

1: There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of _____) ?

Answer: $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

32 will be the answer.

2: Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

Answer: 20 years.

3: The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?

Answer: 12 years.

4: (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsalmic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsalmic go together. Woody and Mimosaic go together, Woody and Balsalmic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume EXCEPT:

Balsalmic and Lilac

Woody and Lemon

Mimosaic and Woody

Mimosaic and Lilac

Answer: Mimosaic and Lilac.

5: A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings.

Answer: $8 * 7 = 56$

6: A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

Answer: 280.5625

7: What is the distance between the z-intercept from the x-intercept in the equation $ax+by+cz+d=0$. (I do not remember the values of a,b,c,d)

8: An athlete decides to run the same distance in $1/4$ th less time that she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

9: A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what is the average speed of the pony?

10: There are 7 friends (A1,A2,A3....A7). If A1 has to shake hands with all without repeat. How many hand shakes possible?

11: There are two pipes A and B. If A filled 10 liters in an hour B can fill 20 liters in the same time. Likewise B can fill 10, 20, 40, 80, 160....if B filled $\frac{1}{16}$ th of a tank in 3 hours, how much time will it take to fill completely?

Answer: 7 hours

12: (Keywords): Sports readers, 10 tables, 4 chairs per table, each table has a different number of people then how many tables will be left without at least one person?

Ans : 6

13: The ages of two friends are in the ratio 5:6. After how many years will the ages be in the ratio 7:8?

Answer: 10 years.

14: What is the distance of the z-intercept from the x-intercept in the equation $ax+by+cz+d=0$. (I do not remember the values of a,b,c,d)

15: An athlete decides to run the same distance in $\frac{1}{4}$ th less time than she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

16. A man whose age is 45 yrs has 3 sons named John, Jill, Jack. He went to a park weekly twice. He loves his sons very much. On a certain day he found shopkeepers selling different things. An apple costs 1 penny, 2 chocolates cost 1 penny, & 3 bananas cost 1 penny. He has bought an equal number of apples, chocolates & bananas for each son. If the total amount he invests is 7 pence then how many of each he has bought for his son?

a) 1 app, 1 cho, 1 banana

b) 1 app, 2 cho, 3 banana

c) 1 app, 2 cho, 1 banana

17. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bears. For some reason he travelled 1 mile in the north direction & reached the North Pole. There he saw a bear. He then followed the bear around 1 hr with a speed of 2 km/hr in the east direction. After that he travelled in the south direction & reached his lab in 2 hrs. Then what is the color of the bear? I think the answer is white

a) white b) black c) gray d) brown

18. In a particular city there are 100 homes numbered from 1, 2, 3, 100. The city was built by a builder from Chennai. There were 45 shops in the town which were built by a builder from Mumbai. The 2nd builder can build them in $\frac{1}{2}$ time as compared to the 1st builder. If the 2nd builder

builds in 15 days, then how many 2's are used by the builder from Chennai in numbering the 100 homes?

a)17 b)18 c)19 ans d) 20 c)19

19. MR Dash has 3 sons whose ages are respectively a, b, c. The grandfather has bought a cycle for the eldest son, mother has bought a bag for the youngest one which cost Rs150/. The sum of two age of the elder son & one son is 15. The difference of age of sons is 3 & 2. Then what is the age of the eldest son?

a)10, b)11, c) 12, d)13

20. We all know that Arya Bhatta is the greatest mathematician belongs to India. When his daughter Mayabati was in her teen age he discovered a problem. At that time the age of Mayabati is a prime number, let that age is a. After some years her age becomes b. Then Arya Bhatta was able to solve that problem with the help of his daughter Mayabati. If $a-b=5$ & product of a & b is 26 then what is the sum of two squares?

A)77 b) 45 c)89 d)67

21. How many 13 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed? Ans: 5 to the power 12

22. $(40 \times 40 - 40 \times 31 + 31 \times 31) / (40 \times 40 + 40 \times 31 + 31 \times 31) = ?$ a simple calculation

23. $x/2y=2a$, then $2x/x-2ay=?$ (something like this .very easy)

24. A big question describing a story. After that a number is given eg 2880. by what if we divide the number it'll become a perfect square? Ans: 5

25. 1st a story. Then a simple ratio problem. The question was if the ratio of age of two persons is 5:6, sum of present age is 33, then in how many years the ratio of their age becomes 7:8?

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

26. Mr. Behera wants to build a house for his wife. In this there are 5 rooms each having equal area. The length of each room is 4m, breadth is 5 m. the height of the rooms are 2m. if to make a sq meter we need 17 bricks, then how many bricks are needed to make the floor of a particular room?

27. A very big story. on Tuesday college parking place have only 4 wheelers & bicycles, total no of wheels was 182, when what is the possible no of bicycles?

a)20 b) 19 c) 18 d) 17

28. Simple question but big one on average age. sth like a, b, c weighed separately 1st a, b, c, then a & b, then b & c, then c & a at last abc, the last weight was 167, then what will be the avg weight of the 7 weights?

29. Arrange the jumbled letters to make a perfect word RGTEI(sth like this). Find to which category it belong?(not so easy,I was bt able 2 solve the problem .the number of the question was 34)

A)town b)vegetable c)animal d) bird

30. 3 persons a,b,c were there A always says truth,B lies on Monday,tuesday,& Wednesday.but C lies on thursday,Friday & saturday .one day A said"that B & C said to A that" B said "yesterday way one of the days when I lies",C said that"yesterday way one of the days when I lies too".then which day was that?

Ans: a Sunday b thursday c saturday d.Tuesday

31.a long story & with in it a mathematical series present like

8 6 17 14 35 30 71 _ 143.

32. One man want to build a wall the length and breadth of the wall are 20, 30 respectively. He need 35 bricks for one square centimeter then how many bricks he need?

Ans: $l*b*35$ (no of bricks needed for sqcm)

33. one person had three children.he has 7 pennis.then how he can distribute the fruits among his child by folloing conditions.

a)he can get one water millon for 1 penny.

b)he can get 2 oranges for 1 penny.

c)he can get 3 grapes for 1 penny.

Ans:2 water millon 1 orange 1 grape

34. $\frac{1}{3}$ rd of a number is more 3 than the $\frac{1}{6}$ th of a number then find the number?

Ans:18

35. In Tnagar many buildings were under residential category.for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Ans:

For 1 to 10 - 1 six

2 to 20 - 1 six

Similarly upto 59 we utilise six, 5 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans = $5+11+3 = 19$

Ans:19.

36. one grand father has 3 grand child.eldest one age is 3 times of the youngest child age.sum of two youngest child age is more than two of eldest one age.find the eldest one age?

Ans: 15(we can easily predict from options, as we take y as 15)

37.difrence b/w two nubers is 4.and their product is 17.then find the sum of their squers?

Ans: 70 (By using $(x-y)^2=x^2+y^2-2xy$)

38. I dont remember exactly the question, one logical problem stating the colour of beer?

Ans: white.

39. find category from following Jumbled letters, parakeet(answer)

Ans: bird(category)

40. which is the smallest digit when divides the 2880 gives perfect square.?

Ans:5(we can easily predict from options, as we divides them with 2880)

41. I don't have any brothers and sisters.by pointing a picture that man said that his father is my fathers .son then who is he?

Ans:his son.

42. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become

45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas(i dint mention above) in exam which may confuse u on solving technique.

So now we can compute x from above equation. ($x = 41$, $6x = 246$)

Let now we compute y, $((6x+y)/7) = 45$, as we have value of x, compute y.

Ans: 69

43.The ratio b/w the ages of two pwrsons is 6:5.and sum of there ages is 77 then how many years later there ratio becomes 8:7?

Ans: we can easily predict from options

44. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence $d = 22 * 6 = 132$ km,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog = $132/8 = 16.5$ km/hr

Ans:16.5km/hr.

45..six friends go to pizza corner there r 2 types of pizzas.and six different flavors r there they has to select 2 flavors from 6 flavors what's chanches to select?

Ans:6C2

46.3, 22 , 7, 45, 15, ? , 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ($3+4 = 7$, $7+8 = 15$, $15+16=31$)

Similarly for second group (22,45,?) ($22+23 = 45$, $45+46 = 91$) hence ans is 91.

47.cycles and 4 wheelors problem?

Ans: We can easily predict from options

48.some irrivelent data.in last two lines problem will be there.

One man walks certain distance with 5 kmph.and walk back the same

Ans: A

49. A and B tanks are there. $\frac{1}{8}$ th of the tank B is filled in 22 Hrs. What is time to fill the tank full?
50. 5 friends went for week end party to McDonald's restaurant and there they measure their weights. Some irrelevant data. Final measure is 155 kg then find the average weight of 5 people?

Ans: $155/5=31$

51. 2 pots are there. 1st pot is filled with ink and 2nd pot is filled with water. Take 1 spoon of ink from 1st pot and pour it in 2nd pot. And take 1 spoon of mixture from 2nd pot and pour it in 1st pot then which one of the following is true?

Ans: Water in 1st pot is less than the ink in 2nd pot.

52. One electronic problem? Ohm's law

Ans: $V=IR$

53. There are ten spots in library and each spot has 4 tables and ten readers are there. Sorry I don't remember complete question?

Ans: None

54. Lion and tiger are there. Lion lies on Monday, Tuesday, Wednesday and tiger lies on Thursday, Friday, Saturday.

Lion said that today is one of those days when I lie.

Tiger said that today is one of those days when I lie too. Then find today?

Ans: Thursday

55. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. Hence the current average age has become 45. Find the age of seventh person?

Solution: It is given as after 2 yr average age will be 43 so now the average is 41 yr.

After addition of 7th person avg is 45 so 7th person will be $45+(6*(45-41))$

Ans: 69

56. Horse started to chase dog as it relieved stable two hrs ago. And horse started to run with average speed 22 km/hr, horse crossed 10 mts road and two small ponds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. Compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence $d = 22*6 = 132\text{km}$,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog = $132/8 = 16.5\text{km/hr}$

Ans: 16.5km/hr.

57. 3, 22, 7, 45, 15, ?, 31

Solution: Here it appears simple, because it is arranged in sequence manner, but the actual question was somewhat twisted mentioning fibonacci series and moreover question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ($3+4=7$, $7+8=15$, $15+16=31$)

Similarly for second group (22,45,?) ($22+23=45$, $45+46=91$) hence ans is 91.

58. In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many times 6 will appear in building numbering?

Ans:

this type of question if it is asked how many 2,3,4,5,6,7,8,9 then you blindly write the answer as 20. but for 1 answer will be 21 as 100 is included

59. $((4x+3y)+(5x+9y))/(5x+5y) = ?$ as $(x/2y) = 2$

Ans: as $x=2y$ put the value and get the answer.

60: If we subtract a number with y, we get 4 increase of number, once it got divided by y itself.. Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

61. I don't remember exactly the question, one logical problem stating the colour of beer?

Ans: white. whatever the question about the color of beer means you wrote the answer as white because polar bear. this question is very lengthy don't bother about that.

62. Jumbled letters, parakeet(answer)

Ans: bird(category)

63. I'm only son for my parents. (some irrelevant statements in the middle to distract u). The man in picture is my father's son. (some irrelevant statements). who is he?

64. A toy train can make 10 sounds sound changes after every 4 min.....

.....

.....

now train is defective and can make only 2 sounds.....

.....

find probability that same sound is repeated 3 times consecutively (1 OUT OF ___)?

1. 16

2. 8

3. 12

4. 4

ANS:

$$(1/2) * (1/2) * (1/2) = (1/8)$$

thus 1 out of 8

65.

.....

.....

.....

.....

resistance is X ohm voltage Y then what is current

1.

2.

3.

4.

ans: $V=IR$

66. I have 3 grandsons.....

age diff btw 2 of grandsons X yrs

1st grandson is twice elder than younger one

addition of ages of all the three is y

then what is age of eldest grandson?? (there is some value in X and Y)

67. Ferrari is leading car manufacturer. *Ferrari S.p.A.* is an Italian sports car

It has enjoyed great success.

If Mohan's Ferrari is 3 times faster than his old MERCEDES which gave him 35

kmph

if Mohan travelled 490 km in his ferrari

the hw much time(hours) he took??

1.8

2.4

3.7

4.7.33

(options may be different)

68.lion rat stayin in jungle happily.....

Lion lies on : MON TUE WED

RAT lies on :WED THURS SAT

if lion says : I didnt lie yesterday

RAT says : e1 i didnt lie yesterday

so what day is today??

69. The ratio of current age of X and Y is 5:7,after hw many years der age ratio will b 7:9?

70. Inspired by fibonacchi series sanket decided to create is own series which is

1,2,3,7,7,22,15,67,....

lik dis,then what no come immediately before 63?

ans= 202

xpalnaton ;check altenate no.1,3,7,15=====>n*2+1

similarly 2,7,22,67=====>n*3+1

so series is 1,2,3,7,7,22,15,67,31,202,63.....

71. By using 1,2,3,4,5,how many 5 digit no. can be formed which is divisible by 4,repotation of no. is allowed??

Ans-last 2 place should be divisible by 4

So possible values at last place are 12,24,32,44,52 this can be arranged in 5 ways

The rest 3 places can be filled in $5*5*5$ way so total is 5^4

72. The cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent.....

if rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get??

ans: 1 plum ,2 apple,1 banana

xplanation:7/3=2.333 cents for each child

according to ans given for d sum each child will get 1 plum ,2 apple,1 banana

73. 2880 is divided by which smallest no. so we get no. which is perfect square???

ans= 5

xplanation $2880/5=576$ sure sort question.

74. There are to prime no.....(with some nonsense stuff).....

den addition of two prime no is 13,n multiplication is 21,den wat r some of der squares?

Explanation : $XY=21$ and $X+Y=13$...solve using calci..ans of X & Y will b in points..den $x^2+y^2=??$

75. Smita was makin 1 design(again some nonsense)....size of larger cube to be made is $5*5*5$

using smaller cubes of $1*1*1$she created solid larger cube ..den she decided to make hollow cube...

den hw many $1*1*1$ cubes rqd to make hollow larger cube

Ans= 104

Explanation $(25+25)+(15+15)+(12+12)=104$

76. $2X/5Y=5X/3Y$...den wat is x/y

77. A pizza parlor provides pizzas...there wer 2 toppings available initially peperoni and salami. but now they,ve introduces 8 new toppings (some names) to select from.....

a person wishes to buy two DIFFERENT pizzas of NEW topping....in how many ways he can do that??

ans : $8 \times 7=56$

78. Person travels to....(some nonsense stuff).....if he goes from A to B with speed of 4kmph and

returns back to B with speed of 5 kmph....what is his avg. speed of journey??(values may b different)

Ans: 4.44(its NOT 4.5)

Explanation : $2PQ/(P+Q)=2*4*5/(4+5)=4.44\text{kmph}$

79. There is a dice having value frm 1 ..6 on each face.....and a pack of cards having face card aces

(hugh chunk of nonsense).....when 2 dies are thrown and their scores are added then which sum will come max number of times??

