

## COMPANY BASED QUESTION BANK

COMPANY WISE QUESTION BANK COVERED:

### TCS TOPICS COVERED

Average	Time and Work	Seating Arrangement	Partnership
Coding and Decoding	Probability	Time and Distance	Train questions
Number Series, Missing numbers	Height and distance	Logarithm	Boats and streams
Mensuration	Pipes and cisterns	Hcf and lcm	Profit and loss
Races and games	Simple and compound interest		Algebra
Surds and indices	Volume and surface area		Odd man out
Cubes and dices	Venn diagram	Percentage	Problems on ages
Permutation and combination	Logical Deduction	Ratio and proportion	Clock puzzles
Allegation and mixture	Clocks and Calendars	Statement and arguments	
Statement and assumptions	Statement and conditions	Character puzzles	Direction sense test

### TCS QUESTION BANK

1. A team won 80 % of the games it played. It played 5 more games of which it won 3 and lost 2. Its loss percentage changed to 25%. How many games did it play overall? a)25 b) 14 c) 16 d)20
- 2.3 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? a.88.57 b.92.47 c.96.54 d. 95.58
3. Which of the following number must be added to 5678 to give a remainder of 35 when divided by 460? a.980 b.618 c.797 d.955
- 4.How many prime numbers are there which are less than 100 and greater than 3 such that they are simultaneously of the following forms.  $4x+1$ ,  $5y-1$ . A.11 b.12 c.7 d.None of these
5. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?  
A. 30% B. 70% C. 100% D. 250%
6. Totally 3 beakers A,B,C are present. A of capacity X lit, B of capacity 2X lit, C of capacity 3X lit. if A contain  $\frac{2}{3}$  of wine and rest with water. B contains  $\frac{1}{4}$  of wine and rest with water. if these two liquids are poured in to the 3rd beaker what is the proportion of wine in the 3rd beaker.  
a.  $\frac{7}{18}$  b.  $\frac{5}{18}$  c.  $\frac{3}{18}$  d.  $\frac{1}{18}$
7. Raj writes a number. He sees that the number of 2 digits exceeds 4 times the sum of its digits by 3. If the number is increased by 18, the result is the same as the number formed by reversing its digits. Find the number  
a) 35 b)57 c)42 d)49
- 8.p,q,r,s are distinct integers numbered from 1 to 12. what is possible smallest value for  $\frac{p}{q} + \frac{r}{s}$   
A.0.256 B.0.356 C.0.357 D.None
- 9.George can do some work in 8 hours. Paul can do some work in 10 hours while hari can do the same work in 12 hours. All three of them start working at 9.00 am. While George stops work at 11.00 am and the remaining two complete the work. Approximately at what time the work be finished?  
A.11.30 am B.12.30 pm C.1 Pm D.12 noon
- 10.1-2+3-4.....200 terms. What is the average? a.0.5 b.1 c.-.5 d.-1
11. Find the number of zeros in the expression  $15 \times 32 \times 25 \times 22 \times 40 \times 75 \times 98 \times 112 \times 125$   
a.14 b.12 c.9 d.7
12. When numbers are written in base b, we have  $12 \times 25 = 333$ . The value of b is  
a. 10 b. 8 c. 7 d. 6
- 13.If  $P(x) = ax^4 + bx^3 + cx^2 + dx + e$  has roots at  $x = 1, 2, 3, 4$  and  $P(0) = 48$ , what is  $P(5)$   
a.45 b.48 c.50 d.52
- 14.1!+2!+3!...+50! divided by 5! a)11 b)22 c)33 d)44
15. A farmer has a rose garden. Every day he either plucks 7 or 6 or 24 or 23 roses. The rose plants are intelligent and when the farmer plucks these numbers of roses, the next day 37 or 36 or 9 or 18 new roses bloom in the garden respectively. On Monday, he counts 189 roses in the garden. He plucks the roses as per

his plan on consecutive days and the new roses bloom as per intelligence of the plants mentioned above. After some days which of the following can be the number of roses in the garden?

(a) 4 (b) 7 (c) 30 (d) 37

16. The addition of  $641+852+973=2456$  is incorrect. What is the largest digit that can be changed to make the addition correct? (a) 5 (b) 6 (c) 4 (d) 7

17. g and m can paint 720 box in 20 days, m and h in 24 days and h and g in 15 days. g works for 4 days, m for 8 days, h for 8 days. find total no of boxes painted by them? a. 348 b. 358 c. 359 d. 360

18. x takes 4 days to complete one third of a job, y takes 3 days to complete one sixth of the Same job and z takes 5 days to complete half of the job. If all of them work together for 3 days and x and z quit, how long will it take for y to complete the remaining work done? (a) 6 (b) 7 (c) 8.1 (d) 5.1

19. An organization has 3 committees. Only two persons are the members of all three committees, but every pair of committees has three members in common. What is the least possible number of members on any one committee. A. 4 B. 3 C. 5 C. 2

20. \* sum of the digits in the product  $(16^{100}) \cdot (125^{135})$  (a) 25 (b) 36 (c) 11 (d) 69

21. Mr. lord want to fence his square shaped land of 120 sqft. each side. if a pole is needed every 12 feet how many poles do he need? A. 40 B. 45 C. 52 D. 56

22. There are 5 sweets- jamun, kulfi, peda, laddu and jalebi that I wish to eat on 5 consecutive days " Monday through Friday, one sweet at a day, based on the following self imposed constraints:

A) laddu is not eaten on Monday B) if jamun is eaten on Monday, then laddu must be eaten on Friday  
c) if laddu is eaten on Tuesday, kulfi must be eaten on Monday D) if peda is eaten the day following the day of eating jalebi

Based on the above, peda can be eaten on any day except? a. Monday b. Tuesday c. Wednesday d. Friday

23. A drinks machine offers three solutions Tea, Coffee or Random but the machine has been wired up wrongly so that each button does not give what it claims. If each drink costs Rs. 50, what is the minimum amount of money that must be spent to determine with certainty the correct labeling of the buttons?

a) Rs. 100 (b) Can not be determined (c) Rs 150 (d) Rs 50

24. In a G6 summit being held in London a French, a German, an Italian, a British, a Spanish and a Polish diplomat represent their respective countries and participate in a round table conference to strengthen the co operation between these countries. There are exactly 6 chairs evenly spaced around a circular table. The chairs are numbered 1 through 6, with successively numbered chairs next to each other and chair number 1 next to chair no 6. Each chair is occupied by one of the diplomats. The following conditions apply.  $\hat{\alpha} \notin$  Polish sits immediately next to British

German sits immediately next to Italian French doesn't sit immediately next to Italian

If Spanish sits immediately next to Polish, Spanish doesn't sit next to Italian

Which of the following seating arrangement of the 6 diplomats in chair 1-6 would not violate the given conditions?

A) French, Polish, British, Italian, Spanish, German B) French, German, Italian, Polish, British, Spanish

C) French, German, Italian, Spanish, Polish, British D) French, Spanish, Polish, British, German, Italian

25. 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, in spite of 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?

a) 32 (b) 25 (c) 59 (d) 65

26. 1, 7, 8, 49, 50, 56, 57, 343, 344, 350, 351, 392, 393, 399, 400. The above sequence contains sum of distinct power of 7 in increasing order ( $7^0, 7^1, 7^1+7^0, 7^2$  etc.) What is value of term number 38? a. 16863 b. 16893 c. 17893 d. 19796

27. 1, 2, 4, 8, 16, 32, .. a. 64 b. 124 C. 68 d. None

28. If a man walks at rate of 5 kmph, he misses a train by 7 minutes. However, if he walks at rate of 6 kmph, he reaches the station 5 minutes before the arrival of train. Find the distance covered by him to reach the station. a. 6 b. 7 c. 8 d. 9

29. Among a group of 2500 people, 35 percent invest in municipal bonds, 18 percent invest in oil stocks, and 7 percent invest in both municipal bonds and oil stocks. If 1 person is to be randomly selected from 2500

people, what is the probability that the person selected will be one who invests in municipal bonds but not in oil stocks.

- a.  $7/25$       b.  $3/25$       c.  $9/25$       d.  $5/25$

30. The letters in the word ADEORV are permuted in all possible ways and arranged in alphabetical order then find the word at position 45th in the permuted alphabetical order? a. AEVODR      b. ADVORE  
c. AEDVOR      d. AEORDV

31. Raj divided 50 into 2 parts such that the sum of their reciprocals is  $1/12$ . What are the numbers?

- A. 36, 14      B. 28, 22      C. 20, 30      D. None of these

32. How many distinct 9 digit numbers can be formed from the number 223355888 by re-arranging its digits so that the odd digits occupy even positions? A. 120      B. 90      C. 60      D. 30

33. When the sum of four consecutive odd numbers is divided by 10, the number obtained is a perfect square. Which one of the following is not one of the four consecutive odd numbers? A. 39 B. 41      C. 43  
D. 47

34. Ashok, Eesha, Farook and Gowri ran a race. Ashok said, "I did not finish 1<sup>st</sup> or 4<sup>th</sup>. Eesha said, "I did not finish 4<sup>th</sup>. Farook said, "I finished 1<sup>st</sup>. Gowri said, "I finished 4<sup>th</sup>. There were no lies in the competition, and exactly three of the children told truth. Who finished 4<sup>th</sup>? A. Ashok      B. Gowri      C. Eesha  
D. Farook

35. The two sides of a triangle are 32 and 68. The area is 960 sq.cm. Find the third side      A. 60      B. 62  
C. 59      D. 63

36. A and B completed a work together in 5 days. Had A worked at twice the speed and B at half the speed, it would have taken them 4 days to complete the job. How much time would it take for A alone to do the work? A. 15 days      B. 10 days      C. 25 days      D. 20 days

37. Find the odd man out 7, 9, 17, 47, 91, and 172. A. 17      B. 47      C. 9      D. 91

38. A village milkman carried out adulteration of milk with water to make higher profits. He has 2 cans, one with water another with pure milk, He pours water from can No.1 into can no.2 sufficient to double its contains. He again pours from No.2 into No.1 ugh of the mixture to double the contains. He again pours from No.1 into No.2 to double the contains of No.2 and find the same number of litres of milk in each can, although there is one more liter of water in No.2 than there is a milk. How much more water than milk is there in can No.1? A. 1      B. 2      C. 3      D. 4

39. \*This is a credit card number. The sum of 3 consecutive terms is 18, Find X

			7				X				8		
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- A. 2      B. 1      C. 3      D. 4

40. Two equilateral triangles 12cm sides overlap to form a star. The star is circumscribed by a circle. Find the area of the circle lying outside the star? A.  $48(-3)$       B.  $48\sqrt{3}$       C.  $48(\pi - \sqrt{3})$       D. Cannot say

41. One man travels 10 km upstream in 5 hrs. Another man travels downstream 10 km in 3 hrs. if the speed of the stream is 0.5 km/hr, what is the difference between the speed of men? A.  $5/4$       B.  $7/3$   
C.  $4/3$       D.  $2/3$

42. The average temperature of Tuesday, Wednesday and Thursday was  $37^\circ\text{C}$ . The average temperature of Wednesday, Thursday and Friday was  $38^\circ\text{C}$ . If the temperature on Friday was  $39^\circ\text{C}$ . Find the temperature on Tuesday.

- A. 38.33      B. 37.33      C. 36      D. None of these

43. What is the largest number which can be added to 5678 such that the remainder is 35 if we divide it by 460?

- A. 648      B. 717      C. 672      D. 797      e) none of these

44. The weight and the cost of a  $2*2*2$  cup are 1.5 kg and Rs.10000. what is the cost of  $3*3*3$  cup?

- A. 30000      B. 33450      C. 33750      D. Cannot say

45. If  $f[x] = ax^4 + bx^2 + x + 5$ .  $f[-3] = 2$ , find  $f[3]$ . A. 12      B. 8      C. 10      D. 14

46. Rajesh calculated his average over the last 24 tests and found it to be 76. He finds out that the marks for three tests have been inverted by mistake. The correct marks for these tests are 87, 79 and 98. What is the approximate percentage difference between his actual average and his incorrect average? A. 2%      B. 2.5%

- C. 2.30%      D. None of these

47. Find the last digit of  $8+88+888+\dots$ . Up to 24 terms.

A.682 B.672 C.666 D.632

48. \*The numbers 6,12,21,22,27,34 are placed in the boxes a,b,c,d,e,f shown below in a certain order such that the sum of the entries in each of the extreme rows and each of the extreme columns (i.e. top row,bottom row,left most column, right most column) are the same number K. What is the value of K?

9	A	B	14
C			D
23	E	F	25

A.71 B.66 C.61 D.69

49.A rectangular field is 300 feet wide and 400 feet long.Random sampling indicates that there are, on the average, three ants per square inch throughout the field. [12 inches=1 foot] Of the following, the number most closely approximates the number of ants in the field is A.50 million B.500 million C. 5 million D. 5000

50.George can do some work in 8 hours. Paul can do some work in 10 hours while Hari can do the same work in 12 hours. All three of them start working at 9.00 am. While George stops work at 11.00 am and the remaining two complete the work. Approximately at what time the work be finished? A.11.30 am B.12.30 pm C.1 Pm D.12 noon

51.The average of three numbers is 42. if we add one more number then the average becomes 40 and if we replace the first number by a number which is 3 more than the recently added number the new average becomes 38. Find the First number.A.45 B.42 C.37 D.38

52.The area of a triangle and circle are equal.If the radius of the circle is 6 cm and height of the triangle is 7 cm then the length of the base of the triangle is: 32.32 cm 28.12 cm 19.19 cm 27.27 cm

53.A typist A takes twice as much time as another one B or thrice as much time as the typist C to type 150 pages. If they work together, they can type 150 papers in 2 hours then C can type 150 papers alone in : A.4hours B.6h C.8h D.2h

54. If  $53p26p3$  is a 7 digit number divisible by 9 and if  $757qp$  is divisible by 8 then the minimum value of  $p + q$  is: A.4 B.8 C.12 D.16

55. In a college during the start of the 1 year course, the number of boys and girls are in the ratio 5 : 4. After few months some of the students left the college in the ratio 3 : 2. At the end of the year the number of boys and girls who have completed the course is 6 and 16 respectively. Find the initial number of girls in the class A.50 B.60 C.58 D.72

56. If  $\frac{2}{5}$ th of a number exceeds  $\frac{3}{10}$  of another number by twice of 17 and 190 is the sum of that two numbers then the biggest of them is: A.120 B.130 C.165 D.132

57.Dipin's score is 15% more than that of Rafi. Rafi's score is 10% less than that of Chandar. If the difference between the scores of Dipin and Chandar is 14, what is the score of Rafi? A.180 B.360 C.120 D.480

58. Anushka has a jewel chest containing Rings, Pins and Ear-rings. The chest contains 26 pieces. Anushka has  $2\frac{1}{2}$  times as many rings as pins, and the number of pairs of ear rings is 4 less than the number of rings. How many earrings does Anushka have? A.12 B.8 C.6 D.10

59.A certain shade of orange color is obtained by mixing 1 part of white color with 2 parts of red color. If 3.6 kgs of the mixture is needed and the white and red colors can be purchased only in 1 kg, what is the least amount of color, in kg's, that must be purchased for the mixture? A.5kg B.4kg C.6kg D.4.5kg

60.Let  $N = 80pq2pq$  (7 digit number). If N is exactly divisible by 120 then the sum of the digits in N is equal to:

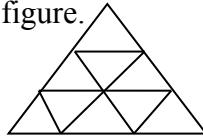
A.18 B.22 C.24 D.12

61.A farmer has a rose garden. Every day he either plucks 7 or 6 or 24 or 23 roses. The rose plant are intelligent and when the farmer plucks these no. of roses, the next day 37 or 36 or 9 or 18 new roses bloom up in the garden respectively. On Monday he counts 189 roses, he plucks the roses as per his plan on consecutive days and new roses bloom up as per the intelligence of the plants mentioned above. After some days which of the following can be the number of roses in the garden? a.4 b.7 c.15 d.18

62.The sum of three digit number is subtracted from the number. The resulting number is always A.divisible by 6 B.not divisible by 6 C.divisible by 9 D.not divisible by 9

63. \*Chocolates Rs.164.90 it is used to sell chocolates for Rs.2 each but there were no sales at that price. When it is reduced the price, all chocolates sold out. Enabling the shop keeper to realize Rs. 164.90 from the chocolates alone. If the new price was not less than half the original price. How many chocolates were sold?  
A.39 B.37 C.97 D.71
64. Remainder of  $(16937^{30})/31$  A.1 B.2 C.3 D.6
65. A workman starts his work on Monday. Work for 8 days and takes every 9<sup>th</sup> day as his holiday. His 12<sup>th</sup> holiday will fall on: A. Monday B. Wednesday C. Friday D. Sunday
66. From a box containing 3 white chips, 7 blue chips & 15 green chips, 2 chips are drawn at random. What is the probability that one is of the chips is blue & the other white? a.  $7/625$  b.  $7/50$  c.  $7/100$  d.  $21/625$
67. HCF of 2472, 1284 & 3<sup>rd</sup> number N is 12. If LCM of these three no's is  $2^3 \times 3^2 \times 5^1 \times 103 \times 107$ , then N?  
a.  $22 \times 32 \times 51$  b.  $22 \times 32 \times 71$  c.  $22 \times 32 \times 103$  d. none
68. Frame a 4 digit plate which has 2 alphabets and 2 numbers. In how many ways can we frame the same?  
A. 448680 B. 53240 C. 496800 D. None of these
69. There is a ladder of 100m from the wall and height of the wall is 60m. Find the maximum length (in m) of the cube that can be inscribed inside the triangle. A. 34 B. 40 C. 30 D. 48
70. Cara, a Blue whale participated in a weight loss program at the biggest office. At the end of every month, the decrease in weight from original weight was measured and noted as 1,2,6,21,86,445,2676. While Cara made a steadfast effort, the weighing machine showed an erroneous weight once. What was that? A. 2676 B. 86 C. 445 D. 12500
71. 1,2,2,3,3,3,4,4,4,1,1,2,2,2,2,3,3,3,3,3,4,4,4,4,4,4,1,1,1,2,2,2,2,2,3,3,3,3,3,3,3,3,.....in the above sequence what is the number at the position 2888 of the sequence. A. 1 B. 2 C. 3 D. 4
72. Raj earns 25% on an investment but loses 10% on another investment. Of the ratio of the two investments is 3:5, What is the gain or loss on the two investments taken together? a. 6.25% loss b. 3.125% gain c. 13.125% loss d. 13.125% gain
73. If ABERSU are in sorted in alphabetical order, if 24 sorting are required for ABUSRE, 25 for AEBRSU, 49 for ARBESU, then how many sorting are required for AEUSRB? (a) 45 (b) 48 (c) 47 (d) 46
74. Two vehicles A and B leave from city Y to city X, A overtakes B at 10.30 a.m. and reaches city X at 12.00 p.m. It waits for 2 hrs and returns to city Y. On its way, it meets B at 3.00 p.m. and reaches city Y at 5.00 p.m. B reaches city X, waits for 1 hr and returns to city Y. After how many hours will B reach city Y from the time A overtook him for the first time? a. 50 hrs b. 37.5 hrs c. 49.5 hrs d. 41.5 hrs
75. A number when successively divided by 5,3,2 gives remainder 0,2 and 1 respectively in that order. What will be the remainder when the same number is divided successively by 2,3, and 5 in that order? a) 2,1,3 b) 4,1,2 c) 4,3,2 d) 1,0,4
76. . if  $1998 = 27$ , then find out  $2997 = ?$  a. 27 b. 25 c. 18 d. 19
77. In a rectangular coordinate system, what is the area of a triangle whose vertices have the coordinates (4,0), (6, 3) and (6, -3) A. 6 B. 7 C. 7.5 D. 6.5
78. If 75 % of a class answered the first question on a certain test correctly, 55 percent answered the second question on the test correctly, and 20 percent answered neither of the questions correctly, what percentage answered both correctly?  
a) 10% b) 30% c) 50% d) 70%
79. In a 8 x 8 chess board what is the total number of squares. a) 104 b) 204 c) 304 d) 404
80. At the end of 1994 Rohit was half an old as his grand mother. The sum of years in which they were born is 3844. How old Rohit was at the end of 1999. a) 46 years b) 53 years c) 62 years d) 96 years
81. P is thirty percentage of Q, Q is twenty percentage of N. M is fifty percentage of N, Find the value of P/N. (a) 0.03 (b) 33.33 (c) 16.67 (d) None of these
82. \*A starts riding his bike at 10am with a speed of 20kmph and B also starts at 10am with a speed of 40kmph from the same point in the same direction. A turns south at 12 o'clock and B turns north at 11 am. What will be the distance between A and B at 2 pm?  
(a) 250km (b) 120km (c) 160km (d) 145.6km

83. Find the number of triangles in the given figure.



(a) 10 (b) 9 (c) 27 (d) 13

84. There are 6 people from different countries namely Germany, Italy, Britain, Spain, Poland and France. They are sitting around a table. Polish sits next to British. German sits next to Italian, or British or both. Italian does not sit next to the Frenchman. Spanish sits immediately after British. Who sits on the either side of the German?

(a) British and Italian (b) Polish and British (c) British and French (d) Italian and French

85. A Beaker contains 180 litres of Alcohol. On the first day, 60 litres of alcohol is taken out and replaced by water. On second day, 60 litres of mixture is taken out and replaced by water and the process continues day after day. What will be the quantity of alcohol in the beaker after the third day? (a) 40 litres (b) 80 litres

(c) 53.33 litres (d) 100 litres

86. Out of eight crew members three particular members can sit only on the left side. Another two particular members can sit only on the right side. Find the number of ways in which the crew can be arranged so that four men can sit on each side. A. 864 B. 863 C. 865 D. 1728

87. A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is: A. 2 : 1 B. 3 : 1 C. 3 : 2

D. 4 : 3

88. Ten different letters of alphabet are given, words with 5 letters are formed from these given letters. Then, the number of words which have at least one letter repeated is: A. 69760 B. 30240 C. 99748 D. 42386

89. If 15 women or 10 men can complete a project in 55 days, in how many days will 5 women and 4 men working together to complete the same project? a) 75 b) 95 c) 55 d) 65

90. A certain number when divided by 222 leaves a remainder 35, another number when divided by 407 leaves a remainder 47. What is the remainder when the sum of these two numbers is divided by 37? A. 8

B. 9 C. 12 D. 17

91. In how many ways can the digits of the number 2,2,3,3,5,5,8,8,8 be arranged so that the odd digits are placed in even positions? A. 450 B. 350 C. 720 D. 5040

92. The wages of 24 men and 16 women amount to Rs. 11600 per day. Half of the men and 37 women earn the same money. The daily wages paid to each man: A. 375 B. 400 C. 350 D. 325

93. In a particular year, the month of Jan has exactly four Thursdays and four Sundays. On which day of the week did Jan 1 occur that year A. Monday B. Wednesday C. Tuesday

D. Friday

94. It takes 52 days to complete an agreement deal by a certain number of men. After 17 days 300 men are added and 21 days are reduced. How many men were working initially? A. 250 B. 200 C. 50 D. None

95.  $0 > a > b > c > d$ , which is largest? A.  $(b+d)/(a+c)$  B.  $(a+b)/(c+d)$  C.  $(a-b)/(c-d)$  D.  $(a+b)/(c+d)$

96. A sum of Rs. 3000 is distributed among a, b, c. A gets  $\frac{2}{3}$  of what B+c got together and c gets  $\frac{1}{3}$  of what a+b together. C's share is a. 1200 b. 2250 c. 750 d. 1050

97. In the given figure, If the sum of the values along each side is equal, find the possible values of a, b, c, d, e, f

32	A	B	10
E			F
15	C	D	5

a. 9, 7, 20, 16, 6, 38 b. 4, 9, 10, 13, 16, 38 c. 4, 7, 20, 13, 6, 38 d. 4, 7, 20, 16, 6, 33

98. A hollow pipe has circumferences 14cm. A bug is on wall (outside) at a distance of 48cm from top. A drop of honey is on the wall (inside the pipe) at 24cm from top. But diametrically opposite to bug. Find the shortest distance bug has to travel to reach honey. a. 24 b. 25 c. 27 d. 29

99. The sum of 3 consecutive no of the 4 no's A, B, C, D are 4613, 4961, 5010, 5099 then what is the largest no among A, B, C, D? a. 1948 b. 1463 c. 1601 d. 1550

100.  $1 - 2 + 3 - 4 + \dots - 98 + 99 = ?$  a. -49 b. 0 c. 50 d. -50

101. There is a conical tent in which 10 persons can stand. Each person needs  $6\text{m}^2$  to stand and  $60\text{m}^3$  air to breathe. What is the height of the tent? a. 60 b. 30 c. 20 d. 45
- 102\*.  $\frac{2}{3}$  of the balls in the bag are blue, the rest are pink. If  $\frac{5}{9}$  of the blue balls and  $\frac{7}{8}$  of the pink balls are defective, find the total number of balls in the bag given that the number of non-defective balls is 146. a. 216 b. 649 c. 432 d. 578
103. An apple costs L rupees per kg up to 30 kg. It will cost Q rupees per kg for every additional kg. If 33 kg of apples costs Rs. 1167 and 36 kg of apples costs Rs. 1254, then what is the cost of 10 kg of apples? A. 300 B. 360 C. 390 D. 330
104. Jack is faster than Paul, Jake and Paul each walk 24 km. The sum of their speeds is 7 km per hour. And the sum of times taken by them is 14 hours. Then Jack's speed is A. 4 kmph B. 3 kmph C. 5 kmph D. 2 kmph
105. In a certain city, 60% of the registered voters are Congress supporters and the rest are BJP supporters. In an assembly election, if 75% of the registered Congress supporters and 20% of the registered BJP supporters are expected to vote for candidate A, what percentage of the registered voters are expected to vote for candidate A? A. 53 B. 70 C. 60 D. 20
106. If  $f(x) = 2x + 2$  what is  $f(f(3))$ ? A. 18 B. 8 C. 64 D. 16
107. What is the remainder when  $6^{17} + 117^6$  is divided by 7? A. 1 B. 3 C. 6 D. 0
108. George does  $\frac{3}{5}$  of a piece of work in 9 days. He calls Paul, and they finish the remaining work together in 4 days. How long would Paul, working alone, take to complete the work? a. 28 b. 30 c. 32 d. 35
109. Raj drives slowly along the perimeter of a rectangular park at 24 kmph and completes a full round in 4 minutes. If the ratio of the length to the breadth of the park is 3:2, what are its dimensions? a.  $150\text{m} \times 100\text{m}$  b.  $480\text{m} \times 320\text{m}$  c.  $450\text{m} \times 300\text{m}$  d.  $100\text{m} \times 100\text{m}$
110. Oranges can be packed in sets of 10 oranges in a box type A or 25 oranges in box type B. A carton comprising of 1000 oranges of type A and type B boxes is packed. How many different combinations are possible in the number of type A and type B boxes while organizing the oranges? a) 19 b) 21 c) 18 d) 20
111. A circular swimming pool is surrounded by a concrete walk 4 feet wide. If the area of the walk is  $\frac{11}{25}$  of the area of the pool, the radius of the pool in feet is a) 8 feet b) 20 feet c) 16 feet d) 30 feet
112. 2 workers, one young and one old, live together and work at the same office. It takes 20 minutes for the young man to walk to office, the old man takes 30 minutes for the same distance. When will the young man catch up with the old man, if the old man starts at 10.00 am and the young man starts at 10.05 am? a) 11.00 am b) 10.10 am c) 10.15 am d) 10.20 am
113. A  $3 \times 3$  grid is colored using red and blue colors such that if we rotate the grid about its center in the plane by 180 degrees, the grid looks the same. The number of ways to color this grid is: a) 256 b) 64 c) 16 d) 32
114. A student selects 3 digits from numbers 1 to 9 such that they are in strictly increasing order. How many selections have the property that the three digits form an arithmetic progression? a) 7 b) 12 c) 16 d) 14
115. Raj tossed three dice and their results are noted down. What is the probability that Raj gets the sum as 10? a)  $\frac{1}{72}$  b)  $\frac{1}{9}$  c)  $\frac{25}{216}$  d)  $\frac{1}{8}$
116. Jake and Paul walk each 10 kilometers. Jake is 1.5 km faster than Paul because of which covers the distance in 1.5 Hrs faster than Paul. What is Jake's speed? a. 4 b. 6 c. 8 d. 2
117. From the top of a 9 metres high building AB, the angle of elevation of the top of a tower CD is  $30^\circ$  and the angle of depression of the foot of the tower is  $60^\circ$ . What is the height of the tower? a) 6 b) 12 c) 18 d) 24
118. A takes 2 hours to make a publication. B takes 10 hours to make a publication. Find the time taken by them to make two publications, working independently. (a) 12 hours (b) 11 hours (c) 22 hours (d) None of these
- 119) A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is: A.  $\frac{1}{13}$  B.  $\frac{2}{13}$  C.  $\frac{1}{26}$  D.  $\frac{1}{52}$

120) The marked price of a coat was 40% less than the suggested retail price. Eesha purchased the coat for half of the marked price at a 50th Anniversary Sale. What percent less than the suggested retail price did Eesha pay

- (a) 60 % (b) 20% (c) 70% (d) 30%

121) In a triangle ABC, the length of the sides AB & AC equal 17.5 cm & 9 cm respectively. Let D be a point on the line segment BC such that AD is perpendicular to BC. If  $AD = 3$  cm, then what is the radius (in cm) of the circle circumscribing the triangle ABC? (a) 17.05 (b) 27.85 (c) 32.25 (d) 26.25

122) Jain housing complex has a democratically elected governing council comprising of the president, Secretary and the Treasurer. During Their Annual meeting, They brought up three different initiatives for discussion and voting namely Painting of exteriors, 24 hr Security and additional water tank. They Vote As below.

I) Each Member of the council votes for at least one of the initiatives and against at least one of the initiatives.

II) Exactly two members of the council votes for the painting initiatives

III) Exactly one member of the council votes for the Security Initiatives

IV) Exactly one member of the council vote for the water tank Initiatives.

V) The President votes for the Painting Initiatives and votes against Security initiatives

VI) Security Votes against painting Initiatives VII) Treasurer Votes Against water tank initiatives.

Which one of the following statements could be true?

(a) President and Secretary vote the same way on the water tank initiative.

(b) Secretary and Treasurer vote the Same way on the painting initiative.

(c) Secretary and Treasurer vote the same way on the Security initiative.

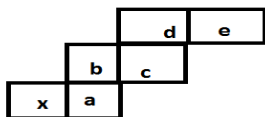
(d) President votes for one of the initiatives and secrets votes for two of the initiatives.

123) 11 23 47 83 131 . What is the next number ? (a) 145 (b) 178 (c) 176 (d) 191

124) In this question  $A^B$  Means A raised to the Power B. if  $f(x) = ax^4 - bx^2 + x + 5$

$f(-3) = 2$ ; Then  $f(3) = ?$  (a) 3 (b) -2 (c) 8 (d) 1

125) If the given Sheet is folded to form a cube, which side will be opposite to X?



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

126) What is the greatest possible positive integer n if  $8^n$  divides  $44^{44}$  without leaving a remainder.

- (a) 14 (b) 28 (c) 29 (d) 15

127) 17 x 8m rectangular ground is surrounded by 1.5m width path. Depth of the path is 12cm. Gravel is filled and find the quantity of gravel required in cubic meters (a) 5.5 (b) 7.5 (c) 6.05 (d) 10.08

128) For a real number X,  $\text{int}(X)$  denotes the integral of X, that is  $\text{int}(X)$  is the largest integer less than or equal to X. Thus  $\text{int}(1.2) = 1$  and  $\text{int}(-2.4) = -3$ , the value  $\text{int}(1/2) + \text{int}(1/2 + 1/100) + \text{int}(1/2 + 2/100) \dots \text{int}(1/2 + 99/100)$  is?

- (a) 150 (b) 149 (c) 151 (d) 148

129) There are 5 boxes in a cargo hold. The weight of the first box is 200k and the weight of the second box is 20% higher than the weight of the 3rd box whose weight is 25% higher than the first box's weight. The fourth box at 350kg is 30% lighter than the fifth box. Find the difference in the average weight of the four heaviest and four lightest boxes. A.80 B.75 C.37.5 D.116.8

130) A rectangle of height 100 squares and width 200 squares is drawn on a paper. It is colored square by square from top left corner and living across in a spiral turning right whenever a side of the rectangle on colored square is reached which square is colored square is reached which square is colors last (give its row and column numbers- the bottom right square is on row 100 and column 200)

- A. 51, 150 B. 51, 50 C. 50, 150 D. 50, 50

131) A bag contains six sticks of the following lengths 1 cm, 3cm, 5cm, 7cm, 11cm and 13cm. three sticks are drawn at random from the bag what is the probability that we can form a triangle with those sticks.?

- A. 11/20 B. 1 C. 1/4 D. 2/5



- 132). A survey of  $n$  people in the town of bedeviled found that 50% of them perfect brand A. Another survey of 100 people in the tone of chottaville found that 60% prefer bran A. in total 55% of all the people surveyed together prefer Brand A .what is the total number of people surveyed? A.200 B.104 C.213 D.412
- 133) (\*)An Engineer undertakes a project to bulit a road 15km long in 300 days and employee 45 men for the purpose. After 100 days he find only 2.5 km of the road had been completed. FInd the(app) number of extra men he must employ to finish the work in time? a) 43 b) 45 c) 55 d) 68
134. Car A leaves city C at 5pm and drives at a speed of 40kmph.2 hours later another car B leaves city C and drives in the same direction as car a.In how much time will car B be 9 km ahead of car A if speed of car B is 60kmoh? a) 4.25hours b) 4.17hours c) 4.30hours d) 4.45hours
- 135) 26ab5 is a five digits number divisible by 25.If the number formed from the two digits ab is a multiple of 13, then ab=? a) 52 b) 65 c) 10 d) 25
- 136) One day, Eesha started 30 min late from home and reached her office 50 min late while driving 25% slower than her usual speed. How much time in min does Eesha usually take to reach her office from house? a) 80 min b) 50min c) 60 min d) 70 min
- 137) .Find the odd man out 7, 17,19,43,91,131 a) 17 b) 43 c)91 d) 131
- 138) Find the number of zeroes in  $1^1 * 2^2 * 3^3 \dots 48^{48} * 49^{49}$ ? a)250 b) 225 c) 545 d) 135
- 139) George and Mark work for a company. George can finish a certain job in 30 days. Mark can finish the same job in 45 days. A project was taken job in 45 days. A project was taken by the company and George was made superior to Mark. This move from the Company was not liked by Mark. So Mark did not work from 15 days. Find the total number of days the entire work was completed if Mark works at his normal speed after 15 days from the date of commencement? a) 15 b) 20 c) 35 d) 24
- 140) In a telecom assembly factory,there are 250 men and 150 women.The average productivity of all workers is 12 unit per day.The average productivity of a man is 15 unit per day.What us the average productivity of a woman per day? a) 6 b) 9 c) 7 d)8
- 141) A person walks at 4km/hr for a particular duration T1 and 3km/hr for another duration T2 and covers a total distance of 36km.If he walks at 4km/hr for the duration T2 and at 3km/hr for the duration T1,then he covers only 34km.What will be the time taken by him to cover the one of the legs? a) 4hrs b) 7hrs c) 10 hrs d) 6hrs
- 142) 60 men can complete a piece of work in 40 days.6 men start the work but afr every 5 days 5 people leaves.In how many days will work be completed? a) 60 b) 80 c) 120 d) None of these
- 143) father is 5 times faster than son.father completes a work 40 days before the son.If both of them work together,when will the work get complete? a) 8 days b)  $8 \frac{1}{3}$  days c) 10 days d) 20 days
- 144).There is a set of number that relate to each other a certain way.Find the way the first set of boxes works.The number in the second set work in exactly the same way.Find the number that must
- |    |    |     |    |    |    |
|----|----|-----|----|----|----|
| 20 | 6  | 22  |    |    |    |
| 5  | 8  | 12  | 12 | 15 | 3  |
|    | 42 | 102 | 6  |    | 12 |
|    |    |     | 54 | 81 | 45 |
- a) 16 b) 9 c) 12 d)-21
- 145) Two people Ranbir and Katrina decide to meet at a beach between 1pm to 2pm,given that both will surely turn up once in the given time frame.If ranbir arrives he waits for 15 min and then leaves feeling betroyed and similarly katrina waits for 15 min sfter she arrives.So what's the probability that thay meet? a)  $\frac{1}{4}$  b)  $\frac{1}{16}$  c)  $\frac{7}{16}$  d)  $\frac{9}{16}$
- 146) Length and breath and height of a cuboid is in the ratio 1:3:7.Volume of the cuboid is 21m<sup>3</sup>.If the lenght is doubled and Breath & Height are halved,then what is the change in the volume of the cuboid? a) Decreased by 15% b) Decreased by 18% c) Decreased by 30% d) Decreased by 50%
- 147) Total income of 2003, 2004, 2005 is Rs.36400.Every year the salary increase by 20% what is the salary in 2003 a) 10,000 b) 12,000 c) 8800 d) 5000
- 148) On a toss of two dice, A throws a total of 5.Find the probability that he throws another 5 before he throws 7

a) 40% b) 45% c) 50% d) 60%

149) There are 5 distinct integer  $a, b, c, d, e$  in ascending order  $(68-a)(68-b)(68-c)(68-d)(68-e)=725$  What is  $a+b+c+d$ ?

a) 34 b) 136 c) 306 d) 238

150) If  $f(1)=4, f(x+y)=f(x)+f(y)+7xy+2$  for  $x>0$  and  $y>0$ , find  $f(2)+f(5)$  a) 140 b) 160 c) 115 d) 120

151) A number divided by 357 leaves 5 as remainder. If the number is divided by 17, what is the remainder?

a) 9 b) 3 c) 5 d) 7

152) A girl entered a store and bought  $X$  flowers for  $Y$  dollars ( $X$  and  $Y$  are integers). When she was about to leave, the clerk said, if you buy 10 more flowers I will give you all for \$2, and you will save 80 cents a dozen. The values of  $X$  and  $Y$  are ?

a) (15,1) b) (10,1) c) (5,1) d) Cannot be determined from the given information

153) On door A – it leads to freedom On door B – it leads to Ghost house On door C – door B leads to Ghost house The statement written on one of the doors is wrong. Identify which door leads to freedom?

a) A b) B c) C d) None

154) 70, 54, 45, 41, ? a) 35 b) 36 c) 38 d) 40

155) How many positive integers less than 500 can be formed using the number 1, 2, 3 and 5 for digits, each digit being used only one? a) 52 b) 68 c) 66 d) 34

156) There is a rectangle with dimension  $400 \times 300$  ft. inside the rectangle; there are 3 ants for every square inch. So, how many ants (approximately) will be there inside the rectangle?

a) 5 million b) 50 million c) 50000 d) 500

157) In how many ways can 2310 be expressed as a product of three factors?

a) 41 b) 56 c) 23 d) 46

158) Three sisters are identical triplets. The oldest by minutes is Asha, and Asha always tells anyone the truth. The next oldest is Easha and Easha always will tell anyone a lie. Usha is the youngest of the three. She sometimes lies and sometimes tells the truth. Victor, an old friend of the families, came over one day and as usual he didn't know who was who, as he asked each of them one question. Victor asked the sister that was sitting on the left, "Which sister are in the middle of you three?" and the answer he received was, "Oh, that's Asha". Victor then asked the sister in the middle. "What is your name?" The response given was, "I'm Usha". Victor turned to the sister on the right, and then asked, "Who is that in the middle?" The sister then replied, "She is Easha". This confused Victor; he had asked the same question three times and received three different answers. Who was actually sitting in the middle?

a) Asha b) Easha c) Usha d) Cannot be determined

159) Four examiners evaluate certain number of papers in 8 days working 5 hours a day. If deraminers evaluate twice the number of papers in 20 days then how many hours per day should they work?

a) 8 b) 9 c) 4.5 d) 7

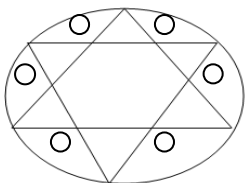
160) From a square of side 2cm equal triangle is cut from it corners to form a regular octagon. We will get an octagon. What is the area of that octagon?

a)  $4(\sqrt{2})+8$  b)  $8(\sqrt{2})-8$  c)  $2(\sqrt{2})+8$  d)  $8(\sqrt{2})+4$

161) A travels at 40 kmph and B travels at 60 kmph. They are travelling towards each other and start at the same time. By the time they meet, B would have travelled 120km more than. Find the total distance.

a) 600 km b) 720 km c) 400 km d) 540 km

162) There is a circle with two equilateral triangle of side 12cm inscribed in it in opposite direction making it a star as shown in the figure. What is the area of the remaining portion of the circle outside the star (dotted small circled region)?



a)  $48(\pi - \sqrt{3})$  b)  $48(\pi + \sqrt{3})$  c)  $24(\pi - \sqrt{3})$  d)  $24(\pi + \sqrt{3})$

163) What is the value of  $A$  such that  $X^2-11X+A$  and  $X^2-14X+2A$  will have a common factor?

a)  $-1/2$  b) 24 c) -2 d) 20

- 164) Probability that leap year chosen at random will have 53 Sundays? A.  $\frac{1}{49}$  B.  $\frac{3}{7}$  C.  $\frac{1}{7}$  D.  $\frac{2}{7}$
- 165) Average salary of 17 teachers is 45000. 3 teachers went out and the average copped by 2500. What is the sum of salaries of 3 teachers who left? A. 173000 B. 176000 C. 170000 D. 85000
- 166) A merchant buys 20kg of wheat at Rs.30 per kg and 40 kg of wheat at Rs.25 per kg. He mixes them and sells one third of the mixture at Rs.26 per kg. The price at which the merchant should sell the remaining mixture so that he may earn a profit of 25% on his whole outlay is. A. Rs.30 B. Rs.40  
C. Rs.360 D. Rs. 37
- 167) After 6 years Raja's father's age will be twice that of the his age and 2 years ago his mother age was twice that of Raja's age What is the sum of Raja's parent's age? A. 4 less than four times Raja's age B. 2 more than four times Raja's age C. 4 more than four times Raja's age D. 2 less than four times Raja's age.
- 168) Find the odd man out: 2, 8, 20, 44, 83 A. 8 B. 20 C. 44 D. 83
- 169) There are 100 in a class and they attend a test. 20 students are failed in both the subjects. 50 students pass in subject A. 60 students passed in subject B. How many students passed in subject an Only? A. 20 B. 30 C. 15 D. 25
170. If  $5+3+2=15$   $10+2+2=18$   $3+5+2=10$   $2+2+4=18$   $3+5+3=11$   $4+6+3=13$   $5+4+5=14$  then  $7+2+5$   
A. 14354 B. 132234 C. 2577224 D. 112321
- 171) Ashy and Eesha – Eesha lies on Monday, Tuesday and Wednesday. Ashy lies on Thursday Friday and Saturday. Other days they will say the truth. Professor forgets and asked them what day it is. Both of them said yesterday was lying and then professor got the day what day is it? A. Tuesday B. Thursday C. Friday D. Cannot is determined.
- 172) For a car there are 5 tyres including one spare tyre (4+1). All tyres are equally used. If the total distance travelled by the car is 40000 km then what is the average distance by the each tyres? A. 10000 B. 40000  
C. 32000 D. 8000
- 173) A city in the us has a basketball league with 3 basketball teams, the Aztecs, the braves and the Celtics. A sport writer notices that the tallest players of the Aztecs are shorter than the shortest player of the Braves. The shortest of the Celtics is shortest player than the shortest of the tallest of the Celtics. The tallest of the braver is taller than the tallest of the Aztecs. Which of the following can be in edged with certainty? X) Paul, a Brave is taller than David, an Aztec. Y) David, a Celtic is shorter than Edward, an Aztec A. X only B. Both X and Y C. Neither X nor Y D. Y only
174. Each of A, B and C need a certain unique time to do certain work. C needs 1 hour less than A to complete the work. Working together they require 30 minutes to complete 50% of the work. The work also gets completed if A and B start working together and A leaves after 1 hour and B works further 3 hours. How much work does C do per hour?  
A. 16.66 % B. 66.66% C. 50% D. 33.33%
- 175) There are 20 persons sitting in a circle. In that there are 18 men and 2 sisters. How many arrangements are possible in which the two sisters are always separated by a men? a)  $18! \cdot 2$  b)  $17!$  c)  $17 \cdot 2!$  d)  $12!$
- 176) Length, Breadth and height of a 3D figure is in the ratio 3:2:1. If the length is doubled and breath And height are halved then what is the % decrease in the volume if the solid?  
A .Decreased by 15% B. Decreased by 18% C. Decreased by 30% D. Decreased by 50%
177. Find the remainder when  $2^{31}$  is divided by 5. A. 4 B. 5 C. 3 D. 7
2. F, G, H, J, K, L, M, N are eight people they need to grouped into two with the following conditions  
I. F, J must be in the same group II. G, N are in different groups  
III. H, L are in the same group IV. M, G are not in the same group  
Find the correct ordering of groups A. FHJLMNGK B. FJHLMNGK C. GKFJHLMN  
D. MNGKHLFJ
178. Find the sum of the series given below:  $1(1!) + 2(2!) + \dots + 2012(2012!)$   
A.  $2013! + 1$  B.  $2013! - 1$  C.  $2012! + 1$  D.  $2012! - 1$

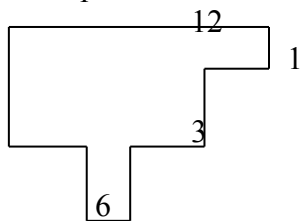
179. 2 gear one with 12 teeth & other with 14 teeth are engaged with each other. One tooth in smaller gear and tooth in biggest gear are marked and initially those marked tooth is contact to each other. After how many rotation of the smaller gear with the marked teeth in the other gear will again come in to contact for the first time? a.7 b.84 c. 12 D. data insufficient

180. One card is lost from a packet of 52 cards. 2 cards are drawn randomly. They are spade. What is the probability that the lost card is also spade a)  $\frac{1}{4}$  b.  $\frac{1}{13}$  c.  $\frac{3}{13}$  d.  $\frac{5}{13}$

181. Three dice are rolled. What is the probability of getting the sum as 13?

a.  $\frac{19}{216}$  b.  $\frac{21}{216}$  c.  $\frac{17}{216}$  d.  $\frac{22}{216}$

182. Find the parameter of the decagon with given dimension.



a.32 b.34 c. 44 d. 22

183. Easha invited 8 friends to her birthday party –usha, nisha, asha, ablisha, suresh, ramesh, naresh, ritesh. They are arrived one after the other around the party time within minute of each other from 19:41 to 19:48 hours one friend every minute

Nisha joined the party before Naresh

Suresh joined the party before Ablisha

Naresh and Ablisha joined the party before Usha

Naresh joined the party before Ritesh

Ablisha joined the party before Ramesh

Usha joined the party before Aasha

Which one is not possible? a. Usha 19:44 b. Nisha 19:41 c. Nisha 19:43 d. ramesh 19:41

184. The first 44 integers are written in order to form the large number  $N = 123456 \dots 424344$ . What is the remainder when N is divided by 45? a.4 b.9 c.14 d.18

185. There is a school where 60% are girls & of which 45 are poor. Students are collected at random, what is the probability of selecting a poor girl out of total strength. a.0.27 b.0.45 c.0.56 d.none

186. When M is divided by 6 it leaves a remainder 2 & when N is divided by 6, it leaves a remainder 3. what will be remainder if M-N is divided by 6? ( $M > N$ ) a.1 b.2 c.4 d.5

187. The 18<sup>th</sup> birthday of a girl is on 28<sup>th</sup> Feb. 2009 (Saturday). On what day of the week will be her 25<sup>th</sup> birthday? A. Sunday B. Monday C. Tuesday D. Wednesday

188. A 2 C D

- 2 B 9 6

-----

5 6 4 6

-----

Find  $2*A + 4*B + 3*C + D$ . A.50 B.60 C.70 D.80

189. A call center agent has a list of 305 phone numbers of people in alphabetic order of names [but she does not have any of the names]. She needs to quickly contact Deepak Sharma to convey a message to him. If each call takes 2 minutes to complete, and every call is answered, what is the minimum amount of time in which she can guarantee to deliver the message to Mr. Sharma?

A.18 minutes B. 610 minutes C. 206 minutes D. 34 minutes

190. Two identical circles intersect so that their centers, and the points at which they intersect, form a square of side 1 cm. The area in sq. cm of the portion that is common to the two circles is

a.  $\sqrt{5}$  b.  $\sqrt{2}-1$  c.4 d.  $(\pi/2)-1$

191. Two full tanks, one shaped like a cylinder and the other like a cone, contain liquid fuel. The cylindrical tank held 500 litres more than the conical tank. After 200 litres of fuel is pumped out from each tank the cylindrical tank now contains twice the amount of fuel in the conical tank. How many litres of fuel did the cylindrical tank have when it was full?

a.1100 b.1200 c.1000 d.700

192. In how many ways can 7 different objects be divided among 3 persons so that either one or two of them do not get any object? a.180 b.84 c.381 d.36
193. Two consecutive numbers are removed from the progression  $1, 2, 3, \dots, n$ . The arithmetic mean of the remaining numbers is  $26\frac{1}{4}$ . The value of  $n$  is a.60 b.50 c.81 d. Cannot be determined
194. At 12:00 hours Jake starts to walk from his house at 6 Km an hour. At 13:30 hours, Paul follows him from Jake's house on his bicycle at 8 Km per hour. When will Jake be 3 Km behind Paul?  
a)19.30hrs b) 18.30 hrs c) 20.30 hrs d)19.00 hrs
195. The letters in the word ADOPTS are permuted in all possible ways and arranged in the alphabetical order. Find the word at position 42 in the permuted alphabetical order. a) AOTDPS b) AOTPDPS c) AOTDPS d) AOSTPD
196. Find the number of divisors for 1728? a)27 b)28 c)32 d)34
197. If there are Six periods in each working day of a school, In how many ways can one arrange 5 subjects such that each subject is allowed at least one period? a)1200 b)2400  
c)3600 d)4800
198. 3 mangoes and 4 apples costs Rs.85. 5 apples and 6 peaches costs 122. 6 mangoes and 2 peaches costs Rs.114. What is the combined price of 1 apple, 1 peach, and 1 mango. a) 37 b) 39 c) 35 d) 36
199. In a school, sixty percent of the students are girls and thirty five percent of the girls are poor. If a student is randomly selected, what is the probability of selecting a poor girl student? (a) 60% (b) 35% (c) 21%  
(d) None of these
200. A number is divided by 5, 2 and 3 successively in order to get remainders of 0, 1, and 2 respectively. What will be the remainders when the same number is divided by 2, 3 and 5 respectively? (a) 1, 0, 4  
(b) 1, 2, 3 (c) 1, 2, 0 (d) 1, 0, 2
201. In an year  $N$ , the 320<sup>th</sup> day of the year is Thursday. In the year  $N+1$ , 206<sup>th</sup> day of the year is also Thursday. What is the 168<sup>th</sup> day in the year  $N-1$ ? (a) Friday (b) Thursday (c) Tuesday (d) Saturday
202. A tank is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the tank in the same time during which the tank is filled by the third pipe alone. The second pipe fills the tank 5 hours faster than the first pipe and 4 hours slower than the third pipe. The time required by the first pipe is: A. 6 hours B. 10 hours C. 15 hours D. 30 hours
203. In how many ways can 10 identical pencils and 3 out of 26 sweets can be distributed to 3 students (each of them has at least one pencil)? (a)  $10^3 \cdot 26C3$  (b) 4560 (c) 3620 (d) None of these
204. How many polynomial functions  $f$  of degree  $\geq 1$  satisfy  $f(x^2) = [f(x)]^2 = f(f(X))$ ?  
(a) More than 2 (b) 2 (c) 0 (d) 1
205. A man sold 12 Candies in 10\$ had loss of  $b\%$  then again sold 12 candies had profit of  $b\%$  find the value of  $b$ ? (a) 9 (b) 9.09 (c) 10 (d) 11
206. Each of A, B and C need a certain unique time to do certain work. C needs one hour less than A to complete the work. Working together they require 30 mins to complete 50% of the work. The work also get completed if A and B starts work together A leaves after 1 hour and B works further 3 hours. How much work does c do per hour? (a) 16.66% (b) 66.66% (c) 50% (d) 33.33%
207.  $f(f(n)) + f(n) = 2n + 3$ ,  $f(0) = 1$  Find  $f(2012)$ . (a) 2011 (b) 2013 (c) 4095 (d) 2012
208. A man asks 5 people to make a guess about the amount of money in his pocket which is less than Rs.50. A guesses that the amount is a multiple of 10. B guesses that the amount is a multiple of 12. C guesses that the amount is a multiple of 15. D guesses that the amount is a multiple of 18. E guesses that the amount is a multiple of 30. Which of the following guesses are correct? (a) AE (b) AB (c) BC (d) DE
209. The letter of the alphabet are numbered from 1 to 26 consecutively with 1 assigned to A and 26 is assigned as Z. By 27<sup>th</sup> letter we mean A, 28<sup>th</sup> we letter mean B etc. In general  $26m+n$  where  $m$  and  $n$  are positive integers is same as the letter numbered in  $n$ . Let  $p=6$ . Then strange county military general his secret messages according to the following codification scheme. In codifying a sentence, the first the letter occurs it is replaced the  $P$ th letter from it, second time it occurs it is replaced by  $p^2$ nd letter from it, third time it occurs it is replaced by  $p^3$ rd letter from it. What is the code word for ABBATIAL?  
(a) GHMNZOR (b) GHKJZOHR (c) GHHGZOGR (d) GHLKZOIR

210. In a factory, each day the expected number of accidents is related to the number of overtime hour by linear equation. Suppose that on one day there were 1000 overtime hours logged and 8 accidents reported and on another day there were 400 overtime hours logged and 5 accidents. What is the expected number of accidents when no overtime hours are logged?

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

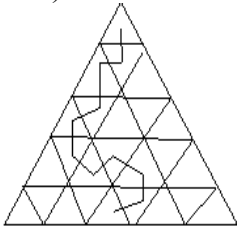
211. Raman scored 456 marks in an exam and Anu got 54 per cent marks in the same exam which is 24 marks less than Raman. If the minimum passing marks in the exam is 34 percent, then how much more marks did Raman scored than the minimum passing marks?

a.184 b.196 c.190 d.180

212. In an objective examination of 90 questions, 5 marks are allotted for every correct answer and 2 marks are deducted for every wrong answer. After attempting all the 90 questions a students got a total of 387 marks. Find the number of questions that he attempted wrong. A.9 B.10 C.11 D.12

213. 4.If  $5 \times nP_3 = 4 \times n+1P_3$  find n? A.10 B.12 C.11 D.14

214. Consider an equilateral triangle of side length n, which is divided into unit triangles, as shown. Let  $f(n)$  be the number of paths from the triangle in the top row to the middle triangle in the bottom row, such that adjacent triangles in our path share a common edge and the path never travels up (from lower row to a higher row) or revisits a triangle. An example of one such path is illustrated below for  $n = 5$ . Determine the value of  $f(2005)$



(a)  $f(2005)=(2001)!$  (b)  $f(2005)=(2004)!$  (c)  $f(2005) = (2011)!$  (d)  $f(2005) =$

$(2020)!$

215. The numbers 272738 and 232342, when divided by n, a 2 digit number, leave a remainder of 13 and 17 respectively. Find the sum of the digits of n? a. 7 b. 8 c. 5 d. 4

216. A can complete a piece of work in 8 hours, B can complete in 10 hours and C in 12 hours. If A,B,C start the work together but A leaves after 2 hours. Find the time taken by B and C to complete the remaining work.

a.  $2 \frac{1}{11}$  b.  $3 \frac{1}{5}$  c)6 d)7

217. What is the largest integer that divides all three numbers 23400 , 272304, 205248 without leaving a remainder?

a) 48 b) 24 c) 96 d) 72

218. We have an equal arms two pan balance and need to weigh objects with integral weights in the range 1 to 40 kilograms. We have a set of weights and can place the weights in any pan. (i.e) some weights can be in a pan with objects and some weights can be in the other pan. The minimum number of weights required is a) 4 b) 10 c) 5 d) 6

219. George is two-third as efficient as Smith and smith is three fourth as efficient as John. In one day what will be the fraction of work done by George alone, compared to all of them working together?

(a)  $\frac{2}{3}$  (b)  $\frac{2}{9}$  (c)  $\frac{4}{9}$  (d)  $\frac{1}{3}$

220. A and B starts from their house at 10 a.m. They travel from their house on MG road at 20 kmph and 40 kmph. There is a T junction on their path. A turns left at the T junction at 12.00 noon. B reaches the T junction earlier and turns right. Both of them continue travelling till 2.00 p.m. What is the distance between A and B at 2.00 p.m.? a.120 km b.140km c.150km d.160km

221. Rajesh and Shakil run a race of 2000 m. First , Ram gives Shakil a headstart of 200 m and beats him by 1 min. Next, Rajesh gives Shakil a start of 6 minutes and is beaten by 1000 meters. Find the time in minutes in which Rajesh and Shakil run the race separately.

a.8,10 b.10,18 c.12,18 d.10,12

222. In the polynomial  $f(x)=2x^4-49x^2+54$ , what is the product of the roots, and what is the sum of the roots (Note that  $x^n$  denotes the x raised to the power of n, or x multiplied by itself n times)? A. 27,0 B. 54,2 C. 49,54 D. None

223. In the polynomial  $f(x)=x^5+a*x^3+b*x^4+c*x+d$ , all coefficients  $a,b,c,d$  are integers. If  $3+\sqrt{7}$  is a root, which of the following must be also a root? (Note that  $x^n$  denotes the  $x$  raised to the power  $n$ , or multiplied by itself  $n$  times. Also  $\sqrt{u}$  denotes the square root of  $u$ , or the number which when multiplied by itself, gives the number  $u$ )? A.  $3-\sqrt{7}$  B.  $3+\sqrt{21}$  C.  $5-\sqrt{3}$  D.  $\sqrt{7}$
224. Ratio of the radius of the cylinder to the cone is 1:2 assume their height are the same find the ration of their volumes. a.3:4 b.1:2 c.1:4 d.4:1
225. How many 5's will be there is the no 121122123.....til356? a.51 b.54 c.50 d.49
226. The sum of the digits of a 3 digit number is 17, the sum of the squares of its digits is 109. If we subtract 495 form that no, we shall get a no consisting of the same digits written in the reverse order. find the no? a.773 b.944 c.863 d.683
- 227.in a city there are few engineering , MCA & MBA candidates.sum of 4 times engineering, 3 times the MBA & 5 times MCA candidates is 3650.also 3 times MCA equal to 2 times MBA & 3 times engineering is equal to 2 times MCA . in total how many MCA candidates are there in city? a.200 b.300 c.950 d.400
228. If a ladder is 100m long and distance between bottom of ladder and wall is 60. What is the maximum size of cube that can be placed between the ladder and wall. a.34 b.24.28 c.21.42 d.28.56
- 229.10 years ago, the average age of 10 people was 33 years. After 3 years, a person of age 40 died. After another 3 years, another person of age 40 died. After 3 years, another person of age 30 dies. Find the present average age. a. 43 b.44 c.35 d.40
230. (\*)In a staircase, there are 10 steps. A child is attempting to climb the staircase. Each time, She can either make 1 or 2 steps. In how many different ways can she climb the staircases? a. 10 b. 21 c. 26 D. None of these
- 231.A machine P can print one lakh books in 8 hours, machine Q can print the same number of books in 10 hours while machine R can print them in 12 hours. All the machines are started at 9 A.M. while machine P is closed at 11 A.M. and the remaining two machines complete work. Approximately at what time will the work (to print one lakh books) be finished ? A. 11:30 A.M.B. 12 noon C. 12:30 P.M. D. 1:00 P.M.
232. A flagstaff 17.5 m high casts a shadow of length 40.25 m. The height of the building, which casts a shadow of length 28.75 m under similar conditions, will be: A. 10 m B. 12.5 m C. 17.5 m D. 21.25 m
233. When Rs 250 added to  $\frac{1}{4}$ th of a given amount of money makes it smaller than  $\frac{1}{3}$ rd of the given amount of money by Rs 100. What is the given amount of money? (a) Rs 350 (b) Rs 600 (c) Rs 4200 (d) Rs 3600
234. Find the least number of candidates in an examination so that the percentage of successful candidates should be 76.8%: (a) 500 (b) 250 (c) 125 (d) 1000
235. The number of times a bucket of capacity 4 litres to be used to fill up a tank is less than the number of times another bucket of capacity 3 litres used for the same purpose by 4. What is the capacity of the tank? (a) 360 litres (b) 256 litres (c) 48 litres (d) 525 litres
236. A certain quantity of rice is spent daily for 30 students in a hostel. One day some students were absent as a result, the quantity of rice has been spent in the ratio of 6:5. How many students were present on that day? (a) 24 b) 20 c) 15 d) 25
237. The ratio of daily wages of two workers is 4:3 and one gets daily Rs 9 more than the other, what are their daily wages? (a) Rs 32 and Rs 24 (b) Rs 60 and Rs 45 (c) Rs 80 and Rs 60 (d) Rs 36 and Rs 27
238. The volume is decreased by 10% when ice is melted into water. If water is frozen, the volume is increased by: (a)  $11\frac{1}{10}\%$  (b)  $11\frac{1}{9}\%$  (c)  $9\frac{1}{11}\%$  (d) 10%
239. The difference between the length and breadth of a rectangle is 23 m. If its perimeter is 206 m, then its area is: A. 1520 m<sup>2</sup> B. 2420 m<sup>2</sup> C. 2480 m<sup>2</sup> D. 2520 m<sup>2</sup>

240. How many vehicle registration plate numbers can be formed with digits 1,2,3,4,5( no repeat). If it is given that the registration number can have 1 to 5 digits. a. 205 b. 100 c. 325 d. 105
241. There are 60 slots around a circle, numbered 1 to 60. A man starts from the first slot and jumps to the 5<sup>th</sup> slot. From there he jumps to the 9<sup>th</sup> slot and so on. In which slot will he land in his 2200<sup>th</sup> jump?  
(a) 45 (b) 41 (c) 1 (d) 5
242. If all the numbers between 11 and 100 are written on a piece of paper. How many times will the number 4 be used?  
(a) 20 (b) 19 (c) 9 (d) None of these
243. For which of the following “n” is the number  $2^{74} + 2^{2058} + 2^{2n}$  a perfect square?  
(a) 2012 (b) 2100 (c) 2011 (d) 2020
244. Two beakers are on the table. The capacity of the first beaker is x litres and that of the second beaker is 2x litres. Two thirds of the first beaker and one fourth of the second beaker is filled with wine. The remaining space is filled with water. If the content in both the beakers are mixed in a large beaker of volume 3x litres, what is the proportion of wine in the beaker?  
(a) 11/12 (b) 11/36 (c) 7/6 (d) 7/18
245. Three non negative numbers, X, Y and Z are such that the mean is M and the median is 5. If M is 10 more than the smallest number and 15 less than the biggest number, find the value of X+Y+Z.  
(a) 15 (b) 5 (c) 20 (d) 30
246. From 5 men and 11 women, in how many ways can a panel of 11 be formed such that the number of men is not more than 3?  
(a) 1650 (b) 2255 (c) 5522 (d) None of these
247. The cost price of a cow and a horse is Rs 3 lakhs. The cow is sold at 20% profit and the horse is sold at 10% loss. Overall gain is Rs 4200. What is the cost price of the cow?  
(a) 1, 86,000 (b) 1,14,000 (c) 86,000 (d) None of these
248. When all possible six-letter arrangements of the letters of the word “MASTER” are sorted in alphabetical order, what will be the 49th word?  
(a) AREMST (b) ARMEST (c) AMERST (d) ARMSET
249. The price of a book in four different shops and the successive discounts offered for the books is given below. Select the option in which the price of the book is the least. (a) 10%, 5%, and 5% discount on Rs.195  
(c) 12.5% and 12.5% discounts on Rs.205 (b) 25%, discount on Rs.200 (d) 10%, and 15% discounts on a marked price of Rs.190
250. There are 3 trucks A,B and C. A loads at the rate of 10kg/min and B loads at the rate of  $13\frac{1}{3}$  kg/min. C unloads at the rate of 5kg/min. If all the 3 trucks are acting simultaneously, find the time taken to load 2.4 tonnes.  
(a) 120.81min (b) 130.91min (c) 240 min (d) 100min
251.  $30L + 3Q = 1167$   $30L + 6Q = 1284$  Find L ? (a) 30 (b) 35 (c) 40 (d) 45
13. Three dice are rolled. What is the probability that you will get the sum of the numbers as 10?  
(a) 27/216 (b) 25/216 (c) 10/216 (d) 1/11
252. A person buys 18 local tickets for Rs 110. Each first class ticket costs Rs 10 and each second class ticket costs Rs 3. What will another lot of 18 tickets in which the numbers of first class and second class tickets are interchanged cost?  
A. 112 B. 118 C. 121 D. 124
253. A drawer holds 4 red hats and 4 blue hats. What is the probability of getting exactly three red hats or exactly three blue hats when taking out 4 hats randomly out of the drawer and immediately returning every hat to the drawer before taking out the next? A. 1/2 B. 1/8 C. 1/4 D. 3/8
254. 2 oranges, 3 bananas and 4 apples cost Rs.15 and 3 oranges, 2 bananas, and 1 apple costs Rs 10. What is the cost of 3 oranges, 3 bananas and 3 apples? a) 20 b) 15 c) 12 d) 10
255. car is filled with four and half gallons of oil for full round trip. Fuel is taken 1/4 gallons more in going than coming. What is the fuel consumed in coming up. a) 2 b) 2.5 c) 1.5 d) 3
256. George works 5 times as fast as his son and hence completes a job 40 days earlier than his son. Find the time they, working together, would take to finish the job. a) 7.5 b) 6 c) 8.33 d) 12.5
257. a,b,c are non negative integers such that  $28a+30b+31c = 365$ . Then  $a=b=c$  is:  
a.12 b.13 c.less than or equal to 11 d.greater than 13



258. In how many ways can the letter of the English alphabet be arranged so that there are seven letters between the letters A and B, and no letter is repeated?

a.  $24P_7 \times 2 \times 20!$  B.  $24P_7 \times 2 \times 18!$  c.  $36 \times 24!$  d.  $18 \times 24!$

259. Two vertical points 2 meters and 8 meters high stand apart on a horizontal plane. The height in meters of the point of intersection of the lines joining the top of each pole to the bottom of the other pole is

a. 1.6 b. 1.8 c. 5.6 d. Cannot be determined

260. A, B, C, D go for a picnic. In a weighing machine they try to find their weights. When A stands on the machine, B also climbs and the weight shown was 132 kg. when B climbs C also climbs and the weight shown was 130 kg. Similarly the weight of C and D was found to be 102 kg and that of B and D was 116 kg. What was the weight of D?

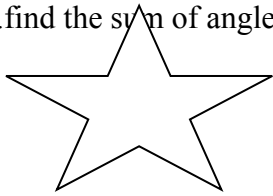
A. 58 kg B. 40 kg C. 78 kg D. 44 kg

261. How many positive integer solutions does the equation  $2x + 3y = 100$  have? a) 50 b) 33 c) 16 d) 35

262. How many different integers can be expressed as the sum of three distinct numbers from the set

{3, 10, 17, 24, 31, 38, 45, 52} A. 8 B. 56 C. 16 D. 15

263. find the sum of angles 1, 2, 3, 4, 5. a. 180 b. 300 c. 360 d. 400



264. Average of three numbers ABC is given as 48. Average of A, B, C, D is 46. It is given that E is having three more than D, then Average of B, C, D, E is 45. What is the score of A? a. 46 b. 50 c. 49 d. 47

265. Raj travels a part of journey by taxi paying 15/km & rest by train paying 21/km. If he travels a total of 450 km & pay Rs. 8130. Then the distance travelled by Raj in train? a. 230 b. 260 c. 190 d. 180

266. Two cards are drawn at random. What is the probability that both are spade a.  $3/51$  b.  $1/26$  c.  $1/4$  d.  $7/51$

267. 60, 48, 28, 24, 20, 18, ... what is the wrong number a. 28 b. 38 c. 60 d. 18

268. Perimeter of an equilateral triangle is equal to the perimeter of the Hexagon. What is the ratio of their areas?

A. 6:1 b. 1:6 c. 3:2 d. 2:3

269. Remainder of  $(32^{31} - 31^{301})$  when it is divided by 9. a. 3 b. 5 c. 2 d. 1

270. 4 men throw a die each simultaneously. Find the probability that at least 2 people get the same number? a.  $5/18$  b.  $13/18$  c.  $1/36$  d.  $1/2$

271. Raj invested in Indigo, HUL & SBI shares at Rs. 300, Rs. 200 & Rs. 5 per share respectively and purchased a total of 100 shares for Rs. 10000. The number of Indigo & HUL shares he bought are a. 15, 25 b. 23, 17 c. 17, 23 d. 17, 60

272. Raju can do piece of work in 10 days, Vicky in 12 days, Tinku in 15 days. They all started work together, but Raju leaves after 2 days, Vicky leaves 3 days before work is completed. In how many days work is completed.

a. 7 b. 5 c. 9 d. 6

273. A rectangle is divided into 40 rectangles with area 70, 36, 20 and x the value of x is ?

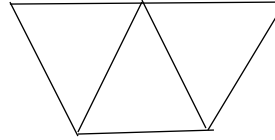
70	36
X	20

a.  $350/9$  b.  $350/7$  c.  $350/11$  d.  $350/13$

274. Find the remainder when the number 1234567...4481 is divided by 45. A. 36 B. 31 C. 44 D. 43

275. How many ways a committee of 11 people can be formed out of 11 women and 5 men? (there should not be more than 3 men in the committee) A. 1596 B. 2256 C. 1856 D. 1586

276. How many triangles can be formed using 87 match sticks?  
(Shape will be like this)



A.47                      B.48                      C.43                      D.None of these

277. If a lemon and apple together cost Rs.12.00, a tomato and a lemon cost Rs. 4.00 and an apple cost Rs.8.00 more than a tomato or a lemon then which of the following can be the price of lemon?  
a.Rs.3   b.Rs.4   c.Rs.1   d.Rs.2

278. Two ISB alumni decide to meet at cafe linger On between 9.30 am and 10.30 am. They agree that the person who arrives first at the café would wait for exactly 15 minutes for the other. If each of them arrives at a random time between 279.30 am and 10.30 am. What is the probability that the meeting takes place? A.  $\frac{7}{18}$    B.  $\frac{9}{16}$    C.  $\frac{7}{16}$    D.  $\frac{11}{18}$

280. If  $x^2 - 16 > 0$ , which of the following must be true?      a.  $-4 < x < 4$       B.  $4 < x$    C.  $-4 > x > 4$       D.  $-4 > x < 4$

281. George, Paul and Hari start a business by contributing Rs.30000, Rs. 40000 and Rs. 50000 respectively. After  $\frac{1}{2}$  a year George withdraws half his contribution. At the end of the year the business showed a profit of Rs. 90000 which we divided amongst the 3 men proportionate to amount and duration of their investment in the enterprise. Paul got:

a) Rs.18000                      b)25000                      c)32000                      d)24000

282. letters in the word ABUSER are permuted in all possible ways and arranged in alphabetical order then find the word at position 49 in the permuted alphabetical order? a) ARBSEU      b) ARBESU   c) ARBSUE      d) ARBEUS

283. Badri has 9 pairs of dark Blue socks and 9 pairs of Black socks. He keeps them all in a same bag. If he picks out three socks at random what is the probability he will get a matching pair?

A.  $(2 \cdot {}^9C_2 \cdot {}^9C_1) / {}^{18}C_3$       B.  $({}^9C_2 \cdot {}^9C_1) / {}^{18}C_3$                       C. 1      D.None of these

284. The difference between a two-digit number and the number obtained by interchanging the digits is 36. What is the difference between the sum and the difference of the digits of the number if the ratio between the digits of the number is 1 : 2 ?      A.4   B.8   C.16   D.None of these

285. A and B can do a piece of work in 75 and 70 days respectively. They began the work together but A Leaves after some days and B finished the remaining work in 23 days. After how many days did A leave  
A.  $23 \frac{9}{28}$  days   B.)  $24 \frac{3}{29}$  days   C.)  $24 \frac{3}{28}$  days   D.)  $23 \frac{3}{29}$  days

286. A, B, C and D are seated in four adjacent seats. They make the following statements. A : I am not in the third position. B : I am in the second or third position. C : I am in the first position. D : I am in the fourth position. If three of them are speaking the truth and one of them is lying, who is in the fourth position? (a) B      (b) C      (c) D      (d) A

287. If YWUSQ is 25 - 23 - 21 - 19 - 17 then MKIGF is

(a) 13 - 11 - 9 - 7 - 6      (b) 1 - 2 - 3 - 5 - 7      (c) 9 - 8 - 7 - 6 - 5      (d) 7 - 8 - 4 - 5 - 3

288. In the equation  $A + B + C + D + E = FG$  where FG is the two digit number whose value is  $10F + G$  and letters A, B, C, D, E, F and G each represent different digits. If FG is as large as possible. What is the value of G?

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

289. There are 10 stepping stones numbered 1 to 10 as shown at the side. A fly jumps from the first stone as follows; Every minute it jumps to the 4th stone from where it started - that is from 1st it would go to 5th and from 5th it would go to 9th and from 9th it would go to 3rd etc. Where would the fly be at the 60th minute if it starts at 1? a)1   b)5   c)4      d)9

290. A closed cylindrical tank contains  $36\pi$  cubic feet of water and its filled to half its capacity. When the tank is placed upright on its circular base on level ground, the height of water in the tank is 4 feet. When the tank is placed on its side on level ground, what is the height, in feet, of the surface of the water above the ground? a)3ft   b)4ft   c)5ft   d)6ft

291. If n is the sum of two consecutive odd integers and less than 100, what is the greatest possibility of n?  
a.96      b.97      c.98      d.99

292. A farmer has a rose garden. Every day he either plucks 10 or 8 or 36 or 28 roses. The rose plant are intelligent and when the farmer plucks these no. of roses, the next day 31 or 36 or 18 or 8 new roses bloom

up in the garden respectively. On Monday he counts 205 roses, he plucks the roses as per his plan on consecutive days and new roses bloom up as per the intelligence of the plants mentioned above. After some days which of the following can be the number of roses in the garden? a)4 b)3 c)7 d)30

293. Which of the following represents the largest 4 digit number which can be added to 7249 in order to make the derived number divisible by each of the following numbers: 12,14,21,33 and 54? a) 8316 b) 8727 c) 9123 d)9383

294. What is the distance in cm between two parallel chords of length 32 cm and 24 cm in a circle of radius 20 cm? a.3 or 21 b.1 or 7 c.4 or 29 d.2 or 14

295. A semicircle is drawn with AB as its diameter. From C, a point on AB, a line perpendicular to AB is drawn, meeting the circumference of the semicircle at D. Given that AC=2 cm and CD=6 cm, the area of the semicircle (in sq cm) