together, find the time taken to fill the tank

- (a) $17 \frac{1}{7}$ mins
- (b) 20 mins
- (c) 8 mins
- (d) none of these

Ans. (a)

5. Thirty men take 20 days to complete a job working 9 hours a day.How many hour a day should 40 men work to complete the job?

- (a) 8 hrs
- (b) $7 \frac{1}{2}$ hrs
- (c) 7 hrs
- (d) 9 hrs

Ans. (b)

6. Find the smallest number in a GP whose sum is 38 and product 1728

- (a) 12
- (b) 20
- (c) 8
- (d) none of these

Ans. (c)

7. A boat travels 20 kms upstream in 6 hrs and 18 kms downstream in 4 hrs. Find the speed of the boat in still water and the speed of the water current?

- (a) $1/2$ kmph
- (b) $7/12$ kmph
- (c) 5 kmph
- (d) none of these

Ans. (b)

8. A goat is tied to one corner of a square plot of side 12m by a rope 7m long. Find the area it can graze?

- (a) 38.5 sq.m
- (b) 155 sq.m
- (c) 144 sq.m
- (d) 19.25 sq.m

Ans. (a)

9. Mr. Shah decided to walk down the escalator of a tube station. He found that if he walks down 26 steps, he requires 30 seconds to reach the bottom. However, if he steps down 34 stairs he would only require 18 seconds to get to the bottom. If the time is measured from the moment the top step begins to descend to the time he steps off the last step at the bottom, find out the height of the stair way in steps?

Ans. 46 steps.

10. The average age of 10 members of a committee is the same as it was 4 years ago, because an old member has been replaced by a young member. Find how much younger is the new member ?

Ans. 40 years.

11. Three containers A, B and C have volumes a , b , and c respectively; and container A is full of water while the other two are empty. If from container A water is poured into container B which becomes $1/3$ full, and into container C which becomes $1/2$ full, how much water is left in container A?

12. ABCE is an isosceles trapezoid and ACDE is a rectangle. $AB = 10$ and $EC = 20$. What is the length of AE?

Ans. $AE = 10$.

13. In the given figure, PA and PB are tangents to the circle at A and B respectively and the chord BC is parallel to tangent PA. If $AC = 6$ cm, and length of the tangent AP is 9 cm, then what is the length of the chord BC?

Ans. $BC = 4 \text{ cm}$.

15 Three cards are drawn at random from an ordinary pack of cards. Find the probability that they will consist of a king, a queen and an ace.

Ans. $\frac{64}{2210}$.

16. A number of cats got together and decided to kill between them 999919 mice. Every cat killed an equal number of mice. Each cat killed more mice than there were cats. How many cats do you think there were ?

Ans. 991.

17. If $\log_2 x - 5 \log x + 6 = 0$, then what would the value / values of x be?

Ans. $x = e^2$ or e^3 .

18. The square of a two digit number is divided by half the number. After 36 is added to the quotient, this sum is then divided by 2. The digits of the resulting number are the same as those in the original number, but they are in reverse order. The ten's place of the original number is equal to twice the difference between its digits. What is the number?

Ans. 46

19. Can you tender a one rupee note in such a manner that there shall be total 50 coins but none of them would be 2 paise coins.?

Ans. 45 one paise coins, 2 five paise coins, 2 ten paise coins, and 1 twenty-five paise coins.

20. A monkey starts climbing up a tree 20ft. tall. Each hour, it hops 3ft. and slips back 2ft. How much time would it take the monkey to reach the top?

Ans. 18 hours.

21. What is the missing number in this series? 8 2 14 6 11 ? 14 6 18 12

Ans. 9

22. A certain type of mixture is prepared by mixing brand A at Rs.9 a kg. with brand B at Rs.4 a kg. If the mixture is worth Rs.7 a kg., how many kgs. of brand A are needed to make 40kgs. of the mixture?

Ans. Brand A needed is 24kgs.

23. A wizard named Nepo says "I am only three times my son's age. My father is 40 years more than twice my age. Together the three of us are a mere 1240 years old." How old is Nepo?

Ans. 360 years old.

24. One dog tells the other that there are two dogs in front of me. The other one also shouts that he too had two behind him. How many are they?

Ans. Three.

25. A man ate 100 bananas in five days, each day eating 6 more than the previous day. How many bananas did he eat on the first day?

Ans. Eight.

26. If it takes five minutes to boil one egg, how long will it take to boil four eggs?

Ans. Five minutes.

27. The minute hand of a clock overtakes the hour hand at intervals of 64 minutes of correct time. How much a day does the clock gain or lose?

Ans. 32 $\frac{8}{11}$ minutes.

28. Solve for x and y: $\frac{1}{x} - \frac{1}{y} = \frac{1}{3}$, $\frac{1}{x^2} + \frac{1}{y^2} = \frac{5}{9}$.

Ans. $x = \frac{3}{2}$ or -3 and $y = 3$ or $-\frac{3}{2}$.

29. Daal is now being sold at Rs. 20 a kg. During last month its rate was Rs. 16 per kg. By how much percent should a family reduce its consumption so as to keep the expenditure fixed?

Ans. 20 %.

30. Find the least value of $3x + 4y$ if $x^2y^3 = 6$.

Ans. 10.

31. Can you find out what day of the week was January 12, 1979?

Ans. Friday.

32. A garrison of 3300 men has provisions for 32 days, when given at a rate of 850 grams per head. At the end of 7 days a reinforcement arrives and it was found that now the provisions will last 8 days less, when given at the rate of 825 grams per head. How, many more men can it feed?

Ans. 1700 men.

33. From 5 different green balls, four different blue balls and three different red balls, how many combinations of balls can be chosen taking at least one green and one blue ball?

Ans. 3720.

34. Three pipes, A, B, & C are attached to a tank. A & B can fill it in 20 & 30 minutes respectively while C can empty it in 15 minutes. If A, B & C are kept open successively for 1 minute each, how soon will the tank be filled?

Ans. 167 minutes.

35. A person walking $\frac{5}{6}$ of his usual rate is 40 minutes late. What is his usual time? Ans. 3 hours 20 minutes.

36. For a motorist there are three ways going from City A to City C. By way of bridge the distance is 20 miles and toll is \$0.75. A tunnel between the two cities is a distance of 10 miles and toll is \$1.00 for the vehicle and driver and \$0.10 for each passenger. A two-lane highway without toll goes east for 30 miles to city B and then 20 miles in a northwest direction to City C.

1. Which is the shortest route from B to C

- (a) Directly on toll free highway to City C
- (b) The bridge
- (c) The Tunnel
- (d) The bridge or the tunnel
- (e) The bridge only if traffic is heavy on the toll free highway

Ans. (a)

2. The most economical way of going from City A to City B, in terms of toll and distance is to use the

- (a) tunnel
- (b) bridge
- (c) bridge or tunnel
- (d) toll free highway
- (e) bridge and highway

Ans. (a)

3. Jim usually drives alone from City C to City A every working day. His firm deducts a percentage of employee pay for lateness. Which factor would most influence his choice of the bridge or the tunnel ?

- (a) Whether his wife goes with him
- (b) scenic beauty on the route
- (c) Traffic conditions on the road, bridge and tunnel
- (d) saving \$0.25 in tolls
- (e) price of gasoline consumed in covering additional 10 miles on the bridge

Ans. (a)

4. In choosing between the use of the bridge and the tunnel the chief factor(s) would be:

- I. Traffic and road conditions
- II. Number of passengers in the car
- III. Location of one's homes in the center or outskirts of one of the cities
- IV. Desire to save \$0.25

- (a) I only
- (b) II only
- (c) II and III only
- (d) III and IV only
- (e) I and II only

Ans. (a)

37. The letters A, B, C, D, E, F and G, not necessarily in that order, stand for seven consecutive integers from 1 to 10

D is 3 less than A

B is the middle term

F is as much less than B as C is greater than D

G is greater than F

1. The fifth integer is

- (a) A
- (b) C
- (c) D
- (d) E
- (e) F

Ans. (a)

2. A is as much greater than F as which integer is less than G

- (a) A
- (b) B
- (c) C
- (d) D
- (e) E

Ans. (a)

3. If $A = 7$, the sum of E and G is

- (a) 8
- (b) 10
- (c) 12
- (d) 14
- (e) 16

Ans. (a)

4. $A - F = ?$

- (a) 1
- (b) 2
- (c) 3
- (d) 4
- (e) Cannot be determined

Ans. (a)

5. An integer T is as much greater than C as C is greater than E. T can be written as $A + E$. What is D?

- (a) 2
- (b) 3
- (c) 4
- (d) 5
- (e) Cannot be determined

Ans. (a)

6. The greatest possible value of C is how much greater than the smallest possible value of D?

- (a) 2
- (b) 3
- (c) 4
- (d) 5
- (e) 6

Ans. (a)

38.

- 1. All G's are H's
- 2. All G's are J's or K's
- 3. All J's and K's are G's
- 4. All L's are K's
- 5. All N's are M's
- 6. No M's are G's

1. If no P's are K's, which of the following must be true?

- (a) All P's are J's
- (b) No P is a G
- (c) No P is an H
- (d) If any P is an H it is a G
- (e) If any P is a G it is a J

Ans. (a)

2. Which of the following can be logically deduced from the conditions stated?

- (a) No M's are H's
- (b) No M's that are not N's are H's
- (c) No H's are M's
- (d) Some M's are H's
- (e) All M's are H's

Ans. (a)

3. Which of the following is inconsistent with one or more of the conditions?

- (a) All H's are G's
- (b) All H's that are not G's are M's
- (c) Some H's are both M's and G's
- (d) No M's are H's
- (e) All M's are H's

Ans. (a)

4. The statement "No L's are J's" is

I. Logically deducible from the conditions stated

II. Consistent with but not deducible from the conditions stated

III. Deducible from the stated conditions together with the additional statement "No J's are K's"

- (a) I only
- (b) II only
- (c) III only
- (d) II and III only
- (e) Neither I, II nor III

Ans. (a)

39. In country X, democratic, conservative and justice parties have fought three civil wars in twenty years. To restore stability an agreement is reached to rotate the top offices President, Prime Minister and Army Chief among the parties so that each party controls one and only one office at all times. The three top office holders must each have two deputies, one from each of the other parties. Each deputy must choose a staff composed of equally members of his or her chief's party and member of the third party.

1. When Justice party holds one of the top offices, which of the following cannot be true

- (a) Some of the staff members within that office are justice party members
- (b) Some of the staff members within that office are democratic party members

- (c) Two of the deputies within the other offices are justice party members
- (d) Two of the deputies within the other offices are conservative party members
- (e) Some of the staff members within the other offices are justice party members.

Ans. (a)

2. When the democratic party holds presidency, the staff of the prime minister's deputies are composed

- I. One-fourth of democratic party members
- II. One-half of justice party members and one-fourth of conservative party members
- III. One-half of conservative party members and one-fourth of justice party members.

- (a) I only
- (b) I and II only
- (c) II or III but not both
- (d) I and II or I and III
- (e) None of these

Ans. (a)

3. Which of the following is allowable under the rules as stated:

- (a) More than half of the staff within a given office belonging to a single party
- (b) Half of the staff within a given office belonging to a single party
- (c) Any person having a member of the same party as his or her immediate superior
- (d) Half the total number of staff members in all three offices belonging to a single party
- (e) Half the staff members in a given office belonging to parties different from the party of the top office holder in that office.

Ans. (a)

4. The office of the Army Chief passes from Conservative to Justice party. Which of the following must be fired.

- (a) The democratic deputy and all staff members belonging to Justice party
- (b) Justice party deputy and all his or hers staff members
- (c) Justice party deputy and half of his Conservative staff members in the chief of staff office
- (d) The Conservative deputy and all of his or her staff members belonging to Conservative party
- (e) No deputies and all staff members belonging to conservative parties.

Ans. (a)

40. In recommendations to the board of trustees a tuition increase of \$500 per year, the president of the university said "There were no student demonstrations over the previous increases of \$300 last year and \$200 the year before". If the president's statement is accurate then which of the following can be validly inferred from the information given:

- I. Most students in previous years felt that the increases were justified because of increased operating costs.
- II. Student apathy was responsible for the failure of students to protest the previous tuition increases.
- III. Students are not likely to demonstrate over new tuition increases.

- (a) I only
- (b) II only
- (c) I or II but not both
- (d) I, II and III
- (e) None

Ans. (a)

41. *The office staff of XYZ corporation presently consists of three bookkeepers--A, B, C and 5 secretaries D, E, F, G, H. The management is planning to open a new office in another city using 2 bookkeepers and 3 secretaries of the present staff. To do so they plan to separate certain individuals who don't function well together. The following guidelines were established to set up the new office*

- I. Bookkeepers A and C are constantly finding fault with one another and should not be sent together to the new office as a team
- II. C and E function well alone but not as a team, they should be separated
- III. D and G have not been on speaking terms and shouldn't go together
- IV. Since D and F have been competing for promotion they shouldn't be a team

1. If A is to be moved as one of the bookkeepers, which of the following cannot be a possible working unit.

- A. ABDEH
- B. ABDGH
- C. ABEFH
- D. ABEGH

Ans. B

2. If C and F are moved to the new office, how many combinations are possible

- A. 1
- B. 2
- C. 3
- D. 4

Ans. A

3.If C is sent to the new office,which member of the staff cannot go with C

- A.B
- B.D
- C.F
- D.G

Ans.B

4.Under the guidelines developed,which of the following must go to the new office

- A.B
- B.D
- C.E
- D.G

Ans.A

5.If D goes to the new office,which of the following is/are true

- I.C cannot go
- II.A cannot go
- III.H must also go

- A.I only
- B.II only
- C.I and II only
- D.I and III only

Ans.D

42.After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to 5--A, B, C, D, E .It was announced that the finalist would be chosen after a series of all-day group personal interviews were held.The examining committee agreed upon the following procedure

- I.The interviews will be held once a week
- II.3 candidates will appear at any all-day interview session
- III.Each candidate will appear at least once
- IV.If it becomes necessary to call applicants for additional interviews, no more 1 such applicant should be asked to appear the next week
- V.Because of a detail in the written applications,it was agreed that whenever candidate B appears, A should also be present.
- VI.Because of travel difficulties it was agreed that C will appear for only 1 interview.

1. At the first interview the following candidates appear A,B,D. Which of the following combinations can be called for the interview to be held next week.

- A. BCD
- B. CDE
- C. ABE
- D. ABC

Ans. B

2. Which of the following is a possible sequence of combinations for interviews in 2 successive weeks

- A. ABC; BDE
- B. ABD; ABE
- C. ADE; ABC
- D. BDE; ACD

Ans. C

3. If A, B and D appear for the interview and D is called for additional interview the following week, which 2 candidates may be asked to appear with D?

- I. A
- II. B
- III. C
- IV. E

- A. I and II
- B. I and III only
- C. II and III only
- D. III and IV only

Ans. D

4. Which of the following correctly state(s) the procedure followed by the search committee

- I. After the second interview all applicants have appeared at least once
- II. The committee sees each applicant a second time
- III. If a third session, it is possible for all applicants to appear at least twice

- A. I only
- B. II only
- C. III only
- D. Both I and II

Ans. A

43. A certain city is served by subway lines A,B and C and numbers 1 2 and 3
When it snows , morning service on B is delayed
When it rains or snows , service on A, 2 and 3 are delayed both in the morning and afternoon
When temp. falls below 30 degrees farenheit afternoon service is cancelled in either the A line or the 3 line, but not both.
When the temperature rises over 90 degrees farenheit, the afternoon service is cancelled in either the line C or the 3 line but not both.
When the service on the A line is delayed or cancelled, service on the C line which connects the A line, is delayed.
When service on the 3 line is cancelled, service on the B line which connects the 3 line is delayed.

Q1. On Jan 10th, with the temperature at 15 degree farenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon.

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

Ans. D

Q2. On Aug 15th with the temperature at 97 degrees farenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?

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

Ans. C

Q3. On which of the following occasions would service be on the greatest number of lines disrupted.