1.8

2.9

3.10

4.11

Ans: 8

Explanation : 8----2,6 3,5 4,4

9----4,5 3,6

10----5,5 4,6

11---- 5,6

thus 8's probability is more

80. "susha brought terilon cloth and rope to (some nonsense nw jst go to last 2 lines)...."....

if rope is 153 mtr long and it is to be cut into pieces of 1 mtr long then how many times will she have to cut it??

Ans : 152 times

81. There are some 2 wheelers and 4 wheelers parked(some nonsense).....total number of wheels present is 240

then how many 4 wheelers wer there

Ans-

This can be done by looking at the option first check the no of bicycles and then multiply it by 2.

And then substract the multiplication value from 240 if the value is divided by 4 then that is the answer

82. $\frac{1}{3}$ of a number is 6 more than $\frac{1}{6}$ of that number then what is the number

Ans= $\frac{x}{3}=\frac{x}{6}+6=36$

83. The cost of making a robot consists of material cost,repairing cost,coloring cost and is in the ratio 3:4:5.if the material cost is 1200 then find out the cost of the robot.

Ans- simple 3 part is 1200 so $3+4+5=12$ part=?

84. There are pepsi 1 litre & oil 1 litre .it is given as 1 spoon of pepsi is aken and is mixed with Oil. Then 1 spoon oil&pepsi is taken and is mixed with pepsi then which of the condition holds true.

Ans-the amount of pepsi in oil is mre than amount of oil in pepsi.

85. An tank is filled with water .in first hour 10 lit ,in second hour 20 lit and in 3 rd hour time 40 lit.if time taken to fill $\frac{1}{4}$ of the tank is 5 hr.what is the time required to fill up the tank.

Ans-as the water is filled as twice speed.and in 5 the hour $\frac{1}{4}$.so in 6 hour $\frac{1}{2}$.so answer 7 th hour.

86. Which is the smallest no divides 2880 and gives a perfect square?

a.1 b.2 c.5 d.6 Ans: c

87. Two bowls are taken, one contains water and another contains tea.one spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the second bowl. Which statement will hold good for the above?

(Ans: second liquid in first bowl is smaller than the first mixture in second bowl)

88. Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by4?

a.31250 b.97656 c.78125 d.97657

Ans: c

89. Rearrange and categorize the word 'RAPETEKA'?

Ans: bird

87. In school there are some bicycles and 4wheeler wagons.one Tuesday there are 190 wheels in the campus. How many bicycles are there?

Ans: 15

88. Key words in question (Fibonacci series, infinite series, in the middle of the question one number series is there....I got the series 3 12 7 26 15 ?

Ans:54

(Logic: $3*2+1=7$ $12*2+2=26$
 $7*2+1=15$ $26*2+2=54$)

89. A lies on mon, tues, wed and speak truths on other days, B lies on thur, fri, sat and speaks truths on other days ...one day a said I lied today and B said I too lied today. What is the day?

90. Man, Bear, North, South, walks.

Ans: White

91. A father has 7 penny's with him and 1 water melon is for 1p, 2chickoos for 1p, 3 grapes foe 1p.he has three sons. How can he share the fruits equally?

Ans: 1 watermelon,2chickoos,1grape

92. (1/2) of a number is 3 times more than the (1/6) of the same number?

Ans: 9

93. There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in (1/16) th of a tank in 3 hours, how much time will it take to fill completely?

Ans:7 hours

94. KEYWORDS:T.Nagar,Chennai,1-100,prime numbers b/n 140-180,How many 2's are there?

Ans: 20 (Not only 2's ,1's,3's,4's,5's,6's,7's,8's,9's,0's also 20)

95. A man is standing before a painting of a man and he says I have no bro and sis and his father is my father's son?

Ans: he himself

96. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?

Ans:109

97. What is the value of $[(3x+8Y)/(x-2Y)]$; if $x/2y=2$?

Ans:10 {the numerical may change)

98. A pizza shop made pizzas with to flavours.in home there are 'N' different flavors, in that 'M' flavors are taken to made pizza.in how many ways they can arrange?

(Logic: NcM)

99. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

Ans:15

100. KEYWORDS: one organization ,material labor and maintenance are in the ratio of 4:6:7,the material cost is:100,what is the total cost?

Ans: 425

101. KEYWORDS: density, reluctance, sensitivity, voltage ,current, what is the resistance
Formula is " $R=V/I$ "

102. In a market 4 man are standing .the average age of the four before 4years is 45,after some days one man is added and his age is 49.what is the average weight of all?

Ans: 49

103. KEYWORDS: Sports readers,10 tables,4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

107. KEYWORDS: Die, card, coin, b/n 2 to 12

Ans: All are equal

108. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. what is the average of all the subjects?

Ans: 74.625

109. In a question ,last part has ,the ages of two people has the ratio of 6:6 and by adding the numbers we get 44,after how many years the ratio would be 8:7?

Ans: 8

110.One train travels 200m from A to B with 70 km/ph. and returns to A with 80kmph, what is the average of their speed?

111. Two years before Paul's age is 2times the Alice age and the present age of Paul is 6times the Alice. what is the presents Paul's age???(3years) "u try to solve this question once"

112. There is ferarri and benz car, benz speed is say 10kmph and it cover 10 km.And if ferarri goes with 3 times faster than benz.So in how much time ferarri could take to cover same distance.

sol: as speed of ferarri is $3*10=30$ so time will be $10/30$

113. If one lady have 3 daughter and any of out 3 have diff, of ages is 3.And oldest is 3 times of more than 2 than yougest after 2 years then tell the age of oldest daughter.

Solution: let x is youngest ,y middle ,z oldest. so $y-x=3$, $z-y=3$, and $z=2=2(x+2)$ and put the option answer try to get condition.(sorry i forgot option but pattern ll be same)

114.One question like that ,there is fabonaci series and you have to find one number ..clue-it based on series

116.if a person moves 15km straight and turns 45km right and moves 15km straight then how much distance he needs to walk to reach starting point?

117.if there are 30 cans out of them one is poisoned if a person tastes very little he will die within 14 hours so if there are mice to test and 24 hours ,how many mices are required to find the poisoned can?

.if atlantic is found in atlantic ocean ,india is found in indian ocean then which of the following cases are true

118.if a and b are mixed in 3:5 ration and b,c are mixed in 8:5 ration if the final mixture is 35 litres,find the amount { $a/b=3*8/5*8$ and $b/c=8*5/5*5$ $a/b/c=24:40:25$

ans= $40*35/(24+40+35)=1400/89$

Ans=15.79}

of b in the final mixture

119. $1!+2!+....50!=3*10^64$?

120. 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas(i dint mention above) in exam which may confuse u on solving technique.

Let x be current average age of first 6 persons in queue and current age of seventh person be y. Then $6x$ will become the sum of those 6 persons age.

Now, let compute the sum of those 6 persons after two years, $6x+12$ (as each and individual increase their age by 2). hence its average become $(6x+12)/6 = 43$ (give in question itself).

So now we can compute x from above equation. ($x = 41$, $6x = 246$)

Let now we compute y , $((6x+y)/7) = 45$, as we have value of x , compute y .

Ans: 69

121. Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence $d = 22 * 6 = 132\text{km}$,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog = $132/8 = 16.5\text{km/hr}$

Ans:16.5km/hr.

122. 3, 22 , 7, 45, 15, ? , 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ($3+4 = 7$, $7+8 = 15$, $15+16=31$)

Similarly for second group (22,45,? ($22+23 = 45$, $45+46 = 91$) hence ans is 91.

123. In Tnagar many buildings were under residential category.for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Ans:

For 1 to 10 - 1 six

2 to 20 - 1 six

Similarly upto 59 we utilise six, 5 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans = $5+11+3 = 19$

Ans:19.

124. If we subtract a number with y , we get 4 increase of number, once it got divided by y itself.. Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

125. Im only son for my parents. (some irrelevant statements in the middle to distract u).The man in picture is my father's son.(some irrelevant statements).who is he?

Ans: he himself(blood relation type of question)..

126. It is the class with the seating arrangement in 4 rows and 8 columns. When the teacher says 'start' the girl who is sitting in first row and first column will say 1, then the next girl sitting behind her will say 4, the next girl sitting behind that girl will say 7, in a particular order each girl is telling a number, the following girls told 10, 13 next turn is yours what u will say?16

127. It is dark in my bedroom and I want to get two socks of the same color from my drawer, which contains 24 red and 24 blue socks. How many socks do I have to take from the drawer to get at least two socks of the same color?

2

3

48

25 ; Solution: 3

128.Inspired by fibonacci series sanket decided to create is own series which is

1,2,3,7,7,22,15,67,....

lik dis,then what no come immediately before 63?

ans= 202

xpalnaton ;check altenate no.1,3,7,15=====> $n*2+1$

similarly 2,7,22,67=====> $n*3+1$

so series is 1,2,3,7,7,22,15,67,31,202,63.....

129..valentine day 14 feb 2005,was celebrated by n and u on monday,he was very happy,he n she.....

.....den day on 14 feb 2010???(similar to dis some date qn was der)

130.the cost 1 plum is 1 cent ,2 apples is 1 cent,3 banana is 1 cent.....

if rahul buys same amount of fruits for his 3 sons spending 7 cent den what amount of fruit each child will get??

ans: 1 plum ,2 apple,1 banana

xplanation: $7/3=2.333$ cents for each child

according to ans given for d sum each child will get 1 plum ,2 apple,1 banana

131.there is a dice having value frm 1 ..6 on each face.....and a pack of cards having face card aces

(hugh chunk of nonsense).....when 2 dies are thrown and their scores are added then which sum will come max number of times??

1.8

2.9

3.10

4.11

Ans: 8

explanation : 8----2,6 3,5 4,4

9----4,5 3,6

10----5,5 4,6

11---- 5,6

thus 8's probability is more

132."susha brought terilon cloth and rope to (some nonsense nw jst go to last 2 lines)...."....

if rope is 153 mtr long and it is to be cut into pieces of 1 mtr long then how many times will she have to cut it??

ans : 152 times

133.(dnt remembr the xact q but procedure was somethn lyk this)

.....8th year-- $1/1024$,, 9th year-- $1/512$,, 10th year-- $1/256$ then afr hw many years $1/32$???

ans: 13

134.there are 2 cans A and B one of MILK and other of Water resp. , both of same qty.....

first one teaspoon of milk from A can was added to B can...

then one teaspoon from B can was added to A can then wich of the folloe\wing is true..

1.Can A contain more milk than water in can B

2.Can A contain less milk than water in can B

3.both contain same qty of milk and water

4.

Ans : option--2

135. If a pipe can fill the tank within 6 hrs but due to leak it took 30 min more now if the tank was full how much time will it take to get emptied through the leak?? (I don't remember whole sum exactly) (lil bit tricky sum)

136. Avg wt of class is X kg (some number) after adding wt of the teacher avg wt of class becomes Y kg then what is the wt of the teacher??

137. 20 men shake hand with each other. Maximum no of handshakes without cyclic handshakes.

138. 100 men & women dance with each other. Probability that a man cannot dance with more than two women.

139. Horse chasing a pony. Horse leaves stable after 2 hrs from pony's departure. 4 hrs later catch pony. Find speed of pony. Given speed of horse.

140. A man goes north 37 km, turns left goes 2 km, turns right goes 17 km, turns right goes 2 km. Find distance b/w starting & ending point.

141. Lady has 2 select gloves & hat from a basket in the dark. She can distinguish hat & gloves. 14 red, 20 blue, 18 green are there. Find probability that any selected glove pair has same colour.

142. Alice in Wonderland meets a character goblet whose age is 2 times Alice's. After 2 years age problem

143. Peter is 2 times Paul's age was when Peter's age is same as Paul's present age. Find Paul's age.

144. From a rope a triangle is made of sides 21 cm, 24 cm, 28 cm. From this a square is made. Find area of square.

145. In a supermarket average of 4 people standing in queue taken 2 yrs before is 55 yrs. Now a person of 45 yrs is added current age.

146. A toy can produce 10 different sounds. Now toy is defective to produce 2 sounds in 3 min. Find probability that it produces 6 consecutive is 1 in ()

147. $\frac{1}{6}$ th of a no is 4 times more than $\frac{2}{3}$ of a no. Find no

148. Age of 2 in d ratio 4:5. Total of 2 ages is 55. Aftr 2 yrs age in ratio 5:7 ages

149. A jogger jogs@1/6th of his usual speed. How much % she has 2 increase 2 reach normal pace of walking.

150: X is 3 years yunger to Y. X's father is a businessman who invested 10000/- at 8% rate of interest n obtained his amount after 10 years. Y's father is a job holder who invested around 20000 at 2% rate n obtained his amount after 20 years.Now Compunded both of dem get around ABC rs/-(dnt remenbr).After 5 years the ratio of ages of X n Y is 1:2. Now X's father is 20 years older to Y n Y' father is 30 years more than X. After 20 years again X's mother asks X's father to purchase a LCD TV which costs around 45000/-.

what is the age of X n Y together?

Ans: answer lies in considering two statements 2gether i.e "X is 3 years younger to Y" n "After 5 years the ratio of ages of X n Y is 1:2"

151. 3, 22 , 7, 45, 15, ? , 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 (3+4 =7, 7+8 =15, 15+16=31)

Similarly for second group (22,45,? (22+23 = 45, 45+46 = 91) hence ans is 91.

152. In Tnagar many buildings were under residential category.for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Solution:

For 1 to 10 - 1 six

2 to 20 - 2 six

Similarly upto 59 we utilise six, 6 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans = 5+11+3 = 19

Ans:19.

153. The bacteria had a probability of splitting into three and a probability to die is one third of total bacteria. Let the probability be P . Some of them survived with probability $1/5$. Then which among the following relation is true?

a) $P = 1/3 + 1/5 * 3$

b) $P = 1/5 * (1/3 - 3)$

c)

154. If a tank A can be filled within 10 hrs and tank B is $1/4$ th filled in 19 hrs. Then what is the duration of the tank to fill completely?

155. A man looks at a painting and tells "Neither I have brothers nor sisters, but the person in the painting is my father's son". Then who is in the painting?

156. A lady had fine gloves and hats. 25 blue, 7 red and 9 grey. She had to select a pair among them. But there was no light so she had to select in darkness the correct pair with a glove and a hat. Therefore how many combinations of same color she can select?

157. An old lady had three grandchildren, the difference between two children was 3 years. Her eldest grandchild was 3 times older than the youngest one and the elder one 2 years more than the sum of the other two. Then what is the age of the eldest child?

158. There was a grandmother in a village who had a grandchild. Upon asking her grandchild's age she told that she is as old as many days old as her daughter's age in weeks and as many days as her own age in years. The sum of the three is 130. Then how old is the child?

159. $(98 * 98 * 98 - 73 * 73 * 73) / (98 * 98 * 98 + 73 * 73 * 73) = ?$

8. Which is the smallest number which on dividing 2880 to make it a perfect square?

- a. 6 b. 5 c. 4 d. 3

Ans : 5

160. Leena cut small cubes of 10 cubic cms each. Which she joined to form a cube with 10 cubes length, 5 cubes in depth and 5 cubes wide. How many more small cubes does she require to form a perfect cube?

10. The first two numbers are 1 and 2. The numbers in series are 3, 6, 7, 14, , 32? Which number comes before 32

161. The age of two people is in the ratio 6:8. The sum of their ages is 77. After 2 years the ratio of their ages becomes 5:7. What is their present age?

162. if a and b are mixed in 3:5 ratio and b,c are mixed in 8:5 ratio if the final mixture is 35 litres, find the amount of b in the final mixture

163. A vendor sells 1 apple for 1 penny, 2 grapes for 1 penny, 3 bananas for 1 penny. A man spends 7 penny and gives equal amount of fruits to each of his three daughters. What is the possible number of fruits each daughter gets? Ans: 1 apple, 2 grape, 2 banana

164. 5 persons standing in queue with different age group, two years ago their average age will be X (I couldn't remember) and 6th person joined with them. hence the current average age has become Y (I couldn't remember). find the age of seventh person?

165. Horse started to chase dog as it relieved stable three hrs ago. Avg speed of the horse was given and the time horse chased dog was also given. What is the speed of the dog?

166. 5, 9, 12, 18, 26, 36, 47, 72, --? Here odd terms have differences as multiples of 7 and even terms add with themselves to form the next number. So answer is 75.

167. In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many times 4 will appear in building numbering? Ans: 19

168. Jumbled letters, choices were given whether the word is bird or city or sweet.....parakeet (answer)

Ans: bird (category)

169. Lion tells lie on Monday, Tuesday, and Wednesday. Rat tells lie on Thursday, Friday and Saturday. Both of them speak truth on other days. Lion tells, "Yesterday was one of the days which I tell lying". Rat also tells, "Yesterday was one of the days which I tell lying". what day was yesterday?

170. There were three different gloves. 13 red, 27 black and 40 green. How many gloves one has to take so as to ensure that there is at least one pair in each color?

171. Probability of occurrence of some events was given. Have to find total probability of specified group of events.

172. One person has no siblings and says, "the guy in the photo is the only son of my father's son". What is the relation of the guy to the person?

173. Difference of two numbers is 6. Product of them is 13. What is the sum of their squares?

174. Voltage and current are given, resistance was asked. $V=IR$

175. Speed and distance were given and time taken was asked. $T=D/S$

176. A problem on finding the age of the grand mother.

177. A lady builds 9cm length, 10cm width, 3cm height box using 3 cubic cm cubes. What is the minimum number of cubes required to build the box?

178. When a pair of dice is thrown, what number has the higher probability to occur...the sum of 8 or 9 or 10?

179. A person has to make 146 pieces of a long bar. He takes 4 seconds to cut a piece. What is the total time taken by him in seconds to make 146 pieces?

180) 6 persons standing in queue with different age group, after two years their average age will be 43 and seventh person joined with them. hence the current average age has become 45. find the age of seventh person?

Solution: Here the question appear as an easy one, but carried a lot of unwanted sentences and unwanted datas(i dint mention above) in exam which may confuse u on solving technique.

Let x be current average age of first 6 persons in queue and current age of seventh person be y . Then $6x$ will become the sum of those 6 persons age.

Now, let compute the sum of those 6 persons after two years, $6x+12$ (as each and individual increase their age by 2). hence its average become $(6x+12)/6 = 43$ (give in question itself).

So now we can compute x from above equation. ($x = 41$, $6x = 246$)

Let now we compute y , $((6x+y)/7) = 45$, as we have value of x , compute y .

Ans: 69

181) Horse started to chase dog as it relieved stable two hrs ago. And horse started to ran with average speed 22km/hr, horse crossed 10 mts road and two small pounds with depth 3m, and it crossed two small street with 200 mts length. After traveling 6 hrs, 2hrs after sunset it got dog. compute the speed of dog?

Ans: As we have speed and travel time of horse, we can get distance travelled by it...

Hence $d = 22*6 = 132\text{km}$,

Exactly this 132km was travelled by dog in 8 hours (as it started two hours earlier).

Hence speed of dog = $132/8 = 16.5\text{km/hr}$

Ans:16.5km/hr.

182) 3, 22 , 7, 45, 15, ? , 31

Solution: Here it appear simple, because it arranged in arranged in sequence manner, but the actual question was some what twist mentioning fibonacci series and more over question was in statements (no numbers).. hence first try to understand the question well.

here let group alternate terms 3,7,15,31 ($3+4=7$, $7+8=15$, $15+16=31$)

Similarly for second group (22,45,?) ($22+23=45$, $45+46=91$) hence ans is 91.

183) In Tnagar many buildings were under residential category. for buildings they number as 1 to 100. For shops, corporation numbered between 150 and 200 only prime numbers. how many time 6 will appear in building numbering?

Solution:

For 1 to 10 - 1 six

2 to 20 - 1 six

Similarly upto 59 we utilise six, 5 times

from 60 to 69 (including 66) - 11 times

from 70 to 100 - 3, hence ans = $5+11+3=19$

Ans:19.

184) $((4x+3y)+(5x+9y))/(5x+5y) = ?$ as $(x/2y) = 2$

Ans: 2(simple algebra, i think u no need of explanation)

185) If we subtract a number with y, we get 4 increase of number, once it got divided by y itself.. Find that number??

Ans: 12 (we can easily predict from options, as we take y as 6)

186) I dont remember exactly the question, one logical problem stating the colour of beer?

Ans: white.

187) Jumbled letters, parakeet(answer)

Ans: bird(category)

188) ratio proportional problem with age. Sorry, dint remember exact question.

189) one question like. $(209*144)^2 + (209*209)+(209*144)+(144*144) = ?$

Ans: here you can use calc, many(4 to 5) questions were depend upon calc alone.(no need problem solving technique).

190) I'm only son for my parents. (some irrelevant statements in the middle to distract u). The man in picture is my father's son. (some irrelevant statements). who is he?

Ans: he himself (blood relation type of question).

191 By which number should we divide the number 2880 to make it perfect square?

Ans: 5

192. There is a problem to find out the color of beer. It is full of unwanted data in problem. for that the

Ans: white

193. $\frac{1}{3}$ of some number is 5 more than $\frac{1}{6}$ th of that number. Find the number.

Ans: 30

194. Difference of two numbers is 4 and their product is 13. Find the sum of squares of that numbers.

Note: this problem starts with the story of aryabhata , ignore all and read the problem from last line.

195. How many of 14 digit numbers we can make with 1,2,3,4,5 that are divisible by 4. Repetitions allowed.

Ans: we have calculate the value $(5^{12}) * 4$ (like $5 * 5 * 5 * 5 * 5 * 5 * 5 * 5 * 5 * 5 * 5 * 5 * 4 =$ value will be given in answers check it out)

196. There is a lengthy problem with details of Chennai city. At last they ask how many 6's came when we give numbering to 100 buildings from 1 to 100.

Ans: 20

197. Rearrange the alphabets REGHFTYD (SOMETHING LIKE THAT) . find the type of rearranged word belongs to:

Animal

Tree

Bird

Thing

Ans: c (bird)

198. There is a factory which is producing the bicycles and four wheelers. One day the total production of wheels is 158. Find out the possible no. of bicycles produced

6

7

8

9

Ans: 7 (note: there is a probability of the answer of 19 also for this question . take care of it.) Also they change the total number of wheels to 198.

199. Four years hence the average of 6 members is 45. Now a person is added and the avg becomes 48. What is the age of added person?

Ans: 42

There is another question with diff. details. For that ans is :69 (problem is not remembered but ans is 69 only)

200. A dog two hours early before the horse started. The horse reached the dog after 6 hours with the speed of 16kmph . find the speed of dog. I cant remember the exact figures.

Ans may be 16.5kmph

201. There is a problem with blood relations. A man is saying while pointing to a person who is painting like this:" I am the only son to my father. His father is the son my father". Find the relation to him with the painting person.

ans: his son

202. There is problem on probabilities. There are gloves and hats with three different colors with some totals are given for each type. Then asked to find out the probability of taking the pair of glove and hat of same color in dark.

203. There is a bacteria which has the probability of die $1/3$ of its total number or it may tripled. Find out the probability

$$P=1/3+(2/3*p^3)$$

$$P=2/3+(2/3*p^3)$$

$$P=2/3+(1/3*p^3)$$

$$P=2/3+(2/3*p^3)$$

I marked it as A. check it out

204. There are two tanks A,B. A will be fill up 1ltr in one hour. B tank will fill up double in every hour (like 10, 20, 40, 80, 160.....). if the tank B is filled $1/16$ in 13 hours how much time it will take to fill up totally.

Ans: 17 hours (note: here no need with A tank details. but they gave to confuse, all problems are like this ,avoid unnecessary data)

205. In a hotel we can order two types of varieties, but we can make 6 more varieties in home. One can want the four varieties with two from hotel must. Find how many ways one can order.

Ans: 12 ways

206. There is a series 13,14,27,30,55,62,?, 126. Find the missing.

This is combination of two series; 13,27 55, ? and 14, 30, 62, 126 (14, $14*2+2(30),30*2+2(62),....$)

13, $13*2+1(27)$, $27*2+1(55)$, $?=55*2+1=111$.For this numbers may be changed but the logic is same.

207. There are three frnds x, y , z gone to excursion with their girl frnds. there they wanted to find their weights but their GF's are not accept to check their weight(all unnecessary data) . Then they check weights as x, y, z individually and then x and y, y and z, x and z ,then all(x,y,z). the last measure is 171. Then find the avg of all these seven measures.

208) Two tanks A and B. A fills 1 ltr/1 hr... b fills 10, 20, 30.... per hour. if this is (passage unnecessary). if $1/4$ th tnk of b takes 15 hrs to fill how much it time will t take to fill complete tank?

209) Out of 7 children the youngest is boy then find the probability that all the remaining children are boys

Ans: $1/2^6 = 1/64$

210) The three sides of a triangle are given. 16, 14, 21 cms and this triangle is converted into a square. So what will be the area of the square generated?

Ans: - $(14+16+21)/4$. Then you will get the 1 side of a square and now find the area of a square. i.e., side^2

211) An equation of the form $4x+6y-2z=32$. Find the difference between x intercept and z intercept?

Ans: $x/a+y/b+z/c=1$

212) A toy train can make 10 sounds sound changes after every 4 min.....
..... now train is defective and can make only 2 sounds..... Find probability that same sound is repeated 5 times consecutively (1 OUT OF ___)?

Ans: $1/32$

213)) 20 men and 20 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.

Ans-never

214) 10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

Ans-9

215) In school there are some bicycles and 4wheeler wagons. One Tuesday there are 234 wheels in the campus. How many bicycles are there?

Ans: go with options. multiply each option with 2 and subtract the obtained no from 234. if it is exactly divisible by 4, that is the ans....

216) A father has 7 penny's with him and 1 water melon is for 1p, 2chickoos for 1p, 3 grapes for 1p.he has three sons. How can he share the fruits equally?

Ans: 1 watermelon,2chickoos,1grape

217) A pizza shop made pizzas with two flavours.in home there are '9' different flavors, in that '2' flavors are taken to make pizza in how many ways they can arrange?

(Logic: NcM , $N=9$, $M=2$)

218) one organization ,material ,labor and maintenance are in the ratio of 4:6:7, if the material cost is: 272 ,what is the total cost?

Ans: $4x=272 \implies x=68$; now total cost = $272 + 6(68)+7(68)$.

219) 4 years before Paul's age is 3times the Alice age and the present age of Paul is 6times the Alice. what is the presents Paul's age???

Ans: $x-4 = 3(y-4)$; $x=6y$: solve u will get it..

220) In a question ,last part has ,the ages of two people has the ratio of 6:5 and by adding the numbers we get 55,after how many years the ratio would be 8:7?

Ans: easy u can do it... simple eqtns

221) In a room (unwanted stuff)..... Sports readers,10 tables,4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

222) passage..... joe is taller than jerry and 3 pillars. kistern is shorter than joe and 2 pillars is jerry shorter/taller than kistern ?

Ans:

223) a volume of A are having in a container of sphere... how many semi hemispheres of B volume each will be reqd to transfer all the A in to semi hemispheres.....?

Ans: $A = x B$

224) Question based on $V = l * R$ but in dis question most of data given are ridiculas like volume ,density,length,height similar long story are given

Ans:

225) Peter and Paul are two friends. The sum of their ages is 42 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

Ans:

226) A horse chases a pony 2 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 81 kmph, what s the average speed of the pony? (This question was really long with loads of irrelevant statement)

Ans:

227) difrence b/w two nubers is 4.and their product is 17.then find the sum of their squers?

Ans:

228) A, B, C, D, E are there among A, B, C are boys and D, E are girls =====> D is to the left of A and no girl sits at the middle and at the extemes. Then what is the order of their sittings..

Ans:

229.) some ages problem..... then asked the answer in binary

Ans:

230)(some chetta chikkati sollu)..unwanted data..... folowed by a formula diameter $d = 10 * (t - 14)$, $t > 14$... then what id diameter after $t = 40$..?

Ans:

231) Some denominations question... like u have 31 ps, and tckt cost is between 1 to 31, u have to give the exact denominations for the ticket. find all the no of possible denominations u may prdict and u must be left wid atleast few paise...?

232) Direction problems..... A man goes 50 km NORTH, then turned left walked 40 km, then turned RIGHT...? in which direction is he in?

Ans: NORTH

Questions

233) Out of 6 children the youngest is boy then find the probability that all the remaining children are boys.

Ans: $1/2^5 = 1/32$

234) A man went 1 mile to east den 1 mile to north (un wanted stuff) and killed a bear what is the color of the bear?

Ans: White

235) Some age, average related problems (practice R. S. Aggarwal)

236) $(1/2)$ of a number is 3 times more than the $(1/6)$ of the same number..?

237) There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in $(1/16)$ th of a tank in 3 hours, how much time will it take to fill completely?

Ans: 7 hours

238) In a market 4 man are standing .the average age of the four before 4years is 45, after some days one man is added and his age is 49.what is the average weight of all?

Ans: 49

239) One train travels 200m from A to B with 70 km/ph. and returns to A with 80kmph, what is the average of their speed?

Ans: apply $2xy/x+y$

240) The three sides of a triangle are given.18, 18, 28 cms and this triangle is conveted into a square .so what will be the area of the square generated?

Ans: - $(18+18+28)/4$. Then you will get the 1 side of a square and now find the area of a square.ie, $side^2$

241) An equation of the form $7x+17y+ 3z=54$. Find the difference between x intercept and z intercept?

Hint: $x/a+y/b+z/c=1$

Ans: convert the above equation to this form and see the difference between a and c then you will get the answer

242) Permutation problem don't remember exactly, but it was almost like there are n people sitting. Find the number of handshakes

243) Average wt of class is (some number) kg after adding wt of the teacher average wt of class becomes some number kg then what is the wt of the teacher??

244) A pizza shop, there were 2 kinds of pizzas available. But now they have introduces 8 new types, a person buy two different type pizzas of new type in how many ways he can select?

Ans: $8 \times 7=56$

245) Series Problem like 4 12 x 44 46 132 134. Find x? (I could not solve out this in exam).

246) There are 1000 pillars for a temple. 3 friends Linda, Chelsey, Juli visited that temple. (Som unrelated stuff) Linda is taller than Chelsey and taller than 2 of 1000 pillars. Juli is shorter than Linda. Find the correct sentence?

Linda is shorter among them

Chelsey is taller than Juli

Chelsey is shorter than Juli

Cannot determine who is taller among Chelsey and Juli

Ans:: d

247) A toy train can make 10 sounds sound changes after every 4 min.....

..... now train is defective and can make only 2 sounds..... Find probability that same sound is repeated 3 times consecutively (1 OUT OF __)?

1.16

2.8

3.12

4.4

Ans: $(1/2)*(1/2)*(1/2) = (1/8)$

248) Probability problem (little tricky)

249) Some Statement and Conclusion type problems

250) Entry ticket to an exhibition ranges from 1p to 7p. You need to provide exact change at the counter. You have 7p coin. In how many parts will u divide 7p so that u will provide the exact change required and carry as less coins as possible?

a) 8 b) 7 c) 5 d) 3 (I cud not solve out the answer in exam)

251) Dhoni and Ponting are waiting for the toss to happen. Umpire found that the coin to be tossed is missing. Ponting then takes a dice (1-6) from his pocket and asks the umpire to toss with it. Umpire feels both the captains may not get fair chance with dice. Dhoni den suggests a solution to umpire which den wud give fair chance to both captains. What would be the idea of Dhoni?

Toss the dice if even no comes captain wil win the toss and if it is odd he loses.

(It's the only option I remember and I think its da answer)

252) Now pet's age is to times when paul was once. But at that time paul's age=pet's current age ,how old is pet?

253) Block has 10,9,5 size, how many unit cube is needed to make a block of that size?

254) 23 people are there, they are shaking hands together, how many hand shakes possible, if they are in pair of cyclic sequence.

Ans-22

255) 10men and 10 women are there, they dance with each other, is there possibilty that 2 men are dancing with same women and vice versa.

Ans-never

256) A lady took out jacket and gloves, which are available in blue 26, yellow 30 and red 56. Power goes off, she can distinguish between gloves and jacket but not in colors. What's the possibility that she will pick up pair of gloves of each color

257) B is taller than J and 3 pillars. P is shorter than B and 2 pillars is J shorter/taller than P?

Ans-irrelevant question

258) Sangakara and Ponting select batting by using a dice, but dice is biased so to resolve Ponting takes out a coin, what is the probability that dice shows correct option.

259) In school there are some bicycles and 4-wheeler wagons. One Tuesday there are 58 wheels in the campus. How many bicycles are there?

Ans: 7

260. Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the first bowl. Which statement will hold good for the above?

(Ans: second liquid in first bowl is smaller than the first mixture in second bowl)

261. Which is the smallest number that divides 2880 and gives a perfect square?

a.1 b.2 c.5 d.6

Ans: c

262. Form 8 digit numbers from by using 1, 2,3,4,5 with repetition is allowed and must be divisible by 4?

a.31250 b.97656 c.78125 d.97657

Ans: c

263. One problem on $(a^3-b^3)/(a^2+ab+b^2)$

Ans: 'a-b'

264. Rearrange and categorize the word 'RAPETEKA'?

Ans: bird(parakeet)

265. Key words in question (Fibonacci series, infinite series, in the middle of the question one number series is there....I got the series 3 12 7 26 15 b ?

Ans:54

(Logic: $3*2+1=7$ $12*2+2=26$

$7*2+1=15$ $26*2+2=54$)

266. A father has 7 penny's with him and 1 water melon is for 1p, 2chickoos for 1p, 3 grapes for 1p.he has three sons. How can he share the fruits equally?

Ans: 1 watermelon,2chickoos,1grape

267. A lies on mon, tues, wed and speak truths on other days, B lies on thur, fri, sat and speaks truths on other days.. one day a said I lied today and B said I too lied today. What is the day?

268. Man, Bear, North, South, walks.

Ans: White

269. $(1/2)$ of a number is 3 times more than the $(1/6)$ of the same number?

Ans: 9(for any no it can be true)

270. There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in $(1/16)$ th of a tank in 3 hours, how much time will it take to fill completely?

Ans:7 hours

271. KEYWORDS:T.Nagar,Chennai,1-100,prime numbers b/n 140-180,How many 2's are there?

Ans: 20 (Not only 2's ,1's,3's,4's,5's,6's,7's,8's,9's,0's also 20)

272. One question has last part like difference between two terms is 9 and product of two numbers is 14, what is the squares of sum of numbers?

Ans:109

273. A man is standing before a painting of a man and he says I have no bro and sis and his father is my father's son?

Ans: His son

274. What is the value of $[(3x+8Y)/(x-2Y)]$; if $x/2y=2$?

Ans:10 {the numerical may change}

275. A pizza shop made pizzas

with to flavours.in home there are 'N' different flavors, in that 'M' flavors are taken to made pizza.in how many ways they can arrange?

(Logic: NcM)

276. One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

Ans:18

277. In a market 4 man are standing .the average age of the four before 4years is 45,after some days one man is added and his age is 49.what is the average weight of all?

Ans: 49

278. KEYWORDS: one organization ,material ,labor and maintenance are in the ratio of 4:6:7,the material cost is:100,what is the total cost?

Ans: 425

279. KEYWORDS: density, reluctance, sensitivity, voltage ,current, what is the resistance Formula is " $R=V/I$ "

280. KEYWORDS: Sports readers,10 tables,4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

281. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. what is the average of all the subjects?

Ans:

the xtra 5 marks will be distributed in 8 semester, $5/8=.625$

$74+.625=74.625$

282. In a question ,last part has ,the ages of two people has the ratio of 6:5 and by adding the numbers we get 44,after how many years the ratio would be 8:7?

Ans: 8

283. Two years before Paul's age is 2 times the Alice age and the present age of Paul is 6 times the Alice. what is the present Paul's age???(3years) "u try to solve this question once"

284. One train travels 200m from A to B with 70 km/ph. and returns to A with 80kmph, what is the average of their speed?

Aptitude test

285. A man whose age is 45 yrs has 3 sons named John, jill, jack. He went to a park weekly twice. he loves his sons very much. On a certain day he find # shopkeepers sailing different things. An apple cost 1penny, 2chocolate costs 1penny. & 3 bananas cost 1 penny. He has bought equal no. of apple, chocolate & banana for each son. If the total amount he invest is 7 penny then how many he has bought from each piece for his son?

a) 1app, 1cho, 1 banana

b) 1 app, 2cho, 3 banana

c) 1app, 2cho, 1banana

D) 2 app, 2cho, 2 banana

286. A scientist was researching on animal behavior in his lab. He was very interested in analyzing the behavior of bear. For some reason he travelled 1 mile in north direction & reached at north pole. there he saw a bear. he then followed the bear around 1 hr with a speed of 2km/hr in east direction. After that he travelled in south direction & reached at his lab in 2 hrs. Then what is the colour of the bear? I think ans is white

a) white b) black c) gray d) brown

287. How many 9 digit numbers are possible by using the digits 1,2,3,4,5 which are divisible by 4 if repetition of digits is allowed?

288. Calculation based on $A^3 - B^3$ formula

289. A long story based ALICE AND WONDER LAND after that simple age question .

290. Question based on $V = I * R$ but in dis question most of data given are ridiculous like volume , density, length, height similar long story are given

291. A direct question on blood relation.

292. A big Question describing a story ARYABHATT AND HIS DAUGHTER LILAVATI After that a number is given eg 2088. by what if we divide the number it ll become a perfect square?

2293 1st a story. Then a simple ratio problem. The question was if the ratio of age of two persons is 5:6, sum of present age is 33, then in how many years the ratio of their age becomes 7:8?

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

294. A very big story. on Tuesday college parking place have only 4wheelers & bicycles, total no of wheels was 182, when what is the possible no of bicycles?

a)20 b 19 c 18 d 17

295. Simple question bt big one on average age. sth like a,b,c weighed separately 1st a,b,c, then a& b, then b&c, then c&a at last abc, the last weight was 167, then what will be the avg weight of the 7 weight?

296. Arrange the jumbled letters to make a perfect word RGTEI(sth like this). Find to which category it belong? (plz do not these type q becoz its time consuming)

A)town b)vegetable c)animal d) bird

297) Simple puzzle based on IQ

3 persons a,b,c were there A always says truth, B lies on Monday, Tuesday, & Wednesday. but C lies on Thursday, Friday & Saturday. one day A said "that B & C said to A that" B said "yesterday was one of the days when I lies", C said that "yesterday was one of the days when I lies too". then which day was that?

Ans: a Sunday b Thursday c Saturday d...

298) A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings.

Answer: $8 * 7 = 56$

299) Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

300) Question based on pipe & ciston (geometrical series)

A and B tanks r there. 1/8th of the tank B is filled in 22Hrs. what is time to fill the tank full?

301) 5 friends went for week end party to Mc donalds restrurent and there they measure there weights. some irrrrrrrrrrrrrrilevent data. finel measure is 155 kg then find the average weight of 5 people?

ans: $155/5=31$

302) 2 pots are there. 1st pot is filled with ink and 2nd pot is filled with water. take 1 spoon of ink from 1st pot and pour it in 2nd pot. and take 1 spoon of mixture from 2nd pot and pour it in 2nd pot then which one of following is true?

ans: Water in 1st pot is less than the ink in 2nd pot.

303) There are ten spots in library and each spot has 4 tables and ten readers are there. 10 students come into library and want to study in how many ways that they sit in the library so that no chair would be blank?

ans :1

304. Question 1: There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of _____) ?

Answer: $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

32 will be the answer.

(My friends got similar question with "3 times consecutively"; for that the answer would be 8)

305. Question 2: Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

Luckily, I had this question twice. Initially I left it because of the confusing statement but when I got the same question second time with different names of the friends (Pooja and Prasad) then I gave a little extra time and solved it.

Answer: 20 years. I simply substituted the answers in the statement to find the best fit, because the statement in the question was pretty confusing.

306. Question 3: The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?

Answer: 12 years.

307. Question 4: (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsalmic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsalmic go together. Woody and Mimosaic go together, Woody and Balsalmic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume EXCEPT:

Balsalmic and Lilac

Woody and Lemon

Mimosaic and Woody

Mimosaic and Lilac

Answer: Mimosaic and Lilac. I have made the question here really easy to understand. But the actual question was in a twisted language and it was difficult to find the answer. It took me some time to get to the answer.

308.Question 5: A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings.

Answer: $8 * 7 = 56$

309.Question 6: A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

Answer:280.5625

310.Question 7: What is the distance between the z-intercept from the x-intercept in the equation $ax+by+cz+d=0$. (I do not remember the values of a,b,c,d)

311.Question 8: An athlete decides to run the same distance in $1/4$ th less time that she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

312.Question 9: A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony? (This question was really long with loads of irrelevant statement)

313.Question 10: There is 7 friends (A1,A2,A3....A7).If A1 have to have shake with all with out repeat. How many hand shakes possible?(I dont know the exact question but like this only)

314.Question 11: There are two pipes A and B. If A filled 10 liters in a hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in $(1/16)$ th of a tank in 3 hours, how much time will it take to fill completely?

Answer:7 hours

315.Question 12: KEYWORDS: Sports readers,10 tables,4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

316.) Two pipes A and B fill at A certain rate B is filled at 10,20,40,80,. If $1/16$ of B if filled in 17 hours what time it will take to get completely filled

Ans 21

317.) In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

318) Find $(4x+2y)/(4x-2y)$ if $x/2y=2$

319) Find average speed if a man travels at speed of 24kmph up and 36kmph down at an altitude of 200m. Formula is $2xy/(x+y)$

320.) Same model as 4th question. But it is on flat surface. Formula is same $2xy/(x+y)$.

321) Six friends go to pizza corner there are 2 types of pizzas. And six different flavors are there they have to select 2 flavors from 6 flavors. In how many ways we can select?

Ans: $6C2$

322) 3, 15, x, 51, 53,159,161. Find X

Ans: 17

323) 3 friends A, B, C went for week end party to McDonald's restaurant and there they measure there weights in some order IN 7 rounds. A;B;C;AB;BC;AC;ABC. Final round measure is 155 kg then find the average weight of all the 7 rounds?

Ans: $4(155)/7=31$

324) There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of)?

Ans: $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

325) (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsamic, Lemon, and Woody and MI mosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsamic go together. Woody and MI mosaic go together; Woody and Balsamic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume except:

Balsamic and Lilac

Woody and Lemon

MI mosaic and Woody

MI mosaic and Lilac

326) A triangle is made from a rope. The sides of the triangle are A cm, B cm and C cm (I do not remember the numerical value). What will be the area of the square made from the same rope?

Ans: $((A+B+C)/4)^2$

327) What is the distance of the z-intercept from the x-intercept in the equation $ax+by+cz=d$ (I do not remember the values of a, b, c, d).

Ans: $\sqrt{\left(\frac{d}{a}\right)^2 + \left(\frac{d}{c}\right)^2}$

328) A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location .once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south. Now the color of bear he found will be in:

Ans: white

329) $\left(\frac{1}{3}\right)$ of a number is 3 times more than the $\left(\frac{1}{6}\right)$ of the same number?

Ans is 18

330) There are 11 boys in a family. Youngest child is a boy. What is the probability of all are boys?

a) 2 b) 2! c) 2048 d) 1024

331) A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333yards. We don't want any details of B. Some irrelevant matter. Final question is Time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 pieces of 1 yard each is?

Ans is $2(141) = 282$

332) A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Ans is 15 pounds

333) John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

Ans is 23(cost price + change given).

334) In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

Ans is 4 boys and 3 girls

335) There are certain number of hats and gloves in a box. They are of 41 red, 23 green, 11 orange. Power gone. But a woman can differentiate between hats and gloves.How many draws are required to obtain a pair of each color.

336) There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

If no. is odd it is head, if no. is even it is tail

If no. is odd it is tail, if no. is even it is head

Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

I didn't remember last option and I don't know answer.

337) 2 years ago of A is x times that of B. 3 Years hence the age of A is $\frac{4}{3}$ times of B. What is the present age of B in binary form?

I didn't remember the exact values of x and y . You can solve easily.

338) metal strip of width ' x ' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is ' y '. If ' z ' strips are placed in that manner. What is the final width of that arrangement?

Ans is $(z-1)(y-x) + x$.

339) There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

There are 2 men who danced with equal no. of women's

There are 2 women who danced with equal no. of men

340) A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round

Ans is 28.

341) There are 3 boys A, B, C and 2 Girls D, E. D always sit right to A. Girls never sit in extreme positions and in the middle position. C always sits in the extreme positions. Who is sitting immediate right to E?

Ans is B or C

342) 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

Ans is $12C2$

343) There are 1000 pillars for a temple. 3 friends Linda, Chelsea, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?

Linda is shorter among them

Chelsea is taller than Julia

Chelsea is shorter than Julia

Cannot determine who is taller among Chelsea and Julia

Ans: d

344) Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

a) 22 b) 31 c) 6 d) 32

Ans is 6

345) There are 2 friends Peter and Paul. Peter age is twice as old as Paul when peter was as old as Paul is now. Sum of the present ages of Peter and Paul is 35. What is the present age of Peter?

Ans is 20

346) A lady took out jacket and gloves, which are available in blue 26, yellow 30 and red 56. Power goes off, she can distinguish between gloves and jacket but not in colors. What's the possibility that she will pick up pair of gloves of each color.

347) Two bowls are taken, one contains water and another contains tea. One spoon of water is added to second bowl and mixed well, and a spoon of mixture is taken from second bowl and added to the first bowl. Which statement will hold good for the above?

(Ans: second liquid in first bowl is smaller than the first mixture in second bowl)

348) Rearrange and categorize the word 'RAPETEKA'?

Ans: bird(parakeet)

349) A lies on mon, tues, wed and speak truths on other days, B lies on Thurs, Fri, Sat and speaks truths on other days. One day A said I lied today and B said I too lied today. What is the day?

350) One grandfather has three grandchildren, two of their age difference is 3, eldest child age is 3 times youngest child's age and eldest child's age is two times of sum of other two children. What is the age of eldest child?

Ans: 18

351) Now pet's age is 10 times when paul was once. But at that time paul's age = pet's current age, how old is pet?

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354) 10 men and 10 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.

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Ans-irrelevant question

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Ans: 1 watermelon, 2chickoos, 1grape

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367. Man, Bear, North, South, Walks.

Ans: White

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Ans: 9(for any no it can be true)

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(Logic: NcM)

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Ans: 18

376. In a market 4 man are standing. The average age of the four before 4 years is 45, after some days one man is added and his age is 49. What is the average weight of all?

Ans: 49

377. Keywords: One organization, material, labor and maintenance are in the ratio of 4:6:7, the material cost is: 100, what is the total cost?

Ans: 425

378. Keywords: Density, Reluctance, Sensitivity, Voltage, Current, what is the Resistance Formula is " $R=V/I$ "

379. Keywords: Sports readers, 10 tables, 4 chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

380. Keywords: Die, card, coin, b/n 2 to 12

Ans: All are equal

381. In a school for a student out of a 100 he got 74 of average for 7 subjects and he got 79 marks in 8th subject. what is the average of all the subjects?

The extra 5 marks will be distributed in 8 semester, $5/8=.625$

$74+.625=74.625$

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a.1 b.2 c.5 d.6

Ans: c

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Ans: 15

387. Man, Bear, North, South, walks. Colour of bear(Hint: North pole)

Ans: White

388. A father has 7 penny♦s with him and 1 water melon is for 1p, 2chickoos for 1p, 3 grapes foe 1p.he has three sons. How can he share the fruits equally?

Ans: 1 watermelon, 2chickoos, 1grape

389. $(1/2)$ of a number is 3 times more than the $(1/6)$ of the same number?

Ans: 9

390. There are two pipes A and B. If A filled 10 liters in hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160♦.if B filled in $(1/16)$ th of a tank in 3 hours, how much time will it take to fill completely?

Ans: 7 hours

391. In a market 4 man are standing .the average age of the four before 4years is 45,aftyer some days one man is added and his age is 49.what is the average weight of all?

Ans: 49

392. There are 10 reading spots in a room. Each reading spot has a round table. Each round table has 4 chair. If different no of persons are sitting at each reading spot. And if there are 10 persons inside the room then how many reading spots donot have atleast a single reader.

(1) 5 (2) 6 (3) 7 (4) None

Ans 6. because different no of persons are sitting on round table. So possible differnt combinations for 10 people will be 1 2 3 4. because max 4 people can sit on round table. so round tables left are 6.

393. A person do rock climbing at an altitude of 800 m.He go up by 7 mph. and come down by 9 mph. what was his av speed.

Ans $(7+9)/2=8$.

394. A boy want to make a cuboid of dimension 5m, 6m, 7m. from small cubes of .03 m³. later he realized he can make same cuboid by making it hollow. Then it take some cubes less. What is the no. of these cube.

Ans. Vol of solid cuboid= $5*6*7=210$ m³. Vol of its inner cuboid by removal of which the cuboid will be hollow= $(5-2)*(6-2)*(7-2)=60$ m³, then ans will be $60/.03$

395. Two years ago A was 6 times older than B. Now he is 2 times older than B. What is the age of A.

Ans. Age of A=5, Age of B= Two and half.

396. What is the value of $(78 \cdot 78 \cdot 78 - 45 \cdot 45 \cdot 45) / (78 \cdot 78 + 78 \cdot 45 + 45 \cdot 45)$

Ans. $78 - 45 = 33$. $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$

397) Two pipes A and B fill at a certain rate B is filled at 10, 20, 40, 80, ... If 1/16 of B is filled in 17 hours what time it will take to get completely filled

Ans 21

398) In a shopping mall with a staff of 5 members the average age is 45 years. After 5 years a person joined them and the average age is again 45 years. What's the age of 6th person?

399) Find $(4x + 2y) / (4x - 2y)$ if $x/2y = 2$

400] Find average speed if a man travels at speed of 24 kmph up and 36 kmph down at an altitude of 200m. formula is $2xy / (x + y)$

401) Same model as 4th question. But it is on flat surface. Formula is same $2xy / (x + y)$.

402) Six friends go to pizza corner there are 2 types of pizzas. And six different flavors there they have to select 2 flavors from 6 flavors. In how many ways we can select?

Ans: 6C_2

403) 3, 15, x, 51, 53, 159, 161. Find X

Ans: 17

404) 3 friends A, B, C went for week end party to McDonald's restaurant and there they measure their weights in some order in 7 rounds. A;B;C;AB;BC;AC;ABC. Final round measure is 155 kg then find the average weight of all the 7 rounds?

Ans: $4(155) / 7 = 31$

405) There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of)?

Answer: $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

406) (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsamic, Lemon, and Woody and MI mosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsamic go together. Woody and MI mosaic go together; Woody and Balsamic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume except:

Balsamic and Lilac

Woody and Lemon

MI mosaic and Woody

MI mosaic and Lilac

407) A triangle is made from a rope. The sides of the triangle are A cm, B cm and C cm (I do not remember the numerical value). What will be the area of the square made from the same rope?

Ans: $((A+B+C)/4)^2$

408) What is the distance of the z-intercept from the x-intercept in the equation $ax+by+cz=d$ (I do not remember the values of a, b, c, d).

Ans: $\sqrt{(d/a)^2 + (d/c)^2}$

409) A scientist in Antarctic region conducts research on bears came to know that bears changes according to the location .once he moves 1 mile towards north, then he moves 2 miles towards east, then 1 mile towards south. Now the color of bear he found will be in:

Ans: white

410) $(1/3)$ of a number is 3 times more than the $(1/6)$ of the same number?

Ans is 18

411) There are 11 boys in a family. Youngest child is a boy. What is the probability of all are boys?

a) 2 b) 2! c) 2048 d) 1024

412) A boy bought a roll A of 56 inches wide and 141 yards long. He also bought B of 77 inches wide of length 333yards. We don't want any details of B. Some irrelevant matter. Final question is Time taken for cutting A into 1 yard piece is 2 seconds. Time taken to cut into 141 pieces of 1 yard each is?

Ans is $2(141) = 282$

413) A Person buys a horse for 15 ponds, after one year he sells it for 20 pounds. After one year, again he buys the same horse at 30 pounds and sells it for 40 pounds. What is the profit for that person?

Ans is 15 pounds

414) John buys a cycle for 31 dollars and given a cheque of amount 35 dollars. Shop Keeper exchanged the cheque with his neighbor and gave change to John. After 2 days, it is known that cheque is bounced. Shop keeper paid the amount to his neighbor. The cost price of cycle is 19 dollars. What is the profit/loss for shop keeper?

Ans is 23(cost price + change given).

415) In a family there are some boys and girls. All boys told that they are having equal no of brothers and sisters and girls told that they are having twice the no. of brothers than sisters. How many boys and girls present in a family?

Ans is 4 boys and 3 girls

416) There are certain number of hats and gloves in a box. They are of 41 red, 23 green, 11 orange. Power gone. But a woman can differentiate between hats and gloves. How many draws are required to obtain a pair of each color.

417) There is a die with 10 faces. It is not known that fair or not. 2 captains want to toss die for batting selection. What is the possible solution among the following?

If no. is odd it is head, if no. is even it is tail

If no. is odd it is tail, if no. is even it is head

Toss a die until all the 10 digits appear on top face. And if first no. in the sequence is odd then consider it as tail. If it is even consider it as head.

I didn't remembered last option and I don't know answer.

418) 2 years ago of A is x times that of B. 3 Years hence the age of A is $\frac{4}{3}$ times of B. What is the present age of B in binary form?

I didn't remember the exact values of x and y . You can solve easily.

419) metal strip of width ' x ' cm. 2 metal strips are placed one over the other, then the combine length of 2 strips is ' y '. If ' z ' strips are placed in that manner. What is the final width of that arrangement?

Ans is $(z-1)(y-x) + x$.

420) There are 100 men and 100 women on the dance floor. They want to dance with each other. Then which of the following statements is always true:

There are 2 men who danced with equal no. of women's

There are 2 women who danced with equal no. of men

421) A game is played between 2 players and one player is declared as winner. All the winners from first round are played in second round. All the winners from second round are played in third round and so on. If 8 rounds are played to declare only one player as winner, how many players are played in first round

Ans is 28.

422) There are 3 boys A, B, C and 2 Girls D, E. D always sit right to A. Girls never sit in extreme positions and in the middle position. C always sits in the extreme positions. Who is sitting immediate right to E?

Ans is B or C

423) 49 members attended the party. In that 22 are males, 17 are females. The shake hands between males, females, male and female. Total 12 people given shake hands. How many such kinds of such shake hands are possible?

Ans is $12C2$

424) There are 1000 pillars for a temple. 3 friends Linda, Chelsea, Juli visited that temple. (Some unrelated stuff) Linda is taller than Chelsea and taller than 2 of 1000 pillars. Julia is shorter than Linda. Find the correct sentence?

Linda is shorter among them

Chelsea is taller than Julia

Chelsea is shorter than Julia

Cannot determine who is taller among Chelsea and Julia

Ans: d

425) Entry ticket to an exhibition ranges from 1p to 31p. You need to provide exact change at the counter. You have 31p coin. In how many parts will u divide 31p so that u will provide the exact change required and carry as less coins as possible?

a) 22 b) 31 c) 6 d) 32

Ans is 6

426) There are 2 friends Peter and Paul. Peter age is twice as old as Paul when peter was as old as Paul is now. Sum of the present ages of Peter and Paul is 35. What is the present age of Peter?

Ans is 20

427) Two tanks A and B. A fills 1 ltr/1 hour B fills 10, 20, 30 per hour. If this is (passage unnecessary). If 1/4th tank of B takes 15 hours to fill how much it time will to take to fill complete tank?

428) Out of 7 children the youngest is boy then find the probability that all the remaining children are boys

Ans: $1/2^6 = 1/64$

429) The three sides of a triangle are given. 16, 14, 21 cms and this triangle is converted into a square. So what will be the area of the square generated?

Ans: $(14+16+21)/4$. Then you will get the 1 side of a square and now find the area of a square. ie, $side^2$

430) An equation of the form $4x+6y-2z=32$. Find the difference between x intercept and z intercept? Ans: $x/a+y/b+z/c=$

431) A Toy train can make 10 sounds sound changes after every 4 mins, now train is defective and can make only 2 sounds. Find probability that same sound is repeated 5 times consecutively (1 out of)?

Ans: $1/32$

432) 20men and 20 women are there, they dance with each other, is there possibility that 2 men are dancing with same women and vice versa.

Ans: Never

433) 10 people are there, they are shaking hands together, how many hand shakes possible, if they are in no pair of cyclic sequence.

Ans-9

434) In school there are some bicycles and 4wheeler wagons. One Tuesday there are 234 wheels in the campus. How many bicycles are there?

Ans: Go with options. Multiply each option with 2 and subtract the obtained no from 234. If it is exactly divisible by 4, that is the answer.

435) A father has 7 penny's with him and 1 water melon is for 1p, 2 chickoos for 1p, 3 grapes for 1p. He has three sons. How can he share the fruits equally?

Ans: 1 watermelon, 2chickoos, 1grape

436) A pizza shop made pizzas with to flavours. In home there are '9' different flavors, in that '2' flavors are taken to made piza in how many ways they can arrange?

(Logic: NcM , $N=9$, $M=2$)

437) One organization, material, labor and maintenance are in the ratio of 4:6:7, if the material cost is: 272, what is the total cost?

Ans: $4x=272 \Rightarrow x=68$; now total cost = $272 + 6(68)+7(68)$.

438) 4 years before Paul's age is 3times the Alice age and the present age of Paul is 6times the Alice. What is the presents Paul's age?

Ans: $x-4 = 3(y-4)$; $x=6y$: Solve you will get it.

439) In a question, last part has, the ages of two people has the ratio of 6:5 and by adding the numbers we get 55, after how many years the ratio would be 8:7?

Ans: Easy you can do it, simple equations

440) In a room (unwanted stuff) Sports readers, 10 tables, 4 chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans : 6

441) Passage joe is taller than jerry and 3 pillars. kistern is shorter than joe and 2 pillars is jerry shorter/taller than kistern ?

442) a volume of A are having in a container of sphere. how many semi hemispheres of B volume each will be required to transfer all the A in to semi hemispheres?

Ans: $A = x B$

443) Question based on $V=l \cdot R$ but in dis question most of data given are ridiculas like volume, density, length, height similar long story are given

444) Peter and Paul are two friends. The sum of their ages is 42 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter?

445) A horse chases a pony 2 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 81 kmph, what s the average speed of the pony?

(This question was really long with loads of irrelevant statement)

446) Difference between two numbers is 4 and their product is 17. Then find the sum of their squares?

447) A, B, C, D, E are there among A, B, C are boys and D, E are girls D is to the left of A and no girl sits at the middle and at the extremes. Then what is the order of their sittings.

448) Some ages problem, then asked the answer in binary

449) (Some chetta chikkati solutions) unwanted data followed by a formula diameter $d = 10*(t-14)$, $t > 14$ then what is diameter after $t=40$?

450) Some denominations question like you have 31 paise, and ticket cost is between 1 to 31, you have to give the exact denominations for the ticket. Find all the no. of possible denominations you may predict and you must be left with at least few paise?

451) Direction problems. A man goes 50 km North, then turned left walked 40 km, then turned right? In which direction is he in?

Ans: North

Find the value of $(74*74*74-70*70*70)$

2000 pillar temple of Hyderabad.

The difference between the age of 2 of my 3 grandchildren is 3. My eldest is 3 times older than the youngest.

Prasad is twice as heavy as Pooja. Pooja's father has 3 times as much land as Prasad's father. Their families are exchanging _____. It turns out that Prasad is also twice as old as Pooja when Prasad was as old as Pooja is now.

The no. of problems that can use this formula is sum of 2 prime numbers. The Product of 2 prime numbers is smaller than the total number of problems. Now, if the difference of any two numbers is 4, and the product is 24, what is the sum of the squares?

Watermelon is one penny each, dates at 2 for a penny and grapes at 3 for a penny. A father spent 7 penny and got the same amount of each type of fruit for each of his 3 children, Jane, Joe, and Jill. Jane is 3 yrs older than Jill and Joe. And Joe is exactly half the age of Jane and Jill. What did each child get?

1 Watermelon, 2 Dates, 1 Grape

1 Watermelon, 1 Dates, 1 Grape

Watermelon, 3 Dates, 2 Grape

Watermelon, 2 Dates, 2 Grape

A man is standing in front of a painting of a man. And he tells the following brothers and sister have _____, but this man's father is my father's son? Who is on the painting. a) His son b) He himself c) His father d) His grandfather.

A racehorse starts chasing a wild pony 3 hours after the pony bolts the stable. The pony runs through the entire country of Alb. Texas jumping 3 streams and crossing four 10 meter roads. The racehorse finally catches up with the pony after four hours by the time the sun had set and the moon was up in the sky for 4 hours. If the average speed of the racehorse is 73kmph then average speed of the wild pony is _____ kmph. a)54.75 b)42.71 c)31.29 d)41.71

The number of problems that can use this formula is sum of 2 prime numbers. Find $3x+2y/x-2y$ if $x/2y = 2$

A Seamstress buys a certain amount of gringham cloth which comes in rolls that are exactly 56 inches wide. She also bought a certain length of Seersucker- 1 yard long and 35 inches wide. She discovers she has 112 yards of gringham and she wants to divide this into 112 lengths of 1 yard each. She wants to have twice as many pieces as Seersucker as she does of gringham. It takes her 8 seconds to cut each length working non stop, how long in seconds does it take to cut 112 pieces.

In the reading room of a library, there are ten reading spots. Each reading spot consist of a round table with four chairs placed around it. There are some readers such that in each occupied reading spot, there are different number of readers. If in all there are ten readers how many reading spots do not have even a single reader.

Stephen Hawking is the Author of the bestseller "The Brief History of Time" and his daughter explains the universe to readers of all ages in their book " George's Secret key to the Universe".

When Lucy was young his father would take his daughter to the terrace and explain about constellations to his daughter and then leaves her alone in the terrace to find few of them all by herself. Lucy finds around 25 groups of stars that appear to her as constellations. She draws 7 patterns of the constellations in her notebook and notes down the number of stars in each of them. She counts 5 stars in first constellation and 15 on next. She counts a number the thrid time and forgets to note it down. The next four constellations she counts 51,53,159,161. Next day her father looks at the notebook and wants to know the number of stars in the third constellation. Lucy only remembers that number of starts counted in each of the constellation followed a pattern 5,15,x,51,53,159,161.

19 b) 45 c) 16 d) 17

Rowen is taller than lily and 2 of the 1000 pillars. Jill is shorter than Rowen & 3 pillars. Which is more accurate? a) Lily is shorter than Jill. b) Its impossible to tell c) Lily is taller than Jill d) Jill is as tall as Lily.

Q1) Given a collection of points P in the plane , a 1-set is a point in P that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by $n_1(P)$. The minimum value of $n_1(P)$ over all configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is

a) 3 b) 5 c) 2

where d represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

a) 17 b) 21.25 c) 12.25 d) 12.06

Q11) In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

a) 8 b) None c) 16 d) 15

Q12) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari, the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Ferrari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success. Rohit once bought a Ferrari. It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

a) 20.72 b) 5.18 c) 238.25 d) 6.18

Q13) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says 'At least n of the statements on this sheet are false.' Which statements are true and which are false?

The even numbered statements are true and the odd numbered are false.

The odd numbered statements are true and the even numbered are false.

The first 35 statements are true and the last 35 are false.

The first 35 statements are false and the last 35 are false.

Q14) Middle – earth is a fictional land inhabited by Hobbits, Elves, dwarves and men. The Hobbits and the Elves are peaceful creatures who prefer slow, silent lives and appreciate

nature and art. The dwarves and the men engage in physical games. The game is as follows . A tournament is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds where in every round , half of the teams get eliminated from the tournament. If there are 8 rounds played in a knock-out tournament how many matches were played?

a) 257 b) 256 c) 72 d) 255

Q15) A research lab in Chennai requires 100 mice and 75 sterilized cages for a certain set of laboratory experiments . To identify the mice, the lab has prepared labels with numbers 1 to 100 , by combining tags numbered 0 to 9. The SPCA requires that the tags be made of toxin-free material and that the temperature of the cages be maintained at 27 degree Celsius. Also , not more than 2 mice can be caged together and each cage must be at least 2 sq.ft in area. The 5 experiments to be conducted by lab are to be thoroughly documented and performed only after a round of approval by authorities. The approval procedure takes around 48 hours. How many times is the tag numbered '4' used by the lab in numbering these mice?

a) 9 b) 19 c) 20 d) 21

Q16) There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160... in tank B. (At the end of first hour, B has 10 litres , second hour it has 20, and so on). If tank B is $\frac{1}{32}$ filled after 21 hours, what is the total duration required to fill it completely?

a) 26 hrs b) 25 hrs c) 5 hrs d) 27 hrs

Q17) Consider two tumblers, the first containing one litre of coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

There is less coffee in the first tumbler than water in the second tumbler.

There is more coffee in the first tumbler than water in the second tumbler

There is as much coffee in the first tumbler as there is water in the second tumbler

None of the statements holds true.

Q18) Francois Pachet , a researcher at Sony Computer Science laboratories is also a jazz musician. He decided to build a robot able to improvise like a pro. Named Continuator, the robot can duet with a live musician in real- time. It listens to a musical phrase and then computes a complementary phrase with the same playing style. If the cost of making the robot is divided between materials , labour and overheads in the ratio of 4:6:2.If the materials cost \$108. the cost of the robot is

a) \$270 b) \$324 c) \$216 d) \$ 648

Q19) A lady has fine gloves and hats in her closet- 18 blue- 32 red and 25 yellow. The lights are out and it is totally dark inspite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each colour?

50 b) 8 c) 60 d) 42

Q20) A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

4 mph b) 5 mph c) 2.4 mph d) 4.8 mph

Q21) Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up . The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

a) \$27 b) \$ 18 c) \$45 d) \$ 486

Q22) Given a collection of 36 points P in the plane and a point equidistant from all points in P, which of the following are necessarily true?

The points in P lie on a circle.

The distance between any pair of points in P is larger than the distance between X and a point in P

a) A and B b) Neither A nor B c) B only d) A only

Q23) In the year 2002, Britain was reported to have had 4.3m closed – circuit television (CCTV) cameras – one for every 14 people in the country . This scrutiny is supposed to deter and detect crime. In one criminal case, the police interrogates two suspects . The ratio between the ages of the two suspects is 6:5 and the sum of their ages is 6:5 and the sum of their ages is 55 years. After how many years will the ratio be 8:7.?

a) 11 b) 6 c) 10 d) 5

Q24) Susan made a block with small cubes of 8 cubic cm volume to make a block 3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to lock like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

a) 114 b) 135 c) 21 d) 71

Q25) Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true ?

In order to win, Alok should remove O1 on his first turn.

In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.

In order to win, Alok should remove O2 on his first turn.

Alok has no winning strategy.

A school yard contains only bicycles and 4 wheeled wagons. On Tuesday, the total number of wheels in the schoolyard was 114. What would be the possible number of bicycles?

18

17

16

8

Determine the distance between x-intercept and y-intercept of the plane where equation is $6x+8y-32=72$.

3

26.83

9

25.63

There are 7 children and the youngest child is a boy. What is the probability that all of them are boys is 1 in

2!

64

128

2

NY public library is one of the world's greatest repositories of books and journals. It has a beautiful reading room facing Manhattan's famous 5th Avenue. In the reading room are 10 reading spots. Each reading spot consists of a round table with 4 chairs placed around it. There are some readers such that in each occupied reading spot, there are different numbers of readers. If in all there are 10 readers, how many spots are empty?

6

none

5

4

A seamstress buys a certain amount of Gingham cloth which comes in rolls that are exactly 56 inches wide. She has also bought a certain length of Seek sucker cloth and 35 inches wide. The seamstress first focuses on the Gingham roll and discovers that she has 116 yards of Gingham and she wants to divide the gingham into 116 lengths of 1 yard each. She wants to have twice as many pieces of seek sucker as she does of the Gingham. It takes 4 seconds to cut each length of Gingham. Working non-stop, how long (in seconds) will it take her to cut all 116 pieces?

464

460

463

465

20 people meet and shake hands. The maximum number of hand shakes possible if there is to be no 'cycle' of handshakes is (a cycle of handshake is a sequence of people a_1, a_2, \dots, a_k) such that people $(a_1, a_2), (a_2, a_3), \dots, (a_{k-1}, a_k), (a_2, a_1)$ shake hand is

16

18

19

17

A pie is to be divided among 20 people. A man eats 3 pieces, a woman eats 2 pieces and a child eats $\frac{1}{2}$ a piece of pie. What is the number of men, women children, so that 20 people in total and everyone get the same pie? There are 20 pieces of pie in all.

7 women, 1 man, 12 children

5 women, 1 man, 14 children

4 women, 2 men, 12 children

A toy train produces at least 10 different tunes when it moves around a circular toy track of radius 5m at 10 m/min. However, the toy train is defective and it now produces only 2 different tunes at random. What are the odds that toy train produces 6 consecutive music tunes of the same type.

32

64

36

6

Bob, Peter, Oliver and 2 girls –Raven and Chelsey are to be seated in a row. Raven often gets sits to left of Bob. No girl sits at extreme positions and middle positions. Peter always sits at the extreme position. Who sits to the right of Chelsey?

Oliver

Bob

Peter/Oliver

Peter

A taxi driver commenced his journey from a point and he drove 10 km towards north and turned to his left and drove another 20 km. After waiting to meet a friend here, he turned to his right and continued to drive another 10 km. In which direction is he now?

West

South

North

East

A hunter walked one kilometer south from his camp. Then he walked one kilometer west. There he shot a bear. Then he walked one kilometer north, and found that he was back at his camp. What color was the bear?

Black

White

Brown

None of the above

Q1) Given a collection of points P in the plane, a 1-set is a point in P that can be separated from the rest by a line, .i.e the point lies on one side of the line while the others lie on the other side. The number of 1-sets of P is denoted by $n_1(P)$. The minimum value of $n_1(P)$ over all

configurations P of 5 points in the plane in general position (.i.e no three points in P lie on a line) is

- 3
- 5
- 2

Q2) Paul the octopus who has been forecasting the outcome of FIFA world cup matches with tremendous accuracy has now been invited to predict ICC world cup matches in 2011. We will assume that the world cup contenders have been divided into 2 groups of 9 teams each. Each team in a group plays the other teams in the group. The top two teams from each group enter the semi finals (after which the winner is decided by knockout).

However, Paul has a soft spot for India and when India plays any team, Paul always backs India. Alas, his predictions on matches involving India are right only 2 out of 3 times. In order to qualify for the semi finals, it is sufficient for India to win 7 of its group matches. What is the probability that India will win the ICC world cup?

- $(2/3)^{10}$
- $(2/3)^9 + 8/3 * (2/3)^9$
- $8/3 * (2/3)^9$
- $(2/3)^{10} + 8/3*(2/3)^9$

Q3) A toy train produces at least 10 different tunes when it moves around a circular toy track of radius 5 meters at 10 meters per minute. However , the toy train is defective and it now produces only two different tunes at random. What are the odds that the toy train produces 4 consecutive music tunes of the same type?

- 1 in 16
- 1 in 4
- 1 in 8

Q4) A number when divided by D leaves a remainder of 8 and when divided by 3D leaves a remainder of 21 . What is the remainder left, when twice the number is divided by 3D?

- 13
- cannot be determined
- 3
- d) 42

(solution:c)

Q5) Six friends decide to share a big cake. Since all of them like the cake, they begin quarreling who gets to first cut and have a piece of the cake. One friend suggests that they have a blindfold friend choose from well shuffled set of cards numbered one to six. You check and find that this method works as it should simulating a fair throw of a die. You check by performing multiple simultaneous trials of picking the cards blindfold and throwing a die. You note that the number shown by the method of picking up a card and throwing a real world die, sums to a number between 2 and 12. Which total would be likely to appear more often – 8,9 or 10?

8

All are equally likely

9

10

Q6) One day Alice meets pal and byte in fairyland. She knows that pal lies on Mondays, Tuesdays and Wednesdays and tells the truth on the other days of the week byte, on the other hand, lies on Thursdays, Fridays and Saturdays, but tells the truth on the other days of the week. Now they make the following statements to Alice – pal. Yesterday was one of those days when I lie byte. Yesterday was one of those days when I lie too. What day is it ?

2. Thursday

3. Tuesday

4. Monday

5. Sunday

(solution:a)

Q7) A car manufacturer produces only red and blue models which come out of the final testing area completely at random. What are the odds that 5 consecutive cars of the same color will come through the test area at any one time?

c) 1 in 16

ci) 1 in 125

cii) 1 in 32

ciii) 1 in 25

Q8) Alok is attending a workshop “How to do more with less” and today's theme is Working with fewer digits. The speakers discuss how a lot of miraculous mathematics can be achieved if mankind(as well as womankind) had only worked with fewer digits.

The problem posed at the end of the workshop is

How many four digit numbers can be formed using the digits 1, 2,3,4 ,5 (but with repetition) that are divisible by 4?

Can you help Alok find the answer?

a) 100 b) 125 c) 75 d) 85

Q9) Rearrange the following letters to make a word and choose the category in which it Ms RAPETEKA

Bird

Vegetable

City

Fruit

Q10) On planet korba, a solar blast has melted the ice caps on its equator. 9 years after the ice melts, tiny planetoids called echina start growing on the rocks. Echina grows in the form of circle, and the relationship between the diameter of this circle and the age of echina is given by the formula

$$d = 4\sqrt{t-9} \text{ for } t \geq 9$$

where d represents the diameter in mm and t the number of years since the solar blast.

Jagan recorded the radius of some echina at a particular spot as 7mm. How many years back did the solar blast occur?

17

21.25

12.25

d) 12.06

(solution:b)

Q11) In the reading room of a library, there are 23 reading spots. Each reading spot consists of a round table with 9 chairs placed around it. There are some readers such that in each

occupied reading spot there are different numbers of readers. If in all there are 36 readers, how many reading spots do not have even a single reader?

8

None

16

d) 15

(solution:d)

Q12) Ferrari S.P.A is an Italian sports car manufacturer based in Maranello, Italy. Founded by Enzo Ferrari in 1928 as Scuderia Ferrari , the company sponsored drivers and manufactured race cars before moving into production of street-legal vehicles in 1947 as Feraari S.P.A. Throughout its history, the company has been noted for its continued participation in racing, especially in Formula One where it has employed great success .Rohit once bought a Ferrari . It could go 4 times as fast as Mohan's old Mercedes. If the speed of Mohan's Mercedes is 46 km/hr and the distance traveled by the Ferrari is 953 km, find the total time taken for Rohit to drive that distance.

20.72

5.18

238.25

d) 6.18

(solution:b)

Q13) A sheet of paper has statements numbered from 1 to 70. For all values of n from 1 to 70. Statement n says ' At least n of the statements on this sheet are false. ' Which statements are true and which are false?

The even numbered statements are true and the odd numbered are false.

The odd numbered statements are true and the even numbered are false.

The first 35 statements are true and the last 35 are false.

ci) The first 35 statements are false and the last 35 are false.

(solution:d)

Q14) Middle – earth is a fictional land inhabited by Hobbits, Elves, dwarves and men. The Hobbits and the Elves are peaceful creatures who prefer slow, silent lives and appreciate nature and art. The dwarves and the men engage in physical games. The game is as follows . A tournol is one where out of the two teams that play a match, the one that loses get eliminated. The matches are played in different rounds where in every round , half of the teams get eliminated from the tournament. If there are 8 rounds played in a knock-out tournol how many matches were played?

257

256

72

d) 255

(solution:d)

Q15) A research lab in Chennai requires 100 mice and 75 sterilized cages for a certain set of laboratory experiments . To identify the mice, the lab has prepared labels with numbers 1 to 100 , by combining tags numbered 0 to 9. The SPCA requires that the tags be made of toxin-free material and that the temperature of the cages be maintained at 27 degree Celsius. Also , not more than 2 mice can be caged together and each cage must be at least 2 sq.ft in area. The 5 experiments to be conducted by lab are to be thoroughly documented and performed only after a round of approval by authorities. The approval procedure takes around 48 hours. How many times is the tag numbered '4' used by the lab in numbering these mice?

9

19

20

d) 21

(solution:b)

Q16)There are two water tanks A and B, A is much smaller than B. While water fills at the rate of one litre every hour in A, it gets filled up like 10, 20, 40, 80, 160... in tank B.(At the end of first hour, B has 10 litres , second hour it has 20, and so on). If tank B is $\frac{1}{32}$ filled after 21 hours, what is the total duration required to fill it completely?

26 hrs

25 hrs

5 hrs

d) 27 hrs

(solution:a)

Q17) Consider two tumblers, the first containing one litre of coffee. Suppose you take one spoon of water out of the first tumbler and pour it into the second tumbler. After moving you take one spoon of the mixture from the second tumbler and pour it back into the first tumbler . Which one of the following statement holds now?

There is less coffee in the first tumbler than water in the second tumbler.

There is more coffee in the first tumbler than water in the second tumbler

There is as much coffee in the first tumbler as there is water in the second tumbler

None of the statements holds true.

Q18) Francois Pachet , a researcher at Sony Computer Science laboratories is also a jazz musician. He decided to build a robot able to improvise like a pro. Named Continuator, the robot can duet with a live musician in real- time. It listens to a musical phrase and then computes a complementary phrase with the same playing style. If the cost of making the robot is divided between and then computes a complementary phrase with the same playing style. If the cost of making the robot is divided between materials , labour and overheads in the ratio of 4:6:2.If the materials cost \$108. the cost of the robot is

\$270

\$324

\$216

d) \$ 648

(solution:b)

Q19) A lady has fine gloves and hats in her closet- 18 blue- 32 red and 25 yellow. The lights are out and it is totally dark inspite of the darkness. She can make out the difference between a hat and a glove. She takes out an item out of the closet only if she is sure that if it is a glove. How many gloves must she take out to make sure she has a pair of each colour?

50

8

60

42

Q20) A man jogs at 6 mph over a certain journey and walks over the same route at 4 mph. What is his average speed for the journey?

- 2.4 mph
- 4 mph
- 4.8 mph
- d) 5 mph

(solution:d)

Q21) Spores of a fungus, called late blight, grow and spread infection rapidly. These pathogens were responsible for the Irish potato famine of the mid-19th century. These seem to have attacked the tomato crops in England this year. The tomato crops have reduced and the price of the crop has risen up . The price has already gone up to \$45 a box from \$27 a box a month ago. How much more would a vegetable vendor need to pay to buy 27 boxes this month over what he would have paid last month?

- \$27
- \$ 18
- \$45
- \$ 486

Q22) Given a collection of 36 points P in the plane and a point equidistant from all points in P, which of the following are necessarily true?

The points in P lie on a circle.

The distance between any pair of points in P is larger than the distance between X and a point in P

- A and B
- Neither A nor B
- B only
- A only

Q23) In the year 2002, Britain was reported to have had 4.3m closed – circuit television (CCTV) cameras – one for every 14 people in the country . This scrutiny is supposed to deter and detect crime. In one criminal case, the police interrogates two suspects . The ratio between

the ages of the two suspects is 6:5 and the sum of their ages is 6:5 and the sum of their ages is 55 years. After how many years will the ratio be 8:7.?

- 11
- 6
- 10
- 5

Q24) Susan made a block with small cubes of 8 cubic cm volume to make a block 3 small cubes long, 9 small cubes wide and 5 small cubes deep. She realizes that she has used more small cubes than she really needed. She realized that she could have glued a fewer number of cubes together to look like a block with same dimensions, if it were made hollow. What is the minimum number of cubes that she needs to make the block?

- 114
- 135
- 21
- 71

Q25) Alok and Bhanu play the following coins in a circle game. 99 coins are arranged in a circle with each coin touching two other coin. Two of the coins are special and the rest are ordinary. Alok starts and the players take turns removing an ordinary coin of their choice from the circle and bringing the other coins closer until they again form a (smaller) circle. The goal is to bring the special coins adjacent to each other and the first player to do so wins the game. Initially the special coins are separated by two ordinary coins O1 and O2. Which of the following is true ?

In order to win, Alok should remove O1 on his first turn.

In order to win, Alok should remove one of the coins different from O1 and O2 on his first turn.

In order to win, Alok should remove O2 on his first turn.

Alok has no winning strategy.

Question 1: There is a toy train that can make 10 musical sounds. It makes 2 musical sounds after being defective. What is the probability that same musical sound would be produced 5 times consecutively? (1 of)?

Answer: $1/2 * 1/2 * 1/2 * 1/2 * 1/2 = 1/32$

32 will be the answer. (My friends got similar question with "3 times consecutively"; for that the answer would be 8)

Question 2: Peter and Paul are two friends. The sum of their ages is 35 years. Peter is twice as old as Paul was when Peter was as old as Paul is now. What is the present age of Peter? Luckily, I had this question twice. Initially I left it because of the confusing statement but when I got the same question second time with different names of the friends (Pooja and Prasad) then I gave a little extra time and solved it.

Answer: 20 years. I simply substituted the answers in the statement to find the best fit, because the statement in the question was pretty confusing.

Question 3: The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?

Answer: 12 years.

Question 4: (There was a long story, I'll cut short it). There are 5 materials to make a perfume: Lilac, Balsalmic, Lemon, Woody and Mimosaic. To make a perfume that is in demand the following conditions are to be followed: Lilac and Balsalmic go together. Woody and Mimosaic go together, Woody and Balsalmic never go together. Lemon can be added with any material. (Actually they had also mentioned how much amount of one can be added with how much quantity of the other; but that's not needed for the question.) All of the following combinations are possible to make a perfume except:

Balsalmic and Lilac

Woody and Lemon

Mimosaic and Woody

Mimosaic and Lilac

Answer: Mimosaic and Lilac. I have made the question here really easy to understand. But the actual question was in a twisted language and it was difficult to find the answer. It took me some time to get to the answer.

Question 5: A girl has to make pizza with different toppings. There are 8 different toppings. In how many ways can she make pizzas with 2 different toppings.

Answer: $8 * 7 = 56$

Question 6: A triangle is made from a rope. The sides of the triangle are 25 cm, 11 cm and 31 cm. What will be the area of the square made from the same rope?

Answer: 280.5625

Question 7: What is the distance between the z-intercept from the x-intercept in the equation $ax+by+cz+d=0$. (I do not remember the values of a,b,c,d)

Question 8: An athlete decides to run the same distance in $\frac{1}{4}$ th less time that she usually took. By how much percent will she have to increase her average speed?

Answer: 33.33%

Question 9: A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony? (This question was really long with loads of irrelevant statement)

Question 10: There is 7 friends (A1, A2, A3....A7). If A1 have to have shake with all with out repeat. How many hand shakes possible?(I dont know the exact question but like this only)

Question 11: There are two pipes A and B. If A filled 10 liters in a hour B can fills 20 liters in same time. Likewise B can fill 10, 20, 40, 80,160....if B filled in $(\frac{1}{16})$ th of a tank in 3 hours, how much time will it take to fill completely?

Answer: 7 hours

Question 12: Keywords: Sports readers, 10 tables, 4chairs per table, each table has different number of people then how many tables will left without at least one person?

Ans: 6

**NAC Tech Sample Test
Part A**

Directions for question: The following capitalized pair of words is followed by four other pairs of words. Choose the pair that has a relationship similar to that in the capitalized pair.

1. EVAPORATION : CLOUD

1. Mountain : Snow
2. Pressure : Atmosphere
3. Book : Pages
4. Tension : Breakdown

Directions : Four sentences are given below which when properly sequenced form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the four given choices to construct the paragraph.

2. A. Rewards are said to be exceptionally good.
 B. But telemarketing is increasingly gaining popularity as a successful strategy.
 C. The use of telephone as a medium of selling, also called telesales, is a fairly old practice.
 D. Because religious telemarketing efforts have increased the bottom line of many organisations.

1. BACD
2. ABCD
3. CBAD
4. CABD

Directions for question 3-4: In each of the following sentences, some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of phrasing the underlined part. Choose the best choice that follows the requirements of standard written English.

3. Nowhere in India is the influence of ancient architecture more apparent than their public buildings.

1. more apparent than their
2. so apparent as their
3. more apparent than its
4. as apparent as it is in its.

4. Although one link in the chain was demonstrated to be weak, but not sufficiently so to require the recall of the automobile.

1. demonstrated to be weak, but not sufficiently so to require.
2. demonstrated as weak, but it was not sufficiently so that it required.
3. demonstrably weak, but not sufficiently so to require.
4. demonstrably weak, it was not so weak as to require.

Directions for questions 5-6 : Find the odd word out.

5. 1. impenetrable
 2. invincible
 3. indomitable
 4. immaculate

6. 1. idyllic
 2. riveting
 3. rustic
 4. rural

Directions for questions 7-8: Read the passage and answer the questions that follow.

It's sad, though unfortunately true but our small planet which is located in an insignificant outer spiral of an absolutely average galaxy is, like millions of other heavenly bodies, regularly bombarded by cosmic debris involving comets and meteors which have in the past led to wholesale cataclysmic obliteration of life forms.

In the greatest known extinction episode at the end of what is known as the Permian period, an era of severe climate and geologic changes 245 million years ago, 96 per cent of all marine species and more than 50 per cent of all other species disappeared. Another period of rapid extinction, 65 million years ago, is famous for the disappearance of the dinosaurs when, along with them, one third of the rest of the plant and mammalian population became extinct too.

The chances of another hit are over-ripe right now and feel-good disaster films like Deep Impact or Armageddon notwithstanding, the severity of loss is going to be far more devastating than special effects on computer graphics. Because this time around a casual wandering stone half the size of a Mumbai suburb impacting with our planet will make thousands of years of art, culture, science, society, civilization, governance and religion meaningless. This time species alone are not going to be obliterated, but specimens with brains and consciousness are going to be wiped out in less time than it takes to think of a blink.

Ironically, if this invader is small enough to wreak devastation on a scale than can still be managed with only the loss of a few hundred millions, we have to then face the daunting task of restructuring everything from almost start. In the process we may also have to face the loss of long cherished icons and artifacts like maybe the Mona Lisa, the ionosphere or the polar ice caps.

Some futures are devolvable and can be prognosticated with optimistic extras. Other futures involve ninth and tenth generation computation to make our livelihood "smart" to the point of excellent boredom. But what does one do with a future that's coming on inevitably any millennia now and is about to sub-atomize our short and convoluted existence?

7. ".....the loss of long cherished icons and artifacts like maybe the Mona Lisa, the ionosphere or the polar ice caps". The sentence implies that icons and artifacts :
1. are too precious to be lost.
 2. are invaluable.
 3. are an integral part of "our world".
 4. will be too hard to lose.
8. The "destruction" author is referring to is of:
1. Permian period.
 2. entire civilization.
 3. heavenly bodies.
 4. our small planet.
9. Five students, Alisha, Binoy, Carey, Dolphy and Elizabeth were comparing the scores each received on a Math and an English test. The following was discovered that Alisha's English score was 80. Alisha's Math score equals Elizabeth's English score. Elizabeth's Math score equals Alisha's English score. Alisha's English score is 15 less than Elizabeth's English score. Dolphy's Math score is 20 more than his English score and is 20 more than Carey's Math score. Dolphy's Math score is 40 more than Binoy's English score. Carey's English score is 10 less than Binoy's English score. If Binoy's English score is 60, what is Dolphy's English score?
1. 80
 2. 70
 3. 60
 4. 50

10. When I was married 10 years ago, my wife was the sixth member in the family. Today, my father died, and a baby was born to me. The average age in my family today is what it was when I was married. How old was my father when he died?
1. 50 years
 2. 60 years
 3. 70 years
 4. Indeterminate
11. In a class, 30 students pass in English and 20 students in Math, while some students among these pass in both. How many more students do only English as compared to those doing only Maths?
1. 10
 2. 15
 3. 20
 4. Indeterminate
12. The cost of hiring a bus is shared equally by all passengers. The bus has seats for 40 passengers and the total bill comes to Rs.70.37. How many seats went unoccupied?
1. 13
 2. 11
 3. 9
 4. 7
13. In tennis, service alternates for each game between the two players and the first player to win 6 games wins. A player winning 6-2 indicates that 8 games were played, of which the winning player won 6 and the losing player won 2.
- Rafa beat Roger in a set of tennis, winning six games to Roger's three. Five games were won by the player who did not serve. Who served first?
1. Rafa
 2. Roger
 3. Inconsistent data
 4. Indeterminate
14. If 'Test is tuff' stands for '@ # \$', 'Test was easy' stands for '\$ % ^', 'easy becomes tuff' stands for '^ @ &' then what will be the code for 'is' and 'was'?
1. &, %
 2. ^, \$
 3. #, %
 4. #, ^
15. In the island of Hanoi is trapped a princess. To rescue her, the prince has to transfer a set of rings numbered 1 to 7 from tower A to tower C. The rings are stacked one over the other in an order, with 1 at the top and 6 at the bottom, and have to be stacked in the same fashion on tower C. The prince can move only one ring at a time, and can store the rings in a stack, temporarily, in another tower B. Minimum how many moves of rings, between the towers, will it take the prince to arrange the rings in tower C ?
1. 13
 2. 127
 3. 14
 4. 129

NAC Tech Sample Test
Part B (Answer any one part)

Information Technology

1. In a graph G there are 2^n vertices which correspond to 'n' bit strings. Two nodes are connected iff the first 3 bits are similar. What are the number of connected components?
 1. 1
 2. 3
 3. 8
 4. 2^{n-3}

2. Let x, y and z denote the first vertex visited in post-order, in-order and pre-order traversals respectively of a complete binary tree. Which of the following is always true?
 1. $x = y$
 2. $x = z$
 3. $y = z$
 4. None of these

3. Consider the following functions: $f(n) = 3n^{\sqrt{n}}$; $g(n) = 3^{\sqrt{n} \log_n 3}$; $h(n) = n!$
Which of the following is true?
 1. $h(n)$ is $O(f(n))$
 2. $h(n)$ is $O(g(n))$
 3. $f(n)$ is $O(g(n))$
 4. $g(n)$ is not $O(f(n))$

4. Consider the following program

```
n = b1b2b3...bm
int n, rev;
rev = 0;
while (n > 0) {
rev = rev * 10 + n % 10;
n = n / 10;
}
```

Which of the following is true at the end of the i^{th} iteration?
 1. $n = b_1b_2 \dots b_{m-i}$ and $rev = b_m b_{m-1} \dots b_{m-i+1}$
 2. $n = b_{m-i+1} \dots b_{m-1} b_m$ and $rev = b_{m-i} \dots b_2 b_1$
 3. $n = b_1 b_2 \dots b_m$ and $rev = b_m \dots b_2 b_1$
 4. none of these

5. A program 'c' with 200 integers in the range 0 – 50 represents the scores of 200 students. It then prints the frequency of each score above 25. What would be the best way for 'c' to store the frequency?
 1. an array of 25 numbers
 2. an array of 50 numbers
 3. an array of 200 numbers
 4. a dynamically allocated array of 250 numbers

Electrical Engineering

1. A 4 bit ripple counter uses RS flip flops. Determine the maximum propagation delay of each flip flop, if the clock frequency is 5 MHz
 1. 100 ns
 2. 60 ns
 3. 30 ns
 4. 50 ns

2. Determine the input displacement factor if the power factor = 0.6 and distortion factor = $\frac{3}{\pi}$
 1. 0.6
 2. 0.634
 3. 0.628
 4. 0.783

3. Assertion (A): If a diode is connected close to the SCR in a series resonant inverter, SCR does not turn off at all.
Reason (R): Diode reduces the reverse voltage of the thyristor.
 1. A and R are true, A is correct explanation
 2. A is true, R is false
 3. A is false
 4. A and R are true, R is not correct explanation

4. Determine which of the following is false with respect to PWM Inverter?
 1. It has very good PF on the AC side
 2. Very wide speed range of operation
 3. Voltage is determined by switching frequency
 4. Closed loop operation is possible

5. Which tool is best used to monitor the speed of moving vehicles in a city?
 1. Pulsed radar
 2. Monopulse radar
 3. Doppler radar
 4. Auto tracking radar

Electronics Engineering

1. Which of the following statement is true?
 1. BJT is current controlled device with a high input impedance and high gain Bandwidth.
 2. FET is a voltage controlled device with high input impedance and low gain Bandwidth.
 3. FET cannot be used for Amplification.
 4. All of the above.

2. A Base band video signal limited to 9MHz is transmitted using USB. The vestigial Bandwidth is 2MHz. The Bandwidth of the USB modulated signal is
 1. 9 MHz
 2. 11 MHz
 3. 13 MHz
 4. 20 MHz

3. Figure of merit of a Single tone AM receiver using Envelope detector if $\mu = 0.5$ is
 1. 0.08
 2. 0.11
 3. 0.25
 4. 1

4. In a 16-bit microprocessor, words are stored in two consecutive memory locations. Reading the entire word in a single operation is possible if
 1. the first word is even
 2. the last memory location is odd
 3. the first memory location is odd
 4. the first memory address is even

5. How many 'zeroes' are present in the binary representation of 51×5 ?
 1. 0
 2. 1
 3. 3
 4. 5

Mechanical Engineering

1. Brinell hardness number is equal to

1. $\frac{P}{D - \sqrt{(D^2 - d^2)}}$

2. $\frac{2P}{\pi D (D - \sqrt{(D^2 - d^2)})}$

3. $\frac{2P}{D - \sqrt{(D^2 - d^2)}}$

4. $\frac{2P}{D(D - \sqrt{(D - d)})}$

2. Technically, steel with carbon above 2% is known as

1. Ferrite
2. Pearlite
3. Cementite
4. Cast Iron

3. Bending moment M and torque T is applied on a shaft. The equivalent torque will be

1. $M + T$

2. $\frac{1}{2} \sqrt{M^2 + T^2}$

3. $\frac{1}{2} (M + \sqrt{M^2 + T^2})$

4. $\sqrt{M^2 + T^2}$

4. A Mohr's circle reduces to a point when the body is subjected to

1. pure shear
2. uniaxial stress only
3. equal and opposite axial stresses on two mutually perpendicular planes, the planes being free of shear
4. equal axial stresses on two mutually perpendicular planes, the planes being free of shear

5. Choose the odd process out

1. TIG welding
2. Thermit welding
3. Resistance welding
4. Submerged arc welding

Civil Engineering

1. The equilibrium super elevation required to contract the centrifugal force fully is given by:
 1. $\frac{V^2}{27.5R}$
 2. $\frac{0.75v^2}{127R}$
 3. $\frac{V^2}{75R}$
 4. $\frac{V^2}{127R}$

2. The mechanical extra widening required for pavement of width 10.5 m, on a horizontal curve of radius 'R' metre is given by:
 1. $\frac{l^2}{2R}$
 2. $\frac{2l^2}{3R}$
 3. $\frac{l^2}{R}$
 4. $\frac{3l^2}{2R}$

3. In calculating the strength of a riveted joint in tearing, shearing and crushing, the
 1. Actual diameter of the rivet is used
 2. Actual diameter of hole drilled for rivet is used
 3. Mean diameter of hole drilled for rivet is used
 4. Smaller of the diameter and hole diameter is used

4. Archimedes' principle of buoyancy states that when a body is totally or partially immersed in a fluid, it is buoyed up by a force which is equal to:
 1. Weight of the body
 2. Weight of the fluid displaced by the body
 3. Weight of the body and the fluid displaced by the body
 4. Difference of weights of the fluid displaced and that of the body

5. If a water tank partially filled with water is being carried on a truck, moving with a constant horizontal acceleration, the level of the liquid will:
 1. Rise on the front side of the tank
 2. Fall on the back side of the tank
 3. Remain the same at both side of the tank
 4. Rise on the back side and fall on the front side

Chemical Engineering

1. The characteristic equation of a system is $S^4 + 3S^2 - 2S + 1 = 0$. The system is
 1. Stable
 2. Unstable
 3. Critically stable
 4. Cannot say

2. Select the wrong statement.
Compared to Pt catalyst, V_2O_5 catalyst used in contact process for manufacture of H_2SO_4 because it is
 1. Is immune to poisons
 2. Requires low O_2/SO_2 to give economic conversion
 3. Requires dilute SO_2 input (7-10%)
 4. Requires low initial investments and 5% replacement per year.

3. Fluid energy mill is used for
 1. Ultrafine grinding
 2. Cutting
 3. Grinding
 4. Crushing

4. The assumptions made in the derivation of Bernoulli's equation are that the flow is
 1. Incompressible, rotational and non-viscous
 2. Incompressible, steady, non-viscous and irrotational
 3. Incompressible, steady and non-viscous
 4. Incompressible, non-viscous and irrotational

5. In a textile mill, an evaporator concentrates a liquor containing solids of 6% by W/W to produce an output containing 30% by W/W. Calculate evaporation of water per 100kg of feed to the evaporator?
 1. 80Kg
 2. 100Kg
 3. 60Kg
 4. 90Kg

Textile Engineering

- 1) Find the odd man out
 1. Chain Stitch
 2. Tricot Stitch
 3. Railway Stitch
 4. Cross Stitch

- 2) 10 kilometers of a cotton yarn with 7 RKM is wound up in a spool. 50 centimeters of the same yarn is then tied to the spool on one end and attached to a hook on the other end.
 1. The 50 cm yarn would stretch by 2%
 2. The 50 cm yarn would break under the weight of the spool
 3. The 50 cm yarn would stretch by 7%
 4. The 50 cm yarn would retain its original shape

- 3) Cellulose pulp is treated with Carbon-di-sulphide and dissolved in caustic soda again. The resultant yarn that is manufactured can be used for
 1. PV fabrics
 2. PC fabrics
 3. PE fabrics
 4. PVC fabrics

- 4) A fabric of dimension 50 cm by 30 cm, has a weight of 22500 mg. The density of the fabric is
 1. 50 gsm
 2. 100 gsm
 3. 150 gsm
 4. 200 gsm

- 5) 500 fabric banners using six-colour geometric graphics need to be produced. Which printing procedure would be most quick and accurate?
 1. block
 2. digital
 3. roller
 4. screen

Bio-Technology Engineering

- In Guinea pigs, black hair (B) is dominant over white (b), rough coat texture (R) is dominant over smooth (r), and short hair (S) is dominant over long hair (s). A cross between a homozygous black, rough, short-haired Guinea pig and a white, smooth, long-haired one and the F₁ offsprings were crossed again. What would be the number of offsprings with the genotype BBR-Ss, if 160 offsprings were born? (Assume that these genes are on separate chromosomes)

 - 15
 - 24
 - 21
 - 27
- The four elements making 99% of living system are

 - C, H, O, S
 - C, H, O, P
 - C, H, O, N
 - C, N, O, P
- Facultative psychrophiles have:

 - Optimal growth temperature between 20^o and 30^o but can grow at 0^oC
 - Optimal growth temperature between 0^o and 10^o but can grow at 25^oC
 - Optimal growth temperature below 5^o but can grow at 25^oC
 - None of the above
- A sample was inoculated by 2 cell of a bacterium with a generation time of 15 minutes. What would be the number of bacterium after 4 hrs?

 - 128
 - 256
 - 512
 - 1024
- The mixture of proteins (K, J, L, M, P) is separated from SDS – PAGE. The increasing order of their molecular size is L, M, K, P, J. The electrophoretic mobility in SDS PAGE gel would be in the order (increasing):

 - KPJML
 - LMKPJ
 - JPKML
 - Same for all

Telecommunications Engineering

1. f_m / f_c is the
 1. upper band frequency
 2. lower band frequency
 3. harmony ratio
 4. mid band frequency

2. Microwaves are electromagnetic waves with frequencies between
 1. 300 MHz to 300 GHz
 2. 50 Mhz to 600 MHz
 3. 800 to 900 MHz
 4. 1.8 to 1.95 GHz

3. Consider two channels.
Channel 1: Bandwidth = 4M HZ; $\frac{S}{N} = 1024$ and Channel 2: Bandwidth = 2MHZ; $\frac{S}{N} = 2048$
 1. Communication in channel 1 is faster than channel 2
 2. Communication in channel 2 is faster than channel 1
 3. Communication in equally fast in both channels
 4. Insufficient data

4. A 5 bit ripple counter requires 100 n sec for change of state. The maximum propagation delay of each flip flop is
 1. 20 ns
 2. 10 ns
 3. 50 ns
 4. 5 ns

5. In a PCM system, number of bits are increased from n to $n + 1$. The quantization noise power
 1. increases by 3dB
 2. decreases by 3dB
 3. decreases by 6dB
 4. increases by 6dB