- (A) A snowy afternoon with the temperature at 45 degree farenheit
- (B) A snowy morning with the temperature at 45 degree farenheit
- (C) A rainy afternoon with the temperature at 45 degree farenheit
- (D) A rainy afternoon with the temperature at 95 degree farenheit

Ans. B

44. In a certain society, there are two marriage groups, red and brown. No

marriage is permitted within a group. On marriage, males become part of their wives groups; women remain in their own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden

Q1. A brown female could have had

- I. A grandfather born Red
- II. A grandmother born Red
- III Two grandfathers born Brown

- (A) I only
- (B) III only
- (C) I, II and III
- (D) I and II only

Ans. D

Q2. A male born into the brown group may have

- (A) An uncle in either group
- (B) A brown daughter
- (C) A brown son
- (D) A son-in-law born into red group

Ans. A

Q3. Which of the following is not permitted under the rules as stated.

- (A) A brown male marrying his father's sister
- (B) A red female marrying her mother's brother
- (C) A widower marrying his wife's sister
- (D) A widow marrying her divorced daughter's ex-husband

Ans. B

Q4. If widowers and divorced males retained their group they had upon marrying which of the following would be permissible (Assume that no previous marriage occurred)

- (A) A woman marrying her dead sister's husband
- (B) A woman marrying her divorced daughter's ex-husband
- (C) A widower marrying his brother's daughter
- (D) A woman marrying her mother's brother who is a widower.

Ans. D

- Q5. I. All G's are H's
- II. All G's are J's or K's
- III All J's and K's are G's
- IV All L's are K's
- V All N's are M's
- VI No M's are G's

45. There are six steps that lead from the first to the second floor. No two people can be on the same step

Mr. A is two steps below Mr. C

Mr. B is a step next to Mr. D

Only one step is vacant (No one standing on that step)

Denote the first step by step 1 and second step by step 2 etc.

1. If Mr. A is on the first step, Which of the following is true?

- (a) Mr. B is on the second step
- (b) Mr. C is on the fourth step.
- (c) A person Mr. E, could be on the third step
- (d) Mr. D is on higher step than Mr. C.

Ans: (d)

2. If Mr. E was on the third step & Mr. B was on a higher step than Mr. E which step must be vacant

- (a) step 1
- (b) step 2
- (c) step 4
- (d) step 5
- (e) step 6

Ans: (a)

3. If Mr. B was on step 1, which step could A be on?

- (a) 2&e only
- (b) 3&5 only
- (c) 3&4 only
- (d) 4&5 only
- (e) 2&4 only

Ans: (c)

4. If there were two steps between the step that A was standing and the step that B was standing on, and A was on a higher step than D , A must be on step

- (a) 2
- (b) 3
- (c) 4
- (d) 5
- (e) 6

Ans: (c)

5. Which of the following is false

- i. B&D can be both on odd-numbered steps in one configuration
- ii. In a particular configuration A and C must either both an odd numbered steps or both an even-numbered steps
- iii. A person E can be on a step next to the vacant step.

- (a) i only
- (b) ii only
- (c) iii only
- (d) both i and iii

Ans: (c)

46. Six swimmers A, B, C, D, E, F compete in a race. The outcome is as follows.

- i. B does not win.
- ii. Only two swimmers separate E & D
- iii. A is behind D & E
- iv. B is ahead of E , with one swimmer intervening
- v. F is a head of D

1. Who stood fifth in the race ?

- (a) A
- (b) B
- (c) C
- (d) D
- (e) E

Ans: (e)

2. How many swimmers separate A and F ?

- (a) 1
- (b) 2
- (c) 3
- (d) 4
- (e) cannot be determined

Ans: (d)

3. The swimmer between C & E is

- (a) none
- (b) F
- (c) D
- (d) B
- (e) A

Ans: (a)

4. If the end of the race, swimmer D is disqualified by the Judges then swimmer B finishes in which place

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

Ans: (b)

47. Five houses lettered A,B,C,D, & E are built in a row next to each other. The houses are lined up in the order A,B,C,D, & E. Each of the five houses has a colored chimney. The roof and chimney of each house must be painted as follows.

- i. The roof must be painted either green, red, or yellow.
- ii. The chimney must be painted either white, black, or red.
- iii. No house may have the same color chimney as the color of roof.
- iv. No house may use any of the same colors that the every next house uses.
- v. House E has a green roof.
- vi. House B has a red roof and a black chimney

1. Which of the following is true ?

- (a) At least two houses have black chimney.
- (b) At least two houses have red roofs.
- (c) At least two houses have white chimneys
- (d) At least two houses have green roofs
- (e) At least two houses have yellow roofs

Ans: (c)

2. Which must be false ?

- (a) House A has a yellow roof
- (b) House A & C have different color chimney
- (c) House D has a black chimney
- (d) House E has a white chimney
- (e) House B&D have the same color roof.

Ans: (b)

3. If house C has a yellow roof. Which must be true.

- (a) House E has a white chimney
- (b) House E has a black chimney
- (c) House E has a red chimney
- (d) House D has a red chimney
- (e) House C has a black chimney

Ans: (a)

4. Which possible combinations of roof & chimney can house

- I. A red roof & a black chimney
- II. A yellow roof & a red chimney
- III. A yellow roof & a black chimney

- (a) I only
- (b) II only
- (c) III only
- (d) I & II only
- (e) I&II&III

Ans: (e)

48. Find $x+2y$

- (i). $x+y=10$
- (ii). $2x+4y=20$

Ans: (b)

49. Is angle BAC is a right angle

- (i) $AB=2BC$
- (2) $BC=1.5AC$

Ans: (e)

50. Is x greater than y

- (i) $x=2k$
- (ii) $k=2y$

Ans: (e)

SET-III

Solve the following and check with the answers given at the end.

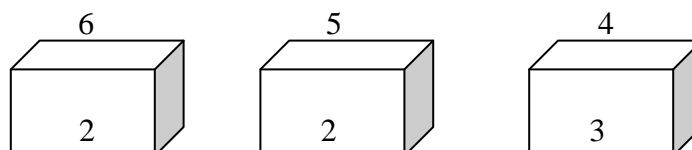
1. It was calculated that 75 men could complete a piece of work in 20 days.

When work was scheduled to commence, it was found necessary to send 25 men to another project. How much longer will it take to complete the work?

2. A student divided a number by $\frac{2}{3}$ when he required to multiply by $\frac{3}{2}$. Calculate the percentage of error in his result.

3. A dishonest shopkeeper professes to sell pulses at the cost price, but he uses a false weight of 950gm. for a kg. His gain is ...%.
4. A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour?
5. A man was engaged on a job for 30 days on the condition that he would get a wage of Rs. 10 for the day he works, but he have to pay a fine of Rs. 2 for each day of his absence. If he gets Rs. 216 at the end, he was absent for work for ... days.
6. A contractor agreeing to finish a work in 150 days, employed 75 men each working 8 hours daily. After 90 days, only $\frac{2}{7}$ of the work was completed. Increasing the number of men by _____ each working now for 10 hours daily, the work can be completed in time.
7. what is a percent of b divided by b percent of a?
 (a) a (b) b (c) 1 (d) 10 (e) 100
8. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs. _____ for the horse and Rs. _____ for the cart.
9. A tennis marker is trying to put together a team of four players for a tennis tournament out of seven available. males - a, b and c; females – m, n, o and p. All players are of equal ability and there must be at least two males in the team. For a team of four, all players must be able to play with each other under the following restrictions:
 b should not play with m,
 c should not play with p, and
 a should not play with o.
 Which of the following statements must be false?
 1. b and p cannot be selected together
 2. c and o cannot be selected together
 3. c and n cannot be selected together.

10-12. The following figure depicts three views of a cube. Based on this, answer questions 10-12.



10. The number on the face opposite to the face carrying 1 is _____ .
11. The number on the faces adjacent to the face marked 5 are _____ .
12. Which of the following pairs does not correctly give the numbers on the opposite faces.
 (1) 6,5 (2) 4,1 (3) 1,3 (4) 4,2
13. Five farmers have 7, 9, 11, 13 & 14 apple trees, respectively in their orchards. Last year, each of them discovered that every tree in their own orchard bore exactly the same number of apples. Further, if the third farmer gives one apple to the first, and the fifth gives three to each of the second and the fourth, they would all have exactly the same number of apples. What were the yields per tree in the orchards of the third and fourth farmers?
14. Five boys were climbing a hill. J was following H. R was just ahead of G. K was between G & H. They were climbing up in a column. Who was the second?
- 15-18 John is undecided which of the four novels to buy. He is considering a spy thriller, a Murder mystery, a Gothic romance and a science fiction novel. The books are written by Rothko, Gorky, Burchfield and Hopper, not necessary in that order, and published by Heron, Piegion, Blueja and sparrow, not necessary in that order.
- (1) The book by Rothko is published by Sparrow.
 (2) The Spy thriller is published by Heron.
 (3) The science fiction novel is by Burchfield and is not published by Blueja.
 (4) The Gothic romance is by Hopper.
15. Pigeon publishes _____.
16. The novel by Gorky _____.
17. John purchases books by the authors whose names come first and third in alphabetical order. He does not buy the books _____.
18. On the basis of the first paragraph and statement (2), (3) and (4) only, it is possible to deduce that
1. Rothko wrote the murder mystery or the spy thriller
 2. Sparrow published the murder mystery or the spy thriller

3. The book by Burchfield is published by Sparrow.

19. If a light flashes every 6 seconds, how many times will it flash in $\frac{3}{4}$ of an hour?

20. If point P is on line segment AB, then which of the following is always true?
(1) $AP = PB$ (2) $AP > PB$ (3) $PB > AP$ (4) $AB > AP$ (5) $AB > AP + PB$

21. All men are vertebrates. Some mammals are vertebrates. Which of the following conclusions drawn from the above statement is correct.

All men are mammals

All mammals are men

Some vertebrates are mammals.

None

22. Which of the following statements drawn from the given statements are correct?

Given:

All watches sold in that shop are of high standard. Some of the HMT watches are sold in that shop.

a) All watches of high standard were manufactured by HMT.

b) Some of the HMT watches are of high standard.

c) None of the HMT watches is of high standard.

d) Some of the HMT watches of high standard are sold in that shop.

23-27.

1. Ashland is north of East Liverpool and west of Coshocton.

2. Bowling green is north of Ashland and west of Fredericktown.

3. Dover is south and east of Ashland.

4. East Liverpool is north of Fredericktown and east of Dover.

5. Fredericktown is north of Dover and west of Ashland.

6. Coshocton is south of Fredericktown and west of Dover.

23. Which of the towns mentioned is furthest of the north – west

(a) Ashland (b) Bowling green (c) Coshocton

(d) East Liverpool (e) Fredericktown

24. Which of the following must be both north and east of Fredericktown?

(a) Ashland (b) Coshocton (c) East Liverpool

I a only II b only III c only IV a & b V a & c

25. Which of the following towns must be situated both south and west of at least one other town?

A. Ashland only

B. Ashland and Fredericktown

C. Dover and Fredericktown

- D. Dover, Coshocton and Fredericktown
- E. Coshocton, Dover and East Liverpool.

26. Which of the following statements, if true, would make the information in the numbered statements more specific?
- (a) Coshocton is north of Dover.
 - (b) East Liverpool is north of Dover
 - (c) Ashland is east of Bowling green.
 - (d) Coshocton is east of Fredericktown
 - (e) Bowling green is north of Fredericktown
27. Which of the numbered statements gives information that can be deduced from one or more of the other statements?
- (A) 1 (B) 2 (C) 3 (D) 4 (E) 6
28. Eight friends Harsha, Fakis, Balaji, Eswar, Dhinesh, Chandra, Geetha, and Ahmed are sitting in a circle facing the center. Balaji is sitting between Geetha and Dhinesh. Harsha is third to the left of Balaji and second to the right of Ahmed. Chandra is sitting between Ahmed and Geetha and Balaji and Eshwar are not sitting opposite to each other. Who is third to the left of Dhinesh?
29. If every alternative letter starting from B of the English alphabet is written in small letter, rest all are written in capital letters, how the month “ September” be written.
- (1) SeptEMbEr (2) SEpTeMBEr (3) SeptembeR
(4) SepteMber (5) None of the above.
30. The length of the side of a square is represented by $x+2$. The length of the side of an equilateral triangle is $2x$. If the square and the equilateral triangle have equal perimeter, then the value of x is _____.
31. It takes Mr. Karthik y hours to complete typing a manuscript. After 2 hours, he was called away. What fractional part of the assignment was left incomplete?
32. Which of the following is larger than $\frac{3}{5}$?
- (1) $\frac{1}{2}$ (2) $\frac{39}{50}$ (3) $\frac{7}{25}$ (4) $\frac{3}{10}$ (5) $\frac{59}{100}$
33. The number that does not have a reciprocal is _____.
34. There are 3 persons Sudhir, Arvind, and Gauri. Sudhir lent cars to Arvind and Gauri as many as they had already. After some time Arvind gave as many cars to Sudhir and Gauri as many as they have. After sometime Gauri did the same thing. At the end of this transaction each one of them had 24. Find the cars each originally had.
35. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss

and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs. _____ for the horse and Rs. _____ for the cart.

Answers:

1. **Answer:**

30 days.

Explanation:

Before:

$$\begin{aligned} \text{One day work} &= 1 / 20 \\ \text{One man's one day work} &= 1 / (20 * 75) \end{aligned}$$

Now:

$$\begin{aligned} \text{No. Of workers} &= 50 \\ \text{One day work} &= 50 * 1 / (20 * 75) \end{aligned}$$

The total no. of days required to complete the work = $(75 * 20) / 50 =$

30

2. **Answer:**

0 %

Explanation:

$$\text{Since } 3x / 2 = x / (2 / 3)$$

3. **Answer:**

5.3 %

Explanation:

He sells 950 grams of pulses and gains 50 grams.

If he sells 100 grams of pulses then he will gain $(50 / 950) * 100 =$

5.26

4. **Answer:**

250 lines of codes

5. **Answer:**

7 days

Explanation:

The equation portraying the given problem is:

$$10 * x - 2 * (30 - x) = 216 \text{ where } x \text{ is the number of working days.}$$

Solving this we get $x = 23$

Number of days he was absent was $7 (30-23)$ days.

6. **Answer:**

150 men.

Explanation:

$$\begin{aligned} \text{One day's work} &= 2 / (7 * 90) \\ \text{One hour's work} &= 2 / (7 * 90 * 8) \end{aligned}$$

$$\text{One man's work} = 2 / (7 * 90 * 8 * 75)$$

The remaining work (5/7) has to be completed within 60 days, because the total number of days allotted for the project is 150 days.

So we get the equation

$$(2 * 10 * x * 60) / (7 * 90 * 8 * 75) = 5/7 \text{ where } x \text{ is the number of men working after the } 90^{\text{th}} \text{ day.}$$

We get $x = 225$

Since we have 75 men already, it is enough to add only 150 men.

7. **Answer:**

(c) 1

Explanation:

a percent of b : $(a/100) * b$

b percent of a : $(b/100) * a$

a percent of b divided by b percent of a : $((a / 100) * b) / (b/100) * a)$

= 1

8. **Answer:**

Cost price of horse = Rs. 400 & the cost price of cart = 200.

Explanation:-

Let x be the cost price of the horse and y be the cost price of the cart.

In the first sale there is no loss or profit. (i.e.) The loss obtained is equal to the gain.

$$\text{Therefore } (10/100) * x = (20/100) * y$$

$$X = 2 * y \text{ -----(1)}$$

In the second sale, he lost Rs. 10. (i.e.) The loss is greater than the profit by Rs. 10.

$$\text{Therefore } (5 / 100) * x = (5 / 100) * y + 10 \text{ -----(2)}$$

Substituting (1) in (2) we get

$$(10 / 100) * y = (5 / 100) * y + 10$$

$$(5 / 100) * y = 10$$

$$y = \mathbf{200}$$

$$\text{From (1) } 2 * 200 = x = \mathbf{400}$$

9. **Answer:**

3.

Explanation:

Since inclusion of any male player will reject a female from the team.

Since there should be four member in the team and only three males are

available, the girl, n should included in the team always irrespective of others selection.

10. **Answer:**
5

11. **Answer:**
1,2,3 & 4

12. **Answer:**
B

13. **Answer:**
11 & 9 apples per tree.

Explanation:

Let a, b, c, d & e be the total number of apples bored per year in A, B, C, D & E 's orchard. Given that $a + 1 = b + 3 = c - 1 = d + 3 = e - 6$
But the question is to find the number of apples bored per tree in C and D 's orchard. If is enough to consider $c - 1 = d + 3$.

Since the number of trees in C's orchard is 11 and that of D's orchard is 13. Let x and y be the number of apples bored per tree in C & d 's orchard respectively.

Therefore $11x - 1 = 13y + 3$

By trial and error method, we get the value for x and y as 11 and 9

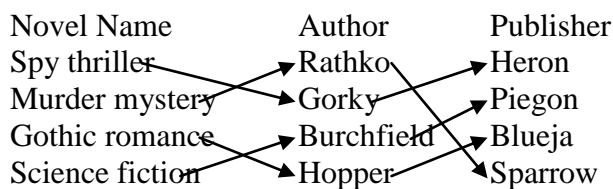
14. **Answer:**
G.

Explanation:

The order in which they are climbing is R - G - K - H - J

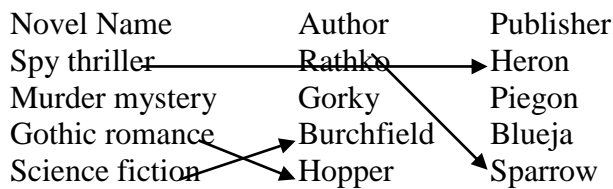
15 - 18

Answer:



Explanation:

Given



Since Blueja doesn't publish the novel by Burchfield and Heron publishes the novel spy thriller, Piegon publishes the novel by Burchfield.

Since Hopper writes Gothic romance and Heron publishes the novel spy thriller, Blueja publishes the novel by Hopper.

Since Heron publishes the novel spy thriller and Heron publishes the novel by Gorky, Gorky writes Spy thriller and Rathko writes Murder mystery.

19. **Answer:**

451 times.

Explanation:

There are 60 minutes in an hour.

In $\frac{3}{4}$ of an hour there are $(60 * \frac{3}{4})$ minutes = 45 minutes.

In $\frac{3}{4}$ of an hour there are $(60 * 45)$ seconds = 2700 seconds.

Light flashed for every 6 seconds.

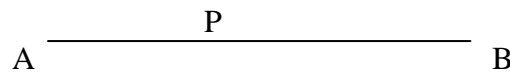
In 2700 seconds $2700/6 = 450$ times.

The count start after the first flash, the light will flashes 451 times in $\frac{3}{4}$ of an hour.

20. **Answer:**

(4)

Explanation:



Since p is a point on the line segment AB, $AB > AP$

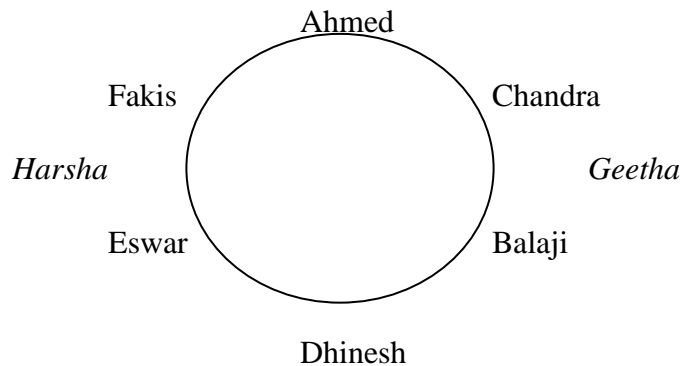
21. **Answer:** (c)

22. **Answer:** (b) & (d).

23 - 27. **Answer:**

28. **Answer:** Fakis

Explanation:



29. **Answer:**

(5).

Explanation:

Since every alternative letter starting from B of the English alphabet is written in small letter, the letters written in small letter are b, d, f...

In the first two answers the letter E is written in both small & capital letters, so they are not the correct answers. But in third and fourth answers the letter is written in small letter instead capital letter, so they are not the answers.

30. **Answer:**

$$x = 4$$

Explanation:

Since the side of the square is $x + 2$, its perimeter = $4(x + 2) = 4x + 8$

Since the side of the equilateral triangle is $2x$, its perimeter = $3 * 2x = 6x$

Also, the perimeters of both are equal.

$$(i.e.) \quad 4x + 8 = 6x$$

$$(i.e.) \quad 2x = 8 \rightarrow x = 4.$$

31. **Answer:**

$$(y - 2) / y.$$

Explanation:

To type a manuscript karthik took y hours.

Therefore his speed in typing = $1/y$.

He was called away after 2 hours of typing.

Therefore the work completed = $1/y * 2$.

Therefore the remaining work to be completed = $1 - 2/y$.

(i.e.) work to be completed = $(y-2)/y$

32. **Answer:**

(2)

33. **Answer:**

1

Explanation:

One is the only number exists without reciprocal because the reciprocal of one is one itself.

34. **Answer:**

Sudhir had 39 cars, Arvind had 21 cars and Gauri had 12 cars.

Explanation:

	Sudhir	Arvind	Gauri
Finally	24	24	24
Before Gauri's transaction	12	12	48
Before Arvind's transaction	6	42	24
Before Sudhir's transaction	39	21	12

35. **Answer:**

Cost price of horse: Rs. 400 &

Cost price of cart: Rs. 200

Explanation:

Let x be the cost of horse & y be the cost of the cart.

10 % of loss in selling horse = 20 % of gain in selling the cart

Therefore $(10 / 100) * x = (20 * 100) * y$

$$\rightarrow x = 2y \text{ -----(1)}$$

5 % of loss in selling the horse is 10 more than the 5 % gain in selling the cart.

Therefore $(5 / 100) * x - 10 = (5 / 100) * y$

$$\rightarrow 5x - 1000 = 5y$$

Substituting (1)

$$10y - 1000 = 5y$$

$$5y = 1000$$

$$y = 200$$

$$x = 400 \quad \text{from (1)}$$

Exercise 2.1

For the following, find the next term in the series

1. 6, 24, 60, 120, 210

- a) 336 b) 366 c) 330 d) 660

Answer : a) 336

Explanation : The series is 1.2.3, 2.3.4, 3.4.5, 4.5.6, 5.6.7, ('.' means product)

2. 1, 5, 13, 25

Answer : 41

Explanation : The series is of the form $0^2+1^2, 1^2+2^2, \dots$

3. 0, 5, 8, 17

Answer : 24

Explanation : $1^2-1, 2^2+1, 3^2-1, 4^2+1, 5^2-1$

4. 1, 8, 9, 64, 25 (Hint : Every successive terms are related)

Answer : 216

Explanation : $1^2, 2^3, 3^2, 4^3, 5^2, 6^3$

5. 8, 24, 12, 36, 18, 54

Answer : 27

6. 71,76,69,74,67,72

Answer : 67

7. 5,9,16,29,54

Answer : 103

Explanation : $5*2-1=9$; $9*2-2=16$; $16*2-3=29$; $29*2-4=54$; $54*2-5=103$

8. 1,2,4,10,16,40,64 (Successive terms are related)

Answer : 200

Explanation : The series is powers of 2 ($2^0, 2^1, \dots$).

All digits are less than 8. Every second number is in octal number system.

128 should follow 64. 128 base 10 = 200 base 8.

Exercise 2.2

Find the odd man out.

1. 3,5,7,12,13,17,19

Answer : 12

Explanation : All but 12 are odd numbers

2. 2,5,10,17,26,37,50,64

Answer : 64

Explanation : $2+3=5$; $5+5=10$; $10+7=17$; $17+9=26$; $26+11=37$; $37+13=50$; $50+15=65$;

3. 105,85,60,30,0,-45,-90

Answer : 0

Explanation : $105-20=85$; $85-25=60$; $60-30=30$; $30-35=-5$; $-5-40=-45$; $-45-45=-90$;

Exercise 3

Solve the following.

1. What is the number of zeros at the end of the product of the numbers from 1 to 100?

Answer : 127

2. A fast typist can type some matter in 2 hours and a slow typist can type the same in 3 hours. If both type combinely, in how much time will they finish?

Answer : 1 hr 12 min

Explanation : The fast typist's work done in 1 hr = $1/2$

The slow typist's work done in 1 hr = $1/3$

If they work combinely, work done in 1 hr = $1/2+1/3 = 5/6$

So, the work will be completed in $\frac{6}{5}$ hours. i.e., $1\frac{1}{5}$ hours = 1hr 12 min

3. Gavaskar's average in his first 50 innings was 50. After the 51st innings, his average was 51. How many runs did he score in his 51st innings. (supposing that he lost his wicket in his 51st innings)

Answer : 101

Explanation : Total score after 50 innings = $50 \times 50 = 2500$

Total score after 51 innings = $51 \times 51 = 2601$

So, runs made in the 51st innings = $2601 - 2500 = 101$

If he had not lost his wicket in his 51st innings, he would have scored an unbeaten 50 in his 51st innings.

4. Out of 80 coins, one is counterfeit. What is the minimum number of weighings needed to find out the counterfeit coin?

Answer : 4

5. What can you conclude from the statement : All green are blue, all blue are red. ?

- (i) some blue are green
 - (ii) some red are green
 - (iii) some green are not red
 - (iv) all red are blue
- (a) i or ii but not both
 - (b) i & ii only
 - (c) iii or iv but not both
 - (d) iii & iv

Answer : (b)

6. A rectangular plate with length 8 inches, breadth 11 inches and thickness 2 inches is available. What is the length of the circular rod with diameter 8 inches and equal to the volume of the rectangular plate?

Answer : 3.5 inches

Explanation : Volume of the circular rod (cylinder) = Volume of the rectangular plate

$$\left(\frac{22}{7}\right) \times 4 \times 4 \times h = 8 \times 11 \times 2$$

$$h = \frac{7}{2} = 3.5$$

7. What is the sum of all numbers between 100 and 1000 which are divisible by 14 ?

Answer : 35392

Explanation : The number closest to 100 which is greater than 100 and divisible by 14 is 112, which is the first term of the series which has to be summed.

The number closest to 1000 which is less than 1000 and divisible by 14 is 994, which is the last term of the series.

$$112 + 126 + \dots + 994 = 14(8+9+ \dots + 71) = 35392$$

8. If $s(a)$ denotes square root of a , find the value of $s(12+s(12+s(12+ \dots$ upto infinity.

Answer : 4

Explanation : Let $x = s(12+s(12+s(12+ \dots$

We can write $x = s(12+x)$. i.e., $x^2 = 12 + x$. Solving this quadratic equation, we get $x = -3$ or $x=4$. Sum cannot be -ve and hence sum = 4.

9. A cylindrical container has a radius of eight inches with a height of three inches. Compute how many inches should be added to either the radius or height to give the same increase in volume?

Answer : $16/3$ inches

Explanation : Let x be the amount of increase. The volume will increase by the same amount if the radius increased or the height is increased.

So, the effect on increasing height is equal to the effect on increasing the radius.

i.e., $(22/7)*8*8*(3+x) = (22/7)*(8+x)*(8+x)*3$

Solving the quadratic equation we get the $x = 0$ or $16/3$. The possible increase would be by $16/3$ inches.

10. With just six weights and a balance scale, you can weigh any unit number of kgs from 1 to 364. What could be the six weights?

Answer : 1, 3, 9, 27, 81, 243 (All powers of 3)

11. Diophantus passed one sixth of his life in childhood, one twelfth in youth, and one seventh more as a bachelor; five years after his marriage a son was born who died four years before his father at half his final age. How old is Diophantus?

Answer : 84 years

Explanation : $x/6 + x/12 + x/7 + 5 + x/2 + 4 = x$

12. If time at this moment is 9 P.M., what will be the time 23999999992 hours later?

Answer : 1 P.M.

Explanation : 24 billion hours later, it would be 9 P.M. and 8 hours before that it would be 1 P.M.

13. How big will an angle of one and a half degree look through a glass that magnifies things three times?

Answer : $1 \frac{1}{2}$ degrees

Explanation : The magnifying glass cannot increase the magnitude of an angle.

14. Divide 45 into four parts such that when 2 is added to the first part, 2 is subtracted from the second part, 2 is multiplied by the third part and the fourth part is divided by two, all result in the same number.

Answer: 8, 12, 5, 20

Explanation: $a + b + c + d = 45$; $a+2 = b-2 = 2c = d/2$; $a=b-4$; $c = (b-2)/2$;
 $d = 2(b-2)$; $b-4 + b + (b-2)/2 + 2(b-2) = 45$;

15. I drove 60 km at 30 kmph and then an additional 60 km at 50 kmph. Compute my average speed over my 120 km.

Answer : 37 1/2

Explanation : Time reqd for the first 60 km = 120 min.; Time reqd for the second 60 km = 72 min.; Total time reqd = 192 min

$$\text{Avg speed} = (60 \times 120) / 192 = 37 \frac{1}{2}$$

Questions 16 and 17 are based on the following :

Five executives of European Corporation hold a Conference in Rome

Mr. A converses in Spanish & Italian

Mr. B, a Spaniard, knows English also

Mr. C knows English and belongs to Italy

Mr. D converses in French and Spanish

Mr. E, a native of Italy knows French

16. Which of the following can act as interpreter if Mr. C & Mr. D wish to converse

- a) only Mr. A b) Only Mr. B c) Mr. A & Mr. B d) Any of the other three

Answer : d) Any of the other three.

Explanation : From the data given, we can infer the following.

A knows Spanish, Italian

B knows Spanish, English

C knows Italian, English

D knows Spanish, French

E knows Italian, French

To act as an interpreter between C and D, a person has to know one of the combinations Italian&Spanish, Italian&French, English&Spanish, English&French

A, B, and E know atleast one of the combinations.

17. If a 6th executive is brought in, to be understood by maximum number of original five he should be fluent in

- a) English & French b) Italian & Spanish c) English & French d) French & Italian

Answer : b) Italian & Spanish

Explanation : No of executives who know

i) English is 2

ii) Spanish is 3

iii) Italian is 3

iv) French is 2

Italian & Spanish are spoken by the maximum no of executives. So, if the 6th executive is fluent in Italian & Spanish, he can communicate with all the original five because everybody knows either Spanish or Italian.

18. What is the sum of the first 25 natural odd numbers?

Answer : 625

Explanation : The sum of the first n natural odd nos is square(n).

$$1+3 = 4 = \text{square}(2) \quad 1+3+5 = 9 = \text{square}(3)$$

19. The sum of any seven consecutive numbers is divisible by
a) 2 b) 7 c) 3 d) 11

TEST YOURSELF

Try the following.

1. There are seventy clerks working in a company, of which 30 are females. Also, 30 clerks are married; 24 clerks are above 25 years of age; 19 married clerks are above 25 years, of which 7 are males; 12 males are above 25 years of age; and 15 males are married. How many bachelor girls are there and how many of these are above 25?
2. A man sailed off from the North Pole. After covering 2,000 miles in one direction he turned West, sailed 2,000 miles, turned North and sailed ahead another 2,000 miles till he met his friend. How far was he from the North Pole and in what direction?
3. Here is a series of comments on the ages of three persons J, R, S by themselves.
S : The difference between R's age and mine is three years.
J : R is the youngest.
R : Either I am 24 years old or J 25 or S 26.
J : All are above 24 years of age.
S : I am the eldest if and only if R is not the youngest.
R : S is elder to me.
J : I am the eldest.
R : S is not 27 years old.
S : The sum of my age and J's is two more than twice R's age.
One of the three had been telling a lie throughout whereas others had spoken the truth. Determine the ages of S,J,R.
4. In a group of five people, what is the probability of finding two persons with the same month of birth?
5. A father and his son go out for a 'walk-and-run' every morning around a track formed by an equilateral triangle. The father's walking speed is 2 mph and his running speed is 5 mph. The son's walking and running speeds are twice that of his father. Both start together from one apex of the triangle, the son going clockwise and the father anti-clockwise. Initially the father runs and the son walks for a certain period of time. Thereafter, as soon as the father starts

walking, the son starts running. Both complete the course in 45 minutes. For how long does the father run? Where do the two cross each other?

6. The Director of Medical Services was on his annual visit to the ENT Hospital. While going through the out patients' records he came across the following data for a particular day : " Ear consultations 45; Nose 50; Throat 70; Ear and Nose 30; Nose and Throat 20; Ear and Throat 30; Ear, Nose and Throat 10; Total patients 100." Then he came to the conclusion that the records were bogus. Was he right?
7. Amongst Ram, Sham and Gobind are a doctor, a lawyer and a police officer. They are married to Radha, Gita and Sita (not in order). Each of the wives have a profession. Gobind's wife is an artist. Ram is not married to Gita. The lawyer's wife is a teacher. Radha is married to the police officer. Sita is an expert cook. Who's who?
8. What should come next?
1, 2, 4, 10, 16, 40, 64,

Questions 9-12 are based on the following :

Three adults – Roberto, Sarah and Vicky – will be traveling in a van with five children – Freddy, Hillary, Jonathan, Lupe, and Marta. The van has a driver's seat and one passenger seat in the front, and two benches behind the front seats, one bench behind the other. Each bench has room for exactly three people. Everyone must sit in a seat or on a bench, and seating is subject to the following restrictions:

An adult must sit on each bench.

Either Roberto or Sarah must sit in the driver's seat.

Jonathan must sit immediately beside Marta.

9. Of the following, who can sit in the front passenger seat ?
(a) Jonathan (b) Lupe (c) Roberto (d) Sarah (e) Vicky
10. Which of the following groups of three can sit together on a bench?
(a) Freddy, Jonathan and Marta (b) Freddy, Jonathan and Vicky
(c) Freddy, Sarah and Vicky (d) Hillary, Lupe and Sarah
(e) Lupe, Marta and Roberto
11. If Freddy sits immediately beside Vicky, which of the following cannot be true ?
 - a. Jonathan sits immediately beside Sarah
 - b. Lupe sits immediately beside Vicky
 - c. Hillary sits in the front passenger seat
 - d. Freddy sits on the same bench as Hillary
 - e. Hillary sits on the same bench as Roberto

12. If Sarah sits on a bench that is behind where Jonathan is sitting, which of the following must be true ?
- Hillary sits in a seat or on a bench that is in front of where Marta is sitting
 - Lupe sits in a seat or on a bench that is in front of where Freddy is sitting
 - Freddy sits on the same bench as Hillary
 - Lupe sits on the same bench as Sarah
 - Marta sits on the same bench as Vicky
13. Make six squares of the same size using twelve match-sticks. (Hint : You will need an adhesive to arrange the required figure)
14. A farmer has two rectangular fields. The larger field has twice the length and 4 times the width of the smaller field. If the smaller field has area K, then the area of the larger field is greater than the area of the smaller field by what amount?
(a) 6K (b) 8K (c) 12K (d) 7K
15. Nine equal circles are enclosed in a square whose area is 36sq units. Find the area of each circle.
16. There are 9 cards. Arrange them in a 3*3 matrix. Cards are of 4 colors. They are red, yellow, blue, green. Conditions for arrangement: one red card must be in first row or second row. 2 green cards should be in 3rd column. Yellow cards must be in the 3 corners only. Two blue cards must be in the 2nd row. At least one green card in each row.
17. Is z less than w? z and w are real numbers.
(I) $z^2 = 25$
(II) $w = 9$
To answer the question,
a) Either I or II is sufficient
b) Both I and II are sufficient but neither of them is alone sufficient
c) I & II are sufficient
d) Both are not sufficient
18. A speaks truth 70% of the time; B speaks truth 80% of the time. What is the probability that both are contradicting each other?
19. In a family 7 children don't eat spinach, 6 don't eat carrot, 5 don't eat beans, 4 don't eat spinach & carrots, 3 don't eat carrot & beans, 2 don't eat beans & spinach. One doesn't eat all 3. Find the no. of children.
20. Anna, Bena, Catherina and Diana are at their monthly business meeting. Their occupations are author, biologist, chemist and doctor, but not necessarily in

that order. Diana just told the neighbour, who is a biologist that Catherina was on her way with doughnuts. Anna is sitting across from the doctor and next to the chemist. The doctor was thinking that Bena was a good name for parent's to choose, but didn't say anything. What is each person's occupation?

Test: Percentage

1. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. What are the marks obtained by them?

A. 42, 33	B. 42, 36
C. 44, 33	D. 44, 36
2. If 20% of $a = b$, then $b\%$ of 20 is the same as:

A. None of these	B. 10% of a
C. 4% of a	D. 20% of a
3. Two numbers A and B are such that the sum of 5% of A and 4% of B is two-third of the sum of 6% of A and 8% of B. Find the ratio of A : B.

A. 2 : 1	B. 1 : 2
C. 1 : 1	D. 4 : 3
4. Two employees X and Y are paid a total of Rs. 550 per week by their employer. If X is paid 120 percent of the sum paid to Y, how much is Y paid per week?

A. Rs 150	B. 130
C. Rs. 250	D. Rs. 200
5. If number xx is 10% less than another number yy and yy is 10% more than 125, then find out the value of xx .

A. 123	B. 122
C. 122.25	D. 123.75
6. $\frac{1}{3}\%$ of 240

A. 72	B. 16
C. 80	D. None
7. $\frac{1}{9}\%$ of 900

A. 100	B. 20	C. 81	D. None
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8. What percent is 70 of 280?

- A. 25% B. 50% C. 75% D. None

9. A number increased by 20% gives 480. The number is

- A. 380 B. 420 C. 400 D. 300

10. A' salary is 30% less than B' salary but 25% more than C's salary. If A's salary is Rs.90 less than B's salary, find the salary of C.

- A. 300 B. 125 C. 168 D. 320

Test:- Series

11. Which number would replace the question mark in series
7, 12, 19, ?, 39

- a) 24 b) 28 c) 31 d) 33

12. Which number would replace the question mark in series
5, 9, 17, 29, 45, ?

- a) 50 b) 60 c) 65 d) 70

13. 2, 10, 40, 120, _____

- a) 240 b) 360 c) 470 d) 210

14. Look at this series: 7, 10, 8, 11, 9, 12,
What number should come next?

- a) 7 b) 19 c) 15 d) 18

15. 64, 32, 16, 8, 4, _____

- a) 4 b) 6 c) 2 d) 1

16. Find the wrong number in the given series?
2, 5, 13, 23, 27, 41, 37, 67,

- a) 23 b) 41 c) 37 d) 27

17. Look at this series: 3, 4, 7, 8, 11, 12,....
What number should come next ?

- a) 7 b) 10 c) 15 d) 20

18. 18, 10, 6, 4, _____.

- a) 2 b) 3 c) 5 d) 7

19. ELFA, GLHA, ILJA, _____, MLNA

- a) OLPA b) KLMA c) LLMA d) KLLA

20. FAG, GAF, HAI, IAH, _____

- a) JAK b) HAL c) HAK d) JAI

Test: Choose or find odd number:

21. 43, 53, 63, 73, 83
a) 43 b) 53 c) 63 d) 73
22. 51, 64, 78, 91, 104, 117.
(a) 51 (b) 78 (c) 104 (d) 130
23. 147, 125, 103, 81, 58, 36, 14.
(a) 147 (b) 103 (c) 58 (d) 14
24. 5, 15, 45, 137, 411, 1233.
(a) 137 (b) 1233 (c) 5 (d) None of these.
25. 17, 21, 26, 30, 34, 38, 42.
(a) 21 (b) 26 (c) 30 (d) None of these.
26. Which is the odd one out?
(a) $10 + 9$ (b) $19 - 0$ (c) $95 \div 5$ (d) 19×0
27. Which is the odd one out?
(a) $55 - 44$ (b) $121 \div 11$ (c) $11 + 1$ (d) 11×1
28. Which is the odd one out?
(a) $1 + 5$ (b) $18 - 12$ (c) 3×2 (d) $6 \div 3$
29. 15, 25, 30, 34, 40, 50, 65, 75.
(a) 15 (b) 34 (c) 50 (d) 75
30. 4, 9, 25, 35, 36, 64.
(a) 9 (b) 35 (c) 36 (d) None of these

Test: Coding and Decoding

31. If TAP is coded as SZO, then how is FREEZE coded ?
a) ATSSST b) EQDDYD c) ESDDYD d) EQDDZD
32. In a certain code, SIKKIM is written as THLJLJL, how is TRAINING written in that code?
a) SQBHOHOF b) UQBHOIOF c) UQBHOHOI d) UQBHOHOF
33. In a certain code, MENTION is written as LNEITNO. How is PATTERN written in that code ?
a) ATAETNR b) OTAETNR c) OTAESNR d) STAETNR
34. In a certain code, TOGETHER is written as RQEGRJCT. In the same code, PAROLE will be written as,
a) RYPQJG b) RCPQJG c) NCPQJG d) NCPQJC
35. If COOL is coded as DQRP, then write the code for HOT
a) JQW b) IQW c) IQX d) IPW
36. If in a certain language, COUNSEL is coded as BITIRAK, how is GUIDANCE written in that code ?
a) EOHYZJBB b) FOIYZJBB c) FOHYZJBB d) None of above
37. If FRIEND is coded as HUMJTK, how is CANDLE written in that code ?
a) EDRIRL b) DCQHQK c) DEQJQM d) FYOBOC

A.) North

B.) East

C.) South-East

D.) North-West

46. A man walks 1 km towards East and then he turns to South and walks 5 km. Again he turns to East and walks 2 km, after this he turns to North and walks 9 km. Now, how far is he from his starting point?

A.) 10 km

B.) 9 km

C.) 5 km

D.) 4 km

47. I am facing South. I turn right and walk 20 m. Then I turn right again and walk 10 m. Then I turn left and walk 10 m and then turning right walk 20 m. Then, I turn right again and walk 60 m. In which direction am I from the starting point?

A.) North-East

B.) North-West

C.) North

D.) West

48. A villager went to meet his uncle in another village situated 5 km away in the North-East direction of his own village. From there he came to meet his father-in-law living in a village situated 4 km in the south of his uncle's village. How far away and in what direction is he now?

A.) 4 km in the East

B.) 3 km in the East

C.) 4 km in the west

D.) 3 km in the North

49. Dhanumjay walks 10 m towards the South. Turning to the left, he walks 20 m and then moves to his right. After moving a distance of 20 m, he turns to the right and walks 20 m. Finally, he turns to the right and moves a distance of 10 m. How far and in which direction is he from the starting point?

A.) 20 m North

B.) 20 m South

C.) 10 m North

D.) 10 m South

50. Arjun walked 30 m towards East, took a right turn and walked 40 m. Then he took a left turn and walked 30 m. In which direction is he now from the starting point?

A.) South-East

B.) South

C.) North-East

D.) East

Test: Blood Relations

51. Pointing towards Vaman, Madhav said "I am the only son of his father's one of the sons."

How Vaman is related to Madhav?

A.) Nephew

B.) Uncle

C.) Either father or uncle

D.) Father

52. Pointing to a photograph, Vipul said, "She is the daughter of my grandfather's only son."

How is Vipul related to the girl in the photograph ?

A.) Father

B.) Brother

C.) Uncle

D.) Cousin

53. Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's son. Brothers and sisters I have none." At whose portrait was Harsh looking ?

A.) His son

B.) His nephew

C.) His uncle

D.) His cousin

54. Pointing to a girl in the photograph, Amar said, "Her mother's brother is the only son of my mother's father." How is the girl's mother related to Amar ?

A.) Mother

B.) Sister

C.) Aunt

D.) Grandmother

55. A girl introduced a boy as the son of the daughter of the father of her uncle. The boy is girl's

A.) Brother

B.) Son

C.) Uncle

D.) Son-in-law

56. If X is the brother of the son of Y's son, how is X related to Y ?

A.) Son

B.) Brother

C.) Grandson

D.) Cousin

57. Pointing to a woman in a photograph a man says "She is the daughter-in-law of the mother of my father's only grand son". How is the woman related to the man?

A.) Wife

B.) mother

C.) daughter-in-law

D.) daughter

58. Pointing to a man in a photograph a woman said, "His brother's father is the woman related to the man in the photograph?"

A.) Mother

B.) Aunt

C.) Sister

D.) Daughter

59. Pointing to a photograph, a woman says, "This man's son's sister is my mother-in-law."

How is the woman's husband related to the man in the photograph ?

A.) Grandson

B.) Son

C.) Nephew

D.) Son-in-law

60. When Anuj saw Manish, he recalled, "He is the son of the father of my daughter." Who is Manish ?

A.) Brother-in-law

B.) Brother

C.) Cousin

D.) Uncle

Test: Sitting Arrangements

Directions (Q. 61- 63) Study the following information carefully to answer these questions.

- A. There are five friends.
- B. They are standing in a row facing south.
- C. Jayesh is to the immediate right to Alok.
- D. Pramod is between Bhagat and Subodh .
- E. Subodh is between Jayesh and Pramod.

61. Who is at the extreme left end ?

- a) Jayesh b)Subodh c)Alok d)Bhagat

62. Who is in the Middle ?

- a) Bhagat b) Subodh c)Jayesh d)Pramod

63. To find the answers to the above questions, which of the given statements can be dispensed with ?

- a) None b) A only c)B only d) C only

Directions (Q. 64- 68) Study the following information carefully to answer these questions.

A, B, C, D, E, F and G are sitting on a wall and all of them are facing east.

II. C is on the immediate right of D.

III. B is at an extreme end and has E as his neighbour.

IV. G is between E and F.

V. D is sitting third from the south end.

64. Who is sitting to the Right of E ?

- a) A b) C c) D d)G

65. Which of the following pairs of people are sitting at the extreme ends ?

- a) AE b) AB c) CB d) FB

66. Name the person who should change places with C such that he gets the third place from the north end.

- a) G b)F c)D d)A

67. Immediately between which of the following pairs of people D is sitting ?

- a) AC b) AF c)CF d)CE

68. Which of the conditions given above are not required to find out the place in which A is sitting ?

- a) I b)II c)IV d)All required

Directions (Q. 69- 70) Study the following information carefully to answer these questions.

A. Eleven students, A, B, C, D, E, F, G, H, I, J and K, are sitting in the first row of the class facing the teacher.

B. D who is to the immediate left of F is second to the right of C.

C. A is the second to the right of E, who is at one of the ends.

D. J is the immediate neighbour of A and B and third to the left of G.

E. H is to the immediate left of D and third to the right of I.

69. Who is sitting in the middle of the row ?

a) B b)C c)G d)I

70. Which of the following group is sitting to the right of G ?

a) CHDE b)CHDF c)IBJA d)ICHDF

Test : Age

71. Father is aged three times more than his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?

A. 2 times

B. $2\frac{1}{2}$ times

C. $2\frac{3}{4}$ times

D. 3 times

72. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

A. 4 years

B. 8 years

C. 10 years

D. None of these

73. A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was:

A. 14 years

B. 19 years

C. 33 years

D. 38 years

74. A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, the how old is B?

A. 7

B. 8

C. 9

D. 10

75. Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

A. 24

B. 27

C. 40

D. None of the above

76. A man is 24 years older than his son. In two years, his age will be twice the age of his son. The present age of his son is:

A. 14 years

B. 18 years

C. 20 years

D. 22 Ears

77. Six years ago, the ratio of the ages of Kunal and Sagar was 6 : 5. Four years hence, the ratio of their ages will be 11 : 10. What is Sagar's age at present?

- A. 16 years B. 18 years
C. 20 years D. Cannot be determined

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

- A. 12 years B. 14 years
C. 18 years D. 20 years

79. At present, the ratio between the ages of Arun and Deepak is 4 : 3. After 6 years, Arun's age will be 26 years. What is the age of Deepak at present ?

- A. 12 years B. 15 years
C. 19 and half D. 21 years

80. Sachin is younger than Rahul by 7 years. If their ages are in the respective ratio of 7 : 9, how old is Sachin?

- A. 16 years B. 18 years
C. 28 years D. 24.5 years

Test: Simplification

81. If $a - b = 3$ and $a^2 + b^2 = 29$, find the value of ab .

- A. 10 B. 12
C. 15 D. 18

82. The price of 2 sarees and 4 shirts is Rs. 1600. With the same money one can buy 1 saree and 6 shirts. If one wants to buy 12 shirts, how much shall he have to pay ?

- A.Rs. 1200 B.Rs. 2400
C.Rs. 4800 D.Cannot be determined

83.

A sum of Rs. 1360 has been divided among A, B and C such that A gets $\frac{2}{3}$ of what B gets and B gets $\frac{1}{4}$ of what C gets. B's share is:

- A.Rs. 120 B.Rs. 160
C.Rs. 240 D.Rs. 300

84. A fires 5 shots to B's 3 but A kills only once in 3 shots while B kills once in 2 shots. When B has

missed 27 times, A has killed:

- A.30 birds
- C.72 birds

- B.60 birds
- D.90 birds

85. A man has some hens and cows. If the number of heads be 48 and the number of feet equals 140, then the number of hens will be:

- A.22
- C.24

- B.23
- D.26

86. What decimal of an hour is a second ?

- A..0025
- C..00027

- B..0256
- D..000126

87. If $2994 \div 14.5 = 172$, then $29.94 \div 1.45 = ?$

- A.0.172
- C.17.2

- B.1.72
- D.172

88. The expression $(11.98 \times 11.98 + 11.98 \times x + 0.02 \times 0.02)$ will be a perfect square for x equal to:

- A.0.02
- C.0.04

- B.0.2
- D.0.4

89. $3889 + 12.952 - ? = 3854.002$

- A.47.095
- C.47.932

- B.47.752
- D.47.95

90. The price of commodity X increases by 40 paise every year, while the price of commodity Y increases by 15 paise every year. If in 2001, the price of commodity X was Rs. 4.20 and that of Y was Rs. 6.30, in which year commodity X will cost 40 paise more than the commodity Y ?

- A.2010
- C.2012

- B.2011
- D.2013

Test : Number System

91. Which one of the following is not a prime number?

- A. 31
C. 71

- B. 61
D. 91

92. $(112 \times 5^4) = ?$

- A. 67000
C. 76500

- B. 70000
D. 77200

93. It is being given that $(2^{32} + 1)$ is completely divisible by a whole number. Which of the following numbers is completely divisible by this number?

- A. $(2^{16} + 1)$
C. (7×2^{23})

- B. $(2^{16} - 1)$
D. $(2^{96} + 1)$

94. What least number must be added to 1056, so that the sum is completely divisible by 23 ?

- A. 2
C. 5

- B. 3
D. 21

95. $1397 \times 1397 = ?$

- A. 1951609
C. 18362619

- B. 1981709
D. 2031719

96. How many of the following numbers are divisible by 132 ?

264, 396, 462, 792, 968, 2178, 5184, 6336

- A. 4
C. 6

- B. 5
D. 7

97. $(935421 \times 625) = ?$

- A. 575648125
C. 584649125

- B. 584638125
D. 585628125

98. The largest 4 digit number exactly divisible by 88 is:

- A. 9944
C. 9988

- B. 9768
D. 8888

99. Which of the following is a prime number ?

- A. 33
C. 93

- B. 81
D. 97

100. What is the unit digit in $\{(6374)^{1793} \times (625)^{317} \times (341^{491})\}$?

- A. 0
C. 3

- B. 2
D. 5

Test : Number System

1. The sum of first five prime numbers is:

<u>A.</u> 11	<u>B.</u> 18
<u>C.</u> 26	<u>D.</u> 28

2. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and the 15 as remainder. What is the smaller number ?

<u>A.</u> 240	<u>B.</u> 270
<u>C.</u> 295	<u>D.</u> 360

3. If the number $517*324$ is completely divisible by 3, then the smallest whole number in the place of * will be:

<u>A.</u> 0	<u>B.</u> 1
<u>C.</u> 2	<u>D.</u> None of these

4. Which one of the following numbers is exactly divisible by 11?

<u>A.</u> 235641	<u>B.</u> 245642
<u>C.</u> 315624	<u>D.</u> 415624

5. The sum of first 45 natural numbers is:

<u>A.</u> 1035	<u>B.</u> 1280
<u>C.</u> 2070	<u>D.</u> 2140

6. The difference between the local value and the face value of 7 in the numeral 32675149 is

<u>A.</u> 75142	<u>B.</u> 64851
<u>C.</u> 5149	<u>D.</u> 69993

7. On dividing a number by 56, we get 29 as remainder. On dividing the same number by 8, what will be the remainder ?

<u>A.</u> 4	<u>B.</u> 5
<u>C.</u> 6	<u>D.</u> 7

8. If n is a natural number, then $(6n^2 + 6n)$ is always divisible by:

<u>A.</u> 6 only	<u>B.</u> 6 and 12 both
<u>C.</u> 12 only	<u>D.</u> by 18 only

9. What will be remainder when $(67^{67} + 67)$ is divided by 68 ?

<u>A.</u> 1	<u>B.</u> 63
<u>C.</u> 66	<u>D.</u> 67

10. A 3-digit number $4a3$ is added to another 3-digit number 984 to give a 4-digit number $13b7$, which is divisible by 11. Then, $(a + b) = ?$

<u>A.</u> 10	<u>B.</u> 11
<u>C.</u> 12	<u>D.</u> 15

Test: HCF AND LCM

11. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.
A. 4 B. 7
C. 9 D. 13
12. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:
A. 276 B. 299
C. 322 D. 345
13. The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:
A. 9000 B. 9400
C. 9600 D. 9800
14. The product of two numbers is 4107. If the H.C.F. of these numbers is 37, then the greater number is:
A. 101 B. 107
C. 111 D. 185
15. The G.C.D. of 1.08, 0.36 and 0.9 is:
A. 0.03 B. 0.9
C. 0.18 D. 0.108
16. The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:
A. 1 B. 2
C. 3 D. 4
17. Find the lowest common multiple of 24, 36 and 40.
A. 120 B. 240
C. 360 D. 480
18. The least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3 is:
A. 3 B. 13
C. 23 D. 33
19. The H.C.F. of two numbers is 11 and their L.C.M. is 7700. If one of the numbers is 275, then the other is:
A. 279 B. 283
C. 308 D. 318
20. The smallest number which when diminished by 7, is divisible 12, 16, 18, 21 and 28 is:
A. 1008 B. 1015
C. 1022 D. 1032

Test: Simplification

21. Which of the following fractions is greater than $\frac{3}{4}$ and less than $\frac{5}{6}$?

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

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

C. $\frac{4}{5}$

D. $\frac{9}{10}$

22. $617 + 6.017 + 0.617 + 6.0017 = ?$

A. 6.2963

B. 62.965

C. 629.6357

D. None of these

23. $0.002 \times 0.5 = ?$

A. 0.0001

B. 0.001

C. 0.01

D. 0.1

24. $34.95 + 240.016 + 23.98 = ?$

A. 298.0946

B. 298.111

C. 298.946

D. 299.09

25. How many digits will be there to the right of the decimal point in the product of 95.75 and .02554 ?

A. 5

B. 6

C. 7

D. None of these

Test: Age

26. The present ages of three persons in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years).

A. 8, 20, 28

B. 16, 28, 36

C. 20, 35, 45

D. None of these

27. Ayesha's father was 38 years of age when she was born while her mother was 36 years old when her brother four years younger to her was born. What is the difference between the ages of her parents?

A. 2 years

B. 4 years

C. 6 years

D. 8 years

28. A person's present age is two-fifth of the age of his mother. After 8 years, he will be one-half of the age of his mother. How old is the mother at present?

A. 32 years

B. 36 years

C. 40 years

D. 48 years

Letter: C J O X N Q T Z F

38. 163542

a)XTJCNZ b)TXJCNZ c)XTJCZN d)XTCJNZ

39. 925873

a)ZQCFOJ b)QZCFOJ c) QZCOFJ d)QZCFJO

40. 741568

a)ONCXTF b) NOXCFT c)ONCFCT d)ONXCTF

Test: Directions

41. A man leaves for his office from his house. He walks towards East. After moving a distance of 20 m, he turns South and walks 10 m. Then he walks 35 m towards the West and further 5 m towards the North. He then turns towards East and walks 15 m. What is the straight distance between his initial and final positions?

- A.) 0 B.) 5
C.) 10 D.) None of these

42. Murari walked 40 m towards North, took a left turn and walked 20 m. He again took a left turn and walked for 40 km. How far and in which direction is he from the starting point?

- A.) 20 m West B.) 20 m South
C.) 20 m East D.) 20 m North

43. Nishitha walks 14 m towards west, then turns to her right and walks 14 m and then turns to her left and walks 10 m. Again turning to her left she walks 14 m. What is the shortest distance between her starting point and the present position?

- A.) 14 B.) 24
C.) 34 D.) 44

44. Vinay walks a distance of 3 km towards North, then he turns to his left and walks for 2 km. He again turns left and walks for 3 km. At this point he turns to his left and walks for 3 km. How many km is he from the starting point?

A.) 1 km B.) 2 km

C.) 3 km D.) 4 km

45. Dharma walks 10 km toward North. From there, he walks 6 km towards South. Then, he walks 3 km towards East. How far and in which direction is he with reference to his starting point?

A.) 2 km South-East B.) 5 km South-East

C.) 5 km North-East D.) 5 km West

Test: Choose or find odd number:

46. 8, 12, 16, 21, 24, 28, 32.

(a) 21 (b) 24 (c) 28 (d) 32

47. 111, 133, 143, 155, 188, 200.

(a) 111 (b) 143 (c) 200 (d) None of these.

48. 231, 121, 363, 253, 284, 352, 374.

(a) 121 (b) 284 (c) 374 (d) None of these.

49. Find the odd pair of numbers.

(a) 55 – 42 (b) 69 – 56 (c) 48 – 34 (d) 95 – 82

50. 3, 5, 11, 14, 17, 21

(a) 21 (b) 17 (c) 14 (d) 3

Test: Sitting Arrangements

Directions (Q. 51 -55) Study the following information carefully and answer the questions given below.

Bunty, Dev, Manav, Kavya, Payal, Qasturba, Wasir and Himmat are sitting around a circle facing at the centre. Manav is to the immediate right of Bunty who is 4th to the right of Kavya. Payal is 2nd to the left of Bunty and is 4th to the right of Wasir. Qasturba is 2nd to the right of Dev who is 2nd to the right of Himmat.

Q51. Who is 3rd to the right of Bunty?

a) Wasir b) Manav c) Kavya d) Himmat e) None of these

Q52. Which of the following represents the immediate neighbours of D?

a) Payal and Qasturba b) Kavya and Himmat c) Payal and Himmat
d) Kavya and Qasturba e) Payal and Kavya

Q53. Who is 3rd to the right of Wasir?

- a) Payal b) Dev c) Kavya
d) Qasturba e) Data inadequate

Q54. Who is 2nd to the left of Payal?

- a) Dev b) Himmat c) Kavya
d) Data inadequate e) None of these

Q55. Who is to the immediate left of Bunty?

- a) Qasturba b) Payal c) Wasir
d) Data inadequate e) None of these

Directions (Q. 56 - 60) Study the following information carefully to answer these questions.

Amrit, Bector, Chinky, Deepinder, Eeshwar, Fancy, Gurkamal and Hero are sitting around a circle facing the centre. Fancy is third to the right of Chinky and second to the left of Hero. Deepinder is not an immediate neighbor of Chinky or Hero. Eeshwar is to the immediate right of Amrit, who is second to the right of Gurkamal.

Q56. Who is second to the left of Chinky?

- a) Amrit b) Bector c) Eeshwar d) Deepinder e) None of these

Q57. Who is to the immediate right of Chinky?

- a) Amrit b) Bector c) Deepinder d) Bector or Deepinder e) None of these

Q58. Which of the following pairs of persons has first person sitting to the right of the second person?

- a) Chinky and Bector b) Amrit and Eeshwar c) Fancy and Gurkamal
d) Hero and Amrit e) Deepinder and Bector

Q59. Who sits between Gurkamal and Deepinder?

- a) Hero b) Deepinder c) Fancy
d) Eeshwar e) None of these

Q60. Which of the following is the correct position of Bector with respect to Hero?

- I. Second to the right
II. Fourth to the right

III. Fourth to the left

IV. Second to the left

a) Only I

b) Only II

c) Only III

d) Both II and III

e) None of these

Test:- Series

61. QAR, RAS, SAT, TAU, _____

a) UAV b) UAT c) TAS d) TAT

62. SCD, TEF, UGH, _____, WKL

a) CMN b) UJI c) VIJ d) IJT

63. QPO, NML, KJI, _____, EDC

a) HGF b) CAB c) JKL d) GHI

64. JAK, KBL, LCM, MDN, _____

a) OEP b) NEO c) MEN d) PFQ

65. CMM, EOO, GQQ, _____, KUU

a) GRR b) GSS c) ISS d) ITT

Study the following arrangement carefully and answer the questions(66-70) given below.

B 5 R 1 @ E K 4 F 7 © D A M 2 P 3 % 9 H 1 W 8 * 6 U J \$ V Q #

66. Which of the following is the sixth to the left of the seventeenth from the left end of the above arrangement?

a) © b) 7 c) D d) A

67. Which of the following is exactly in the middle between 7 and \$ in the above arrangement?

a) % b) 9 c) H d) 3

68. Four of the following five are alike in a certain way based on their position in the above arrangement and so form a group. Which is the one that does not belong to that group?

a) PM3 b) KFE c) 6J* d) 7D4

69. How many such symbols are there in the above arrangement each of which is immediately preceded by a number but not immediately followed by a consonant?

a) ONE b) TWO c) THREE d) NONE OF THESE

70. How many such consonants are there in the above arrangement each of which is immediately followed by another consonant but not immediately preceded by a symbol?

a) ONE b) TWO c) THREE d) NONE OF THESE

Test:Sqaure Roots

71. If $x\sqrt{512}=\sqrt{648x}$, find the value of x.

A. 24

B. 12

C. 48

D. 36

72. $\sqrt{5.4756} = ?$

- A. 2.24 B. 1.24
C. 1.34 D. 2.34

73. If $3\sqrt{5} + \sqrt{125} = 17.88$, then what will be the value of $\sqrt{80} + 16\sqrt{5}$?

- A. 21.66 B. 13.41
C. 22.35 D. 44.7

74. The cube root of 0.000729 is

- A. 0.09 B. 0.9
C. 0.21 D. 0.11

75. What is the least perfect square which is divisible by each of 21, 36 and 66?

- A. 213444 B. 214434
C. 214344 D. 231444

76. $\sqrt{144} \times 11 \sqrt{225} \times 15 \sqrt{196}$ is equal to:

- A. 0.85 B. 0.72
C. 2.8 D. 0.4

77. $(\sqrt{7} - 1\sqrt{7})^2$ simplifies to:

- A. $36\sqrt{7}$ B. 736
C. 367 D. $7\sqrt{36}$

78. The square root of 16641 is

- A. 129 B. 121
C. 211 D. 229

79. $\sqrt{0.0576} \times ? = 0.24$.

- A. None of these B. 10
C. 1 D. 0.1

80. $\sqrt{0.000256} \times ? = 1.6$.

- A. 0.1 B. 10
C. 10000 D. 1000

Test: Trains

81. A train is running at a speed of 40 km/hr and it crosses a post in 18 seconds. What is the length of the train?

- A. 190 metres B. 160 metres
C. 200 metres D. 120 metres

82. A train, 130 meters long travels at a speed of 45 km/hr crosses a bridge in 30 seconds. The length of the bridge is

- A. 270 m
C. 235 m
- B. 245 m
D. 220 m

83. A train has a length of 150 meters . it is passing a man who is moving at 2 km/hr in the same direction of the train, in 3 seconds. Find out the speed of the train.

- A. 182 km/hr
C. 152 km/hr
- B. 180 km/hr
D. 169 km/hr

84. A train having a length of 240 m passes a post in 24 seconds. How long will it take to pass a platform having a length of 650 m?

- A. 120 sec
C. 89 s
- B. 99 s
D. 80 s

85. A train 360 m long runs with a speed of 45 km/hr. What time will it take to pass a platform of 140 m long?

- A. 38 sec
C. 44 sec
- B. 35 s
D. 40 s

86. Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively . If they cross each other in 23 seconds, what is the ratio of their speeds?

- A. Insufficient data
C. 1 : 3
- B. 3 : 1
D. 3 : 2

87. A jogger is running at 9 kmph alongside a railway track in 240 meters ahead of the engine of a 120 meters long train . The train is running at 45 kmph in the same direction. how much time does it take for the train to pass the jogger?

- A. 46
C. 18
- B. 36
D. 22

88. Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. If the faster train passes the slower train in 36 seconds, what is the length of each train?

- A. 88
C. 62
- B. 70
D. 50

89. Two trains having length of 140 m and 160 m long run at the speed of 60 km/hr and 40 km/hr respectively in opposite directions (on parallel tracks). The time which they take to cross each other, is

- A. 10.8 s
C. 9.8 s
- B. 12 s
D. 8 s

90. Two trains are moving in opposite directions with speed of 60 km/hr and 90 km/hr respectively. Their lengths are 1.10 km and 0.9 km respectively. the slower train cross the faster train in --- seconds

- A. 56
C. 47
- B. 48
D. 26

Test: Simple Interest

91. How much time will it take for an amount of Rs. 900 to yield Rs. 81 as interest at 4.5% per annum of simple interest?

- A. 2 years
C. 1 year
- B. 3 years
D. 4 years

92. Arun took a loan of Rs. 1400 with simple interest for as many years as the rate of interest. If he paid Rs.686 as interest at the end of the loan period, what was the rate of interest?

- A. 8%
C. 4%
- B. 6%
D. 7%

93. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is :

- A. Rs. 700
C. Rs. 650
- B. Rs. 690
D. Rs. 698

94. A sum fetched a total simple interest of Rs. 929.20 at the rate of 8 p.c.p.a. in 5 years. What is the sum?

- A. Rs. 2323
C. Rs. 2563
- B. Rs. 1223
D. Rs. 2353

95. Mr. Thomas invested an amount of Rs. 13,900 divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508, what was the amount invested in Scheme B?

- A. Rs. 6400
C. Rs. 6500
- B. Rs. 7200
D. Rs. 7500

96. A person borrows Rs.5000 for 2 years at 4% p.a. simple interest. He immediately lends it to another person at $6\frac{1}{4}\%$ p.a for 2 years. Find his gain in the transaction per year.

- A. Rs. 167.50
C. Rs.225
- B. Rs. 150
D. Rs. 112.50

97. What will be the ratio of simple interest earned by certain amount at the same rate of interest for 5 years and that for 15 years?

- A. 3 : 2
C. 2 : 3
- B. 1 : 3
D. 3 : 1

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

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

99. A certain amount earns simple interest of Rs. 1200 after 10 years. Had the interest been 2% more, how much more interest would it have earned?

- A. Rs. 25
C. Rs. 120
- B. None of these
D. Cannot be determined

100. A man took loan from a bank at the rate of 8% p.a. simple interest. After 4 years he had to pay Rs.

6200 interest only for the period. The principal amount borrowed by him was:

A. Rs.17322

B. Rs.20245

C. Rs.18230

D. Rs.19375

1. Sum of three even consecutive numbers is 48, which is the least number

- 1) 16
- 2) 18
- 3) 20
- 4) 14

Sol: Let the numbers be $2n$, $2n+2$ and $2n+4$

$$2n + (2n+2) + (2n+4) = 48$$

$$6n = 48 - 6 = 42, n = 7$$

Hence the numbers are $\rightarrow 14, 16$ and 18

The least number is 14 .

2. The L.C.M of two numbers is 2310 and their H.C.F is 30 . If one number is 210 the Other is
The other number

$$= \text{L.C.M} \times \text{H.C.F} / \text{given number}$$

$$= 2310 \times 30 / 210 = 330$$

15)

3. Five years ago the average age of a family of 3 members was 27 years. A child has Been born, dueto which the average age of the family is 25 years today. What is the Present age of the child?

Average age of the family of 3 members

$$5 \text{ years ago} = 27 \text{ years}$$

Sum of the ages of the 3 members now

$$= (27 + 5) \times 3 = 96 \text{ years}$$

Average age of the family of 4 members now

$$= 25 \text{ years}$$

Sum of the ages of the 4 numbers now

$$= 25 \times 4 = 100 \text{ years}$$

$$\text{Age of child} = 100 - 96 = 4 \text{ years}$$

4. A boy was asked to find the value of $3/8$ of a sum of money. Instead of multiplying The sum by $3/8$ he divided it by $3/8$ and then his answer exceeded by Rs. 55 . Find the Correct be x .

Sol: Let amount be x

$$8/3 \times x - 3/8 \times x = 55$$

$$\rightarrow 64x - 9x/24 = 55 \rightarrow 55x/24 = 55$$

$$\rightarrow x = 24 \times 55 / 55 = 24$$

$$\therefore 3/8 \text{ of } x = 3/8 \times 24 = \text{Rs.}9$$

5. In a boat 25 persons were sitting. Their average weight increased one kilogram when One man goes and a new man comes in. The weight of the new man is 70 kgs. Find the Weight of the man who is going.

Sol: Weight increased per person is 1 kg.

Total increase in weight = 25 kgs

Weight of new man is 70 kgs,

(Which means his weight is 25 kgs heavier)

The weight of the old man was $70 - 25 = 45$ kgs

6. M men agree to purchase a gift for Rs. D . If three men drop out how much more
Will each have to contribute towards the purchase of the gift

- a) $D/(M-3)$
- b) $MD/3$
- c) $M/(D-3)$
- d) $3D/(M^2-3M)$

Ans. D

7. In a class composed of x girls and y boys what part of the class is composed of girls

- a) $y/(x + y)$
- b) x/xy
- c) $x/(x + y)$
- d) y/xy

Ans.C

8. I drove 60 km at 30 kmph and then an additional 60 km at 50 kmph. Compute my average speed over my 120 km.

- (a) 40
- (b) $37 \frac{1}{2}$
- (c) $25 \frac{1}{2}$
- (d) 50

Ans.B

9. If the wheel of a bicycle makes 560 revolutions in travelling 1.1 km, what is its radius?

- (1) 31.25 cm
- (2) 37.75 cm
- (3) 35.15 cm
- (4) 11.25 cm

Correct Answer - (1)

10. A trader gets a profit of 25% on an article. If he buys the article at 10% lesser price and sells it for Rs. 2 less, he still gets 25% profit. Find the actual CP of the article.

Soln: 25% gain \Rightarrow $SP = 1.25CP$1.

Now, CP is 10% less $\Rightarrow 0.9CP$ and SP is Rs. 2 less $\Rightarrow (SP-2)$.

Still, profit is 25% $\Rightarrow (SP-2)=1.25(0.9CP)$, where $SP = 1.25CP$ (From 1)

ø CP = Rs. 16.

11. Which word does NOT belong with the others?

- a. cornea
- b. retina
- c. pupil
- d. vision**

Q.) For Q12. and Q13. find the word that names a *necessary* part of the underlined word.

12. monopoly

- a. corrupt
- b. exclusive**
- c. rich
- d. gigantic

13. facsimile
a. picture
b. image
c. mimeograph
d. copier

14. OIL PAINTING : CANVAS ::
A. etching : acid
B. violin : bow
C. fresco : plaster
D. building : architecture
E. watercolor : brush

15. CHECKERS : CHESS ::
A. tennis : soccer
B. field hockey : ice hockey
C. basketball : gymnastics
D. hearts : bridge
E. square : diamond

Aptitude Questions

1. The value of $\frac{0.1 \times 0.1 \times 0.1 + 0.02 \times 0.02 \times 0.02}{0.2 \times 0.2 \times 0.2 + 0.04 \times 0.04 \times 0.04}$ is:
- A. 0.0125 B. 0.125
C. 0.25 D. 0.5

Answer: Option B

Explanation:

$$\text{Given expression} = \frac{(0.1)^3 + (0.02)^3}{2^3 [(0.1)^3 + (0.02)^3]} = \frac{1}{8} = 0.125$$

2. $\frac{(243)^{n/5} \times 3^{2n+1}}{9^n \times 3^{n-1}} = ?$
- A. 1 B. 2
C. 9 D. 3^n

Answer: Option C

Explanation:

$$\begin{aligned} \text{Given Expression} &= \frac{(243)^{(n/5)} \times 3^{2n+1}}{9^n \times 3^{n-1}} \\ &= \frac{(3^5)^{(n/5)} \times 3^{2n+1}}{(3^2)^n \times 3^{n-1}} \\ &= \frac{(3^{5 \times (n/5)}) \times 3^{2n+1}}{(3^{2n} \times 3^{n-1})} \\ &= \frac{3^n \times 3^{2n+1}}{3^{2n} \times 3^{n-1}} \\ &= \frac{3^{(n+2n+1)}}{3^{(2n+n-1)}} \\ &= \frac{3^{3n+1}}{3^{3n-1}} \\ &= 3^{(3n+1-3n+1)} = 3^2 = 9. \end{aligned}$$

Direction (for Q.No. 3):

Find out the wrong number in the series.

3. 1, 3, 10, 21, 64, 129, 356, 777

A. 10

B. 21

C. 64

D. 129

E. 356

Answer: Option E

Explanation:

$A \times 2 + 1$, $B \times 3 + 1$, $C \times 2 + 1$, $D \times 3 + 1$ and so on.

So, 356 is wrong.

4. In how many ways can the letters of the word 'LEADER' be arranged?

A. 72

B. 144

C. 360

D. 720

E. None of these

Answer: Option C

Explanation:

The word 'LEADER' contains 6 letters, namely 1L, 2E, 1A, 1D and 1R.

$$\therefore \text{Required number of ways} = \frac{6!}{(1!)(2!)(1!)(1!)(1!)} = 360.$$

5. Albert invested an amount of Rs. 8000 in a fixed deposit scheme for 2 years at compound interest rate 5 p.c.p.a. How much amount will Albert get on maturity of the fixed deposit?

A. Rs. 8600

B. Rs. 8620

C. Rs. 8820

D. None of these

Answer: Option C

Explanation:

$$\text{Amount} = \text{Rs. } \left[8000 \times \left(1 + \frac{5}{100} \right)^2 \right]$$

$$= \text{Rs. } \left(8000 \times \frac{21}{20} \times \frac{21}{20} \right)$$

$$= \text{Rs. } 8820.$$

Direction (for Q.No. 6):

Find the odd man out.

6. 10, 25, 45, 54, 60, 75, 80

A. 10

B. 45

C. 54

D. 75

Answer: Option C

Explanation:

Each of the numbers except 54 is multiple of 5.

7. Two number are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is:

A. 27

B. 33

C. 49

D. 55

Answer: Option B

Explanation:

Let the numbers be $3x$ and $5x$.

$$\text{Then, } \frac{3x - 9}{5x - 9} = \frac{12}{23}$$

$$\Rightarrow 23(3x - 9) = 12(5x - 9)$$

$$\Rightarrow 9x = 99$$

$$\Rightarrow x = 11.$$

$$\therefore \text{The smaller number} = (3 \times 11) = 33.$$

8. In a mixture 60 litres, the ratio of milk and water 2 : 1. If the this ratio is to be 1 : 2, then the quantity of water to be further added is:

A. 20 litres

B. 30 litres

C. 40 litres

D. 60 litres

Answer: Option D

Explanation:

$$\text{Quantity of milk} = \left(60 \times \frac{2}{3} \right) \text{ litres} = 40 \text{ litres.}$$

Quantity of water in it = (60 - 40) litres = 20 litres.

New ratio = 1 : 2

Let quantity of water to be added further be x litres.

$$\text{Then, milk : water} = \left(\frac{40}{20 + x} \right).$$

$$\text{Now, } \left(\frac{40}{20 + x} \right) = \frac{1}{2}$$

$$\Rightarrow 20 + x = 80$$

$$\Rightarrow x = 60.$$

\therefore Quantity of water to be added = 60 litres.

9. The fourth proportional to 5, 8, 15 is:

A. 18

B. 24

C. 19

D. 20

Answer: Option B

Explanation:

Let the fourth proportional to 5, 8, 15 be x .

Then, 5 : 8 : 15 : x

$$\Rightarrow 5x = (8 \times 15)$$

$$x = \frac{(8 \times 15)}{5} = 24.$$

10. A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest?

A. 3%

B. 4%

C. 5%

D. 6%

E. None of these

Answer: Option D

Explanation:

$$\text{S.I.} = \text{Rs. } (15500 - 12500) = \text{Rs. } 3000.$$

$$\text{Rate} = \left(\frac{100 \times 3000}{12500 \times 4} \right) \% = 6\%$$

11. A metallic sheet is of rectangular shape with dimensions 48 m x 36 m. From each of its corners, a square is cut off so as to make an open box. If the length of the square is 8 m, the volume of the box (in m^3) is:

A. 4830

B. 5120

C. 6420

D. 8960

Answer: Option B

Explanation:

$$\text{Clearly, } l = (48 - 16)\text{m} = 32 \text{ m,}$$

$$b = (36 - 16)\text{m} = 20 \text{ m,}$$

$$h = 8 \text{ m.}$$

$$\therefore \text{Volume of the box} = (32 \times 20 \times 8) \text{ m}^3 = 5120 \text{ m}^3.$$

12. The reflex angle between the hands of a clock at 10.25 is:

A. 180°

B. $192 \frac{1}{2}^\circ$

C. 195°

D. $197 \frac{1}{2}^\circ$

Answer: Option D

Explanation:

$$\text{Angle traced by hour hand in } \frac{125}{12} \text{ hrs} = \left(\frac{360}{12} \times \frac{125}{12} \right)^\circ = 312 \frac{1}{2}^\circ.$$

$$\text{Angle traced by minute hand in 25 min} = \left(\frac{360}{60} \times 25 \right)^\circ = 150^\circ.$$

$$\therefore \text{Reflex angle} = 360^\circ - \left(312\frac{1}{2} - 150\right)^\circ = 360^\circ - 162\frac{1}{2} = 197\frac{1}{2}.$$

13. The banker's discount on a sum of money for $1\frac{1}{2}$ years is Rs. 558 and the true discount on the same sum for 2 years is Rs. 600. The rate percent is:

- | | |
|--------|--------|
| A. 10% | B. 13% |
| C. 12% | D. 15% |

Answer: Option C

Explanation:

$$\text{B.D. for } \frac{3}{2} \text{ years} = \text{Rs. } 558.$$

$$\begin{aligned} \text{B.D. for 2 years} &= \text{Rs. } \left(558 \times \frac{2}{3} \times 2\right) \\ &= \text{Rs. } 744 \end{aligned}$$

$$\text{T.D. for 2 years} = \text{Rs. } 600.$$

$$\therefore \text{Sum} = \frac{\text{B.D.} \times \text{T.D.}}{\text{B.D.} - \text{T.D.}} = \text{Rs. } \left(\frac{744 \times 600}{144}\right) = \text{Rs. } 3100.$$

Thus, Rs. 744 is S.I. on Rs. 3100 for 2 years.

$$\therefore \text{Rate} = \left(\frac{100 \times 744}{3100 \times 2}\right)\% = 12\%$$

14. What was the day of the week on 28th May, 2006?

- | | |
|-------------|-----------|
| A. Thursday | B. Friday |
| C. Saturday | D. Sunday |

Answer: Option D

Explanation:

$$28 \text{ May, } 2006 = (2005 \text{ years} + \text{Period from } 1.1.2006 \text{ to } 28.5.2006)$$

$$\text{Odd days in } 1600 \text{ years} = 0$$

$$\text{Odd days in } 400 \text{ years} = 0$$

5 years = (4 ordinary years + 1 leap year) = (4 x 1 + 1 x 2) = 6 odd days

Jan. Feb. March April May
(31 + 28 + 31 + 30 + 28) = 148 days

∴ 148 days = (21 weeks + 1 day) = 1 odd day.

Total number of odd days = (0 + 0 + 6 + 1) = 7 = 0 odd day.

Given day is Sunday.

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

A. $\frac{1}{4}$

B. $\frac{1}{10}$

C. $\frac{7}{15}$

D. $\frac{8}{15}$

Answer: Option D

Explanation:

$$\text{A's 1 day's work} = \frac{1}{15};$$

$$\text{B's 1 day's work} = \frac{1}{20};$$

$$\text{(A + B)'s 1 day's work} = \left(\frac{1}{15} + \frac{1}{20} \right) = \frac{7}{60}.$$

$$\text{(A + B)'s 4 day's work} = \left(\frac{7}{60} \times 4 \right) = \frac{7}{15}.$$

$$\text{Therefore, Remaining work} = \left(1 - \frac{7}{15} \right) = \frac{8}{15}.$$

Direction (for Q.No. 16):

Each of the questions given below consists of a statement and / or a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement(s) is / are sufficient to answer the given question. Read the both statements and

- Give answer (A) if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- Give answer (B) if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- Give answer (C) if the data either in Statement I or in Statement II alone are sufficient to answer the question.
- Give answer (D) if the data even in both Statements I and II together are not sufficient to answer the question.
- Give answer (E) if the data in both Statements I and II together are necessary to answer the

question.

16. How much time will the leak take to empty the full cistern?

- I. The cistern is normally filled in 9 hours.
 - II. It takes one hour more than the usual time to fill the cistern because of la leak in the bottom.
- A. I alone sufficient while II alone not sufficient to answer
 - B. II alone sufficient while I alone not sufficient to answer
 - C. Either I or II alone sufficient to answer
 - D. Both I and II are not sufficient to answer
 - E. Both I and II are necessary to answer

Answer: Option E

Explanation:

I. Time taken to fill the cistern without leak = 9 hours.

Part of cistern filled without leak in 1 hour = $\frac{1}{9}$

II. Time taken to fill the cistern in presence of leak = 10 hours.

Net filling in 1 hour = $\frac{1}{10}$

Work done by leak in 1 hour = $\left(\frac{1}{9} - \frac{1}{10}\right) = \frac{1}{90}$

∴ Leak will empty the full cistern in 90 hours.

Clearly, both I and II are necessary to answer the question.

∴ Correct answer is (E).

17. The value of $\log_2 16$ is:

- A. $\frac{1}{8}$
 - B. 4
 - C. 8
 - D. 16
-

Answer: Option B

Explanation:

Let $\log_2 16 = n$.

Then, $2^n = 16 = 2^4 \Rightarrow n = 4$.

$\therefore \log_2 16 = 4$.

18. A 270 metres long train running at the speed of 120 kmph crosses another train running in opposite direction at the speed of 80 kmph in 9 seconds. What is the length of the other train?

- A. 230 m
- B. 240 m
- C. 260 m
- D. 320 m
- E. None of these

Answer: Option A

Explanation:

Relative speed = $(120 + 80)$ km/hr

$$\begin{aligned} &= \left(200 \times \frac{5}{18} \right) \text{m/sec} \\ &= \left(\frac{500}{9} \right) \text{m/sec.} \end{aligned}$$

Let the length of the other train be x metres.

$$\text{Then, } \frac{x + 270}{9} = \frac{500}{9}$$

$$\Rightarrow x + 270 = 500$$

$$\Rightarrow x = 230.$$

19. Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is:

- A. 50 m
- B. 72 m
- C. 80 m
- D. 82 m

Answer: Option A

Explanation:

Let the length of each train be x metres.

Then, distance covered = $2x$ metres.

Relative speed = $(46 - 36)$ km/hr

$$\begin{aligned} &= \left(10 \times \frac{5}{18} \right) \text{m/sec} \\ &= \left(\frac{25}{9} \right) \text{m/sec} \\ \therefore \frac{2x}{36} &= \frac{25}{9} \end{aligned}$$

$$\Rightarrow 2x = 100$$

$$\Rightarrow x = 50.$$

20. A train overtakes two persons who are walking in the same direction in which the train is going, at the rate of 2 kmph and 4 kmph and passes them completely in 9 and 10 seconds respectively. The length of the train is:

A. 45 m

B. 50 m

C. 54 m

D. 72 m

Answer: Option B

Explanation:

$$\begin{aligned} 2 \text{ kmph} &= \left(2 \times \frac{5}{18} \right) \text{m/sec} = \frac{5}{9} \text{m/sec.} \\ 4 \text{ kmph} &= \left(4 \times \frac{5}{18} \right) \text{m/sec} = \frac{10}{9} \text{m/sec.} \end{aligned}$$

Let the length of the train be x metres and its speed by y m/sec.

$$\text{Then, } \left(\frac{x}{y - \frac{5}{9}} \right) = 9 \text{ and } \left(\frac{x}{y - \frac{10}{9}} \right) = 10.$$

$$\therefore 9y - 5 = x \text{ and } 10(9y - 10) = 9x$$

$$\Rightarrow 9y - x = 5 \text{ and } 90y - 9x = 100.$$

On solving, we get: $x = 50$.

\therefore Length of the train is 50 m.

21. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.

A. 4

B. 7

C. 9

D. 13

Answer: Option A

Explanation:

Required number = H.C.F. of $(91 - 43)$, $(183 - 91)$ and $(183 - 43)$

= H.C.F. of 48, 92 and 140 = 4.

22. Which of the following fraction is the largest ?

A. $\frac{7}{8}$

B. $\frac{13}{16}$

C. $\frac{31}{40}$

D. $\frac{63}{80}$

Answer: Option A

Explanation:

L.C.M. of 8, 16, 40 and 80 = 80.

$$\frac{7}{8} = \frac{70}{80}; \quad \frac{13}{16} = \frac{65}{80}; \quad \frac{31}{40} = \frac{62}{80}$$

Since, $\frac{70}{80} > \frac{65}{80} > \frac{63}{80} > \frac{62}{80}$, so $\frac{7}{8} > \frac{13}{16} > \frac{63}{80} > \frac{31}{40}$

So, $\frac{7}{8}$ is the largest.

23. $\frac{.009}{?} = .01$

A. .0009

B. .09

C. .9

D. 9

Answer: Option C

Explanation:

$$\text{Let } \frac{.009}{x} = .01; \quad \text{Then } x = \frac{.009}{.01} = \frac{.9}{1} = .9$$

24. The least perfect square, which is divisible by each of 21, 36 and 66 is:

A. 213444

B. 214344

C. 214434

D. 231444

Answer: Option A

Explanation:

L.C.M. of 21, 36, 66 = 2772.

Now, $2772 = 2 \times 2 \times 3 \times 3 \times 7 \times 11$

To make it a perfect square, it must be multiplied by 7×11 .

So, required number = $2^2 \times 3^2 \times 7^2 \times 11^2 = 213444$

25. If $x = \frac{3+1}{3-1}$ and $y = \frac{3-1}{3+1}$, then the value of $(x^2 + y^2)$ is:

A. 10

B. 13

C. 14

D. 15

Answer: Option C

Explanation:

$$x = \frac{(3+1)}{(3-1)} \times \frac{(3+1)}{(3+1)} = \frac{(3+1)^2}{(3-1)} = \frac{3+1+23}{2} = 2+3.$$
$$y = \frac{(3-1)}{(3+1)} \times \frac{(3-1)}{(3-1)} = \frac{(3-1)^2}{(3+1)} = \frac{3+1-23}{2} = 2-3.$$

$$\begin{aligned}\therefore x^2 + y^2 &= (2 + 3)^2 + (2 - 3)^2 \\ &= 2(4 + 3) \\ &= 14\end{aligned}$$

Direction (for Q.No. 6):

Each of the questions given below consists of a question followed by three statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the question.

26. What is Arun's present age?

- I. Five years ago, Arun's age was double that of his son's age at that time.
- II. Present ages of Arun and his son are in the ratio of 11 : 6 respectively.
- III. Five years hence, the respective ratio of Arun's age and his son's age will become 12 : 7.

- A. Only I and II
- B. Only II and III
- C. Only I and III
- D. Any two of the three
- E. None of these

Answer: Option D

Explanation:

II. Let the present ages of Arun and his son be $11x$ and $6x$ years respectively.

I. 5 years ago, Arun's age = 2 x His son's age.

III. 5 years hence, $\frac{\text{Arun's Age}}{\text{Son's age}} = \frac{12}{7}$

Clearly, any two of the above will give Arun's present age.

∴ Correct answer is (D).

27. If $A = x\%$ of y and $B = y\%$ of x , then which of the following is true?

- A. A is smaller than B. B. A is greater than B
- C. Relationship between A and B cannot be determined. D. If x is smaller than y , then A is greater than B.
- E. None of these

Answer: Option E

Explanation:

$$x\% \text{ of } y = \left(\frac{x}{100} \times y \right) = \left(\frac{y}{100} \times x \right) = y\% \text{ of } x$$

∴ $A = B$.

28. If 20% of $a = b$, then $b\%$ of 20 is the same as:

- A. 4% of a B. 5% of a
- C. 20% of a D. None of these

Answer: Option A

Explanation:

$$20\% \text{ of } a = b \Rightarrow \frac{20}{100}a = b.$$

$$\therefore b\% \text{ of } 20 = \left(\frac{b}{100} \times 20 \right) = \left(\frac{20}{100}a \times \frac{1}{100} \times 20 \right) = \frac{4}{100}a = 4\% \text{ of } a.$$

29. 3 pumps, working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?

- A. 9 B. 10
- C. 11 D. 12

Answer: Option D

Explanation:

Let the required number of working hours per day be x .

More pumps, Less working hours per day (Indirect Proportion)

Less days, More working hours per day (Indirect Proportion)

$$\left. \begin{array}{l} \text{Pumps } 4 : 3 \\ \text{Days } 1 : 2 \end{array} \right\} :: 8 : x$$

$$\therefore 4 \times 1 \times x = 3 \times 2 \times 8$$

$$\Rightarrow x = \frac{(3 \times 2 \times 8)}{(4)}$$

$$\Rightarrow x = 12.$$

30. One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 minutes, then the slower pipe alone will be able to fill the tank in:

A. 81 min.

B. 108 min.

C. 144 min.

D. 192 min.

Answer: Option C

Explanation:

Let the slower pipe alone fill the tank in x minutes.

Then, faster pipe will fill it in $\frac{x}{3}$ minutes.

$$\therefore \frac{1}{x} + \frac{3}{x} = \frac{1}{36}$$

$$\Rightarrow \frac{4}{x} = \frac{1}{36}$$

$$\Rightarrow x = 144 \text{ min.}$$

31. A motorboat, whose speed in 15 km/hr in still water goes 30 km downstream and comes back in a

total of 4 hours 30 minutes. The speed of the stream (in km/hr) is:

A. 4

B. 5

C. 6

D. 10

Answer: Option B

Explanation:

Let the speed of the stream be x km/hr. Then,

Speed downstream = $(15 + x)$ km/hr,

Speed upstream = $(15 - x)$ km/hr.

$$\begin{aligned} \therefore \frac{30}{(15 + x)} + \frac{30}{(15 - x)} &= 4\frac{1}{2} \\ \Rightarrow \frac{900}{225 - x^2} &= \frac{9}{2} \end{aligned}$$

$$\Rightarrow 9x^2 = 225$$

$$\Rightarrow x^2 = 25$$

$$\Rightarrow x = 5 \text{ km/hr.}$$

32. A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:

A. Rs. 2000

B. Rs. 10,000

C. Rs. 15,000

D. Rs. 20,000

Answer: Option C

Explanation:

$$\text{Principal} = \text{Rs.} \left(\frac{100 \times 5400}{12 \times 3} \right) = \text{Rs. } 15000.$$

33. A man walked diagonally across a square lot. Approximately, what was the percent saved by not walking along the edges?

A. 20

B. 24

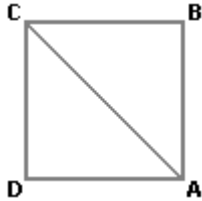
C. 30

D. 33

Answer: Option C

Explanation:

Let the side of the square(ABCD) be x metres.



Then, $AB + BC = 2x$ metres.

$AC = 2x = (1.41x)$ m.

Saving on $2x$ metres = $(0.59x)$ m.

$$\text{Saving \%} = \left(\frac{0.59x}{2x} \times 100 \right) \% = 30\% \text{ (approx.)}$$

34. By investing in $16\frac{2}{3}\%$ stock at 64, one earns Rs. 1500. The investment made is:

A. Rs. 5640

B. Rs. 5760

C. Rs. 7500

D. Rs. 9600

Answer: Option B

Explanation:

To earn Rs. $\frac{50}{3}$, investment = Rs. 64.

To earn Rs. 1500, investment = Rs. $\left(64 \times \frac{3}{50} \times 1500 \right) = \text{Rs. } 5760$.

35. A man buys a watch for Rs. 1950 in cash and sells it for Rs. 2200 at a credit of 1 year. If the rate of interest is 10% per annum, the man:

A. gains Rs. 55

B. gains Rs. 50

C. loses Rs. 30

D. gains Rs. 30

Answer: Option B

Explanation:

S.P. = P.W. of Rs. 2200 due 1 year hence

$$= \text{Rs.} \left[\frac{2200 \times 100}{100 + (10 \times 1)} \right]$$

$$= \text{Rs. } 2000.$$

$$\therefore \text{Gain} = \text{Rs. } (2000 - 1950) = \text{Rs. } 50.$$

Direction (for Q.No. 16):

Find the odd man out.

36. 10, 25, 45, 54, 60, 75, 80

A. 10

B. 45

C. 54

D. 75

Answer: Option C

Explanation:

Each of the numbers except 54 is multiple of 5.

Direction (for Q.Nos. 17 - 19):

Find out the wrong number in the given sequence of numbers.

37. 582, 605, 588, 611, 634, 617, 600

A. 634

B. 611

C. 605

D. 600

Answer: Option A

Explanation:

Alternatively 23 is added and 17 is subtracted from the terms. So, 634 is wrong.

38. 36, 54, 18, 27, 9, 18.5, 4.5

A. 4.5

B. 18.5

C. 54

D. 18

Answer: Option B

Explanation:

The terms are alternatively multiplied by 1.5 and divided by 3. However, 18.5 does not satisfy it.

39. 56, 72, 90, 110, 132, 150

A. 72

B. 110

C. 132

D. 150

Answer: Option D

Explanation:

The numbers are 7×8 , 8×9 , 9×10 , 10×11 , 11×12 , 12×13 .

So, 150 is wrong.

Direction (for Q.No. 20):

Insert the missing number.

40. 8, 24, 12, 36, 18, 54, (...)

A. 27

B. 108

C. 68

D. 72

Answer: Option A

Explanation:

Numbers are alternatively multiplied by 3 and divided by 2.

So, the next number = $54 \div 2 = 27$.

Q41. $0.0024 / .012 * .006 =$

Q42. A square is inscribed in a circle, radius of the circle is 'a'. Area of the square =

Q43. The angle of a triangle is 1:2:2 then the triangle is

Q44. X's salary is 150% of Y, and Z's salary is 75% of Y, their total salary is

Q45. $g(x) = 1 + x/2$, then value of $g(2x)$ in terms of $g(x)$ is

Q46. If $X < Y$, which of the following is greater than X and less than Y

Q47. For the sequence 4, 8, 6, 18, 15,, the next number is

Q48. to find the relationship between X & Y for the given value

Q49. (X^*) is the largest integer but less than X. find the value of $(5.2^*) + (4^*) - (2^*) = ?$

Q50. Series of A_n is given by $(A_{n-1})^3$, if first value of A_n is 1 find the series up to four steps

. In each of the following questions, find out which part of the sentence has an error. if there is no mistake the answer is 'no error'

Q51. My father is / in bad mood / today. / no error

A B C D

Q52: Both the civilians/ and army men / joined the First World War / today. / No error

A B C D

Q53. The school is / with in hundred yards / from my house / no error

A B C D

Q54. As soon as the teacher entered / everyone fell /in a silence / no error

A B C D

Q55. He took to / reading Times / for better knowledge / of the facts./ no error

A B C D E

Q56. I will put on / a note in this regard / for your consideration / and necessary decision./ no error

A B C D E

Q57; He has been working on /the problem from a long time /but is still not / able to solve it./ no error

A B C D E

In each question, a part of sentence is printed in italics. Below each sentence, some phrases are given which can substitute the italicized part of the sentence. If the sentence is correct as it is, the answer is 'No correction required'

Q58. He *did many mischiefs*

- A. made many a mischiefs B. Made much mischief
C. Committed many mischiefs D. No Correction required

Q59 Rohit is *as fast as* or perhaps faster than Manish.

- A. Equally fast B. almost as fast C. as fast D. No Correction required

Q60 *All his family members* are in Kanpur.

- A. All of his family members
B. All the family members if his
C. All the members of his family
D. No Correction required

Q61. I often see him *dancing* the top

- A. rotating
B. encircling
C. dodging

D. No Correction required

Q62: What is the time *in* your watch?

A. on B. by C. from D. No Correction required

Q63: Columbus *invented* America

A. searched B. traced C. discovered D. No Correction required

Q64. Wise men *catch* time by the forelock.

A. Hold B. seize C. take D. No Correction required

Q65. A bird in hand is worth *two in bush*

A. two in the bush b. two at a bush c. two on bush D. No Correction required

Q66. There are 6561 balls out of them 1 is heavy. Find the min. no. of times the balls have to be weighed for finding out the heavy ball.

Q67. If I walk with 30 miles/hr i reach 1 hour before and if i walk with 20 miles/hr i reach 1 hour late. Find the distance between 2 points and the exact time of reaching destination is 11 am then find the speed with which it walks.

Q68. When u reverse the digits of age of father u will get the age of son. one year ago the age of father was twice that of son's age. what are the current ages of father and son?

Q69. In a class there are less than 500 students . when it is divided by 3 it gives a whole number. similarly when it is divided by 4,5 or 7 gives a whole number. find the no. of students in the class

Q70. A coffee seller has two types of coffee Brand A costing 5 bits per pound and Brand B costing 3 bits per pound. he mixes two brands to get a 40 pound mixture. he sold this at 6 bits per pound. the seller gets a profit of $33\frac{1}{2}$ percent. how much he has used Brand A in the mixture?

In each question below are given three Statements followed by three Conclusions numbered I, II and III. You have to take the given Statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given Conclusions logically follows from the given Statements disregarding commonly known facts.

Q71. Statements:

Some cycles are busses.

All cars are buses.

Some buses are trains.

Conclusions:

- I. All cars are cycles.
- II. Some trains are buses.
- III. Some trains are cars.

- (1) None follows
- (2) Only I and II follow
- (3) Only I and III follow
- (4) Only II and III follow
- (5) None of these

Q72 Statements:

- All pencils are sticks.
- Some sticks are notes.
- All diaries are notes.

Conclusions:

- I. Some notes are diaries.
- II. Some sticks are pencils.
- III. Some diaries are sticks.

- (1) All follow
- (2) Only I follows
- (3) Only I and II follow
- (4) Only II follows
- (5) None of these

Q73 Statements:

- Some buds are leaves.
- No leaf is fruit.
- Some fruits are buds.

Conclusions:

- I. Some fruits are leaves.
- II. All buds are fruits.
- III. Some leaves are buds.

- (1) Only I or II follows
- (2) Only III follows
- (3) Only II follows
- (4) None follows
- (5) None of these

Q74 Statements:

- Some birds are animals.
- All animals are rivers.
- Some rivers are lions.

Conclusions:

- I. Some lions are animals
- II. Some rivers are birds
- III. No animal is lion

- (1) Only II follows
- (2) Only either I or III follows
- (3) I and II follows
- (4) only either II or III follow
- (5) None of these

Q75 Statements:

All boxes are
pans
boxes are jugs.
Some jugs are glasses.

Some

Conclusions:

I. Some glasses are boxes
II. No glass is box
III. some jugs are
pans

IV. No jug is pan

- (1) Only I and II follows
- (2) Either I or II and III follows
- (3) Only III follows
- (4) Either I or II , and either III or IV follow
- (5) None of these

Use the following answer choices for the questions below.

- A. Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- B. Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- C. Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- D. Each statement alone is sufficient to answer the question.
- E. Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

Q76 If the average size of 3 accounts is \$1 million, is the smallest account less than \$500,000?

1. The largest account is \$1.3 million.
2. One of the accounts is \$0.7 million.

Q77 Is the product of x and y greater than 60?

1. The sum of x and y is greater than 60.
2. Each of the variables is greater than 2.

Q78 What is the value of y ?

1. $y - 3 = 2$
2. $y^2 = 25$

Q79 What was the percent increase of Company A's stock between June 1 and June 30, 2000?

1. The stock gained \$5 in value during June 2000.
2. The stock rose 12% during the first half of the month

Q80 Which company reported the larger dollar increase in earnings?

1. Company A reported that its earnings increased by 5%.
2. Company B reported that its earnings increased by 7%.

Q81. Ramesh starting from a fixed point goes 15 km towards North and then after turning to his right he goes 15 km. Then he goes 10, 15 and 15 metres after turning to his left each time. How far is he from his starting point?

- (A) 5 metres
- (B) 10 metres
- (C) 20 metres
- (D) 15 metres
- (E) Can not be determined

Q82. Sonalika goes 12 km towards North from a fixed point and then she goes 8 km towards South from there. In the end she goes 3 km towards east. How far and in what direction is she from her starting point?

- (A) 7 km East
- (B) 5 km West
- (C) 7 km West
- (D) 5 km North-East
- (E) None of these

Q83. Kanchan goes 5 m towards east from a fixed point N and then 35 km after turning to her left. Again she goes 10 metres after turning to her right. After this she goes 35 m after turning to her right. How far is she from N ?

- (A) 40 m
- (B) At N
- (C) 10 m
- (D) 15 m
- (E) None of these

Q84. Shri Prakash walked 40 metres facing towards North. From there he walked 50 metres after turning to his left. After this he walked 40 metres after turning to his left. How far and in what direction is he now from his starting point?

- (A) 40 m, North
- (B) 50 m, West
- (C) 10 m, East
- (D) 10 m, West
- (E) None of these

Read the following information carefully and answer the questions given it.

There are six persons A B C D E and F in a school. Each of the teachers teaches two subjects, one compulsory subject and the other optional subject. D's optional subjects was History while there others have it as compulsory subject. E and F have Physics as one of their subjects. F's compulsory subject is Mathematics which is an optional subject of both C and E. History and English are A's subjects but in terms of compulsory and optional subjects, they are just reverse of

those of D's. Chemistry is an optional subject of only one of them. The only female teacher in the school has English as her compulsory subject.

Q85. What is C's compulsory subject?

- A) History B) Physics C) Chemistry D) English E) Mathematics

Q86. Who is a female member in the group?

- A) A B) B C) C D) D E) E

Q87. Which of the following has some compulsory and optional subjects as those of F's ?

- A) D B) B C) A D) C E) None of these

Q88. Disregarding which is the compulsory and which is the optional subject, who has the same two subject combination as F?

- A) A B) B C) E D) D E) None of these

Q89. Which of the following groups has History as the compulsory subject?

- A) A,C,D B) B,C,D C) C,D D) A,B,C E) A,D

In each question below is given a passage followed by several inferences. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

mark your answer as :

A. if the inference is ' definitely true' i.e. , it directly follows from the facts given in the passage

B. if the inference is ' probably true' though not definitely true in the light of the facts given

C. if you think the data are inadequate i.e., from the facts given you cannot say whether the inference is likely to be true or false

D. if you think the inference is ' probably false' though not definitely false in the light of the facts given; and

E. if you think inference is ' definitely false' i.e , it contradicts the given facts.

Passage I

A recent survey shows that India has the lowest death rate for blood cancer. China , Thailand and Myanmar (countries that have taste for spices) also have low rates. Higher rates are found in .S.A where spices are not used. The typical American food remains chicken rolls, butter and beef.

Q90. Americans are unorthodox in their food habits.

Q91. Americans dislike spices

Q92. Spices prevent blood cancer

Q93. Spices promote forms of cancer other than blood cancer

Q94 Chicken rolls , butter and beef promote cancer.

Aptitude Question

Q. No.1) In how many different ways can the letters of the word 'MATHEMATICS' be arranged so that the vowels always come together?

- 10080
- 4989600
- 120960
- None of these

Answer: Option C

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Q. No.2) The value of $\log_2 16$ is?

- 1/8
- 4
- 8
- 16

Answer: Option B

Q. No.3) The average age of 15 students of a class is 15 years. Out of these, the average age of 5 students is 14 years and that of the other 9 students is 16 years. The age of the 15th student is:

- 11 years
- 14 years
- 15 years
- 15 $\frac{2}{7}$ years

Answer: Option A

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Q. No.4) A loan was repaid in two annual instalments of Rs. 112 each. If the rate of interest be 10% per annum compounded annually, the sum borrowed was:

- Rs.200
- Rs.210
- Rs. 217.80
- RS.280

Answer: Option B

Q. No.5) $[(\sqrt{7} + \sqrt{5}) / (\sqrt{7} - \sqrt{5})] + [(\sqrt{7} - \sqrt{5}) / (\sqrt{7} + \sqrt{5})] = ?$

A. 6

B. 12

C. 14

D. 18

Answer: Option B

Q. No.6) If $x = \sqrt{8} - \sqrt{7}$, $y = \sqrt{6} - \sqrt{5}$ and $z = \sqrt{10} - 3$, which of the following is true?

A. $x < z < y$

B. $z < x < y$

C. $x < y < z$

D. $z < y < x$

E. None of these

Answer: Option B

Q. No.7) A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds, all starting at the same point. After what time will they meet again at the starting point?

A. 26 min 18 sec

B. 42 min 36 sec

C. 45 min

D. 46 min 12 sec

Answer: Option D

Q. No.8) Out of 15 consecutive numbers, 2 are chosen at random. The probability that they are both odds and both primes is -.

A. $10/17$

B. $10/19$

C. $46/105$

D. $11/15$

E. Cannot be determined

Answer: Option E

Q. No.9) 10 books are placed at random in a shelf. The probability that a pair of books will always be together is -.

A. $1/10$

B. $9/10$

C. $1/5$

D. $3/10$

E. $1/2$

Answer: Option C

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Q. No.10) If $x = 3 - \sqrt{7}$, then find the value of $x + 1/x$.

A. $1/2 (9 + \sqrt{7})$

B. $1/2 (9 - \sqrt{7})$

C. $1/2 (7 + \sqrt{10})$

D. $1/2 (7 - \sqrt{10})$

Answer: Option B

Q. No.11) EMBEZZLE (Synonym)

Misappropriate

Balance

Remunerate

Clear

Answer: Option A

Q. No.12) The great dancer impressed the appreciative crowd by his nimble movements.

Un Rhythmic

Lively

Quickening

Clear

Answer: Option C

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Q. No.13) The master

P: who was very loyal to him

Q: punished the servant

R: without giving any valid reason

S: when he left the work unfinished

The Proper sequence should be:

A. RQPS

B. RQSP

C. QPSR

D. QRPS

Answer: Option C

Q. No.14) The government has formed a high-level infra-finance committee under the chairmanship of

YV Reddy

Rakesh Mohan

C Rangarajan

YK Alagh

Answer: Option B

Q. No.15) Durgapur Steel Plant was constructed in collaboration with

Britain

France

USA

Germany

Answer: Option A

Q. No.16) Name the Indian Chess player who has broken the World Record by finishing the game in first twelve moves?

A. Vishwanathan Anand

- B. Champa Bose
- C. Sakunthala Devi
- D. Praveen Thipse

Answer: Option A

Read Also:- Common Mistakes You Make in Tests

Q. No.17) Susi Susanti, held the Grand Slam title in which of the following games

- A. Lawn Tennis
- B. Tennis
- C. Badminton
- D. volley ball

Answer & Explanation

Answer: Option C

Q. No.18) The term 'Butterfly Stroke' is associated with

- A. Wrestling
- B. Boxing
- C. Kabaddi
- D. Swimming

Answer: Option D

Q. No.19) Crame Trophy Tennis final held in May 2003 was played between

- A. Leander Paes and David Rickle
- B. John McEnroe and David Rickle
- C. Boris Becker and John McEnroe
- D. Boris Becker and Leander Paes

Answer: Option C

Q. No.20) The Turko-Afghan rule in India lasted for about

- A. two centuries
- B. three centuries
- C. four centuries
- D. a little over one century

Answer: Option B

Q. No.21) The term Nirgrantha is associated with

- A. Ajivikas
- B. Charvakas
- C. Jainas
- D. Pasupatas

Answer: Option C

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Q. No.22) Universities in the Presidency towns in India were established in

- A. 1857
- B. 1858
- C. 1900
- D. 1909

Answer: Option A

Q. No.23) Hitler party which came into power in 1933 is known as

- A. Labour Party
- B. Nazi Party
- C. Ku-Klux-Klan
- D. Democratic Party

Answer: Option B

Q. No.24) Among A, B, C, D, E and F, who is the heaviest?

Statements:

A and D are heavier than B, E and F but none of them is the heaviest.
A is heavier than D but lighter than C.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient

Answer: Option A

Q. No.25) How is 'DATE' written in the code language ?

Statements:

DEAR is written as \$#@? in that code.
TREAT is written as %?#@% in that code.
TEAR is written as %#@? in that code.

- A. Only I and II
- B. Only II and III
- C. All I, II and III
- D. Only I and either II or III
- E. None of these

Answer: Option D

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Q. No.26) What does 'come' represent in a code language ?

Statements:

'pit na tac' means 'come and go' in that code language.

'ja ta da' means 'you are good' in that code language.

'na da rac' means 'you can come' in that code language.

- A. Only I and II
- B. Only II and III
- C. Only I and III
- D. All I, II and III
- E. None of these

Answer: Option C

Q. No.27) Statements: All the bottles are boxes. All the boxes are bags. Some bags are trays.

Conclusions:

Some bottles are trays.

Some trays are boxes.

All the bottles are bags.

Some trays are bags.

- A. Only (3) and (4)
- B. Only (1) and (2)
- C. Only (2) and (3)
- D. Only (1) and (4)

Answer: Option A

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Q. No.28) Each of the following questions is based on the following information:

A # B means B is at 1 metre to the right of A.

A \$ B means B is at 1 metre to the North of A.

A * B means B is at 1 metre to the left of A.

A @ B means B is at 1 metre to the south of A.

In each question first person from the left is facing North.

1. According to X @ B * P, P is in which direction with respect to X?

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

Answer: Option D

2. According to P # R \$ A * U, in which direction is U with respect to P ?

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

Answer: Option C

Q. No.29) Six girls are sitting in a circle facing to the centre of the circle. They are P, Q, R, S, T and V. T is not between Q and S but some other one. P is next to the left of V. R is 4th to the right of P.

Which of the following statement is not true ?

- A. S is just next to the right to R
- B. T is just next to the right of V
- C. R is second to the left of T
- D. P is second to the right of R

Answer: Option C

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Q. No.30) Each of these questions is based on the following information:

M % N means M is the son of N.

M @ N means M is the sister of N.

M \$ N means M is the father of N.

Which of the following shows the relation that C is the granddaughter of E?

A. C % B \$ F \$ E

B. B \$ F \$ E % C

C. C @ B % F % E

D. E % B \$ F \$ C

Answer: Option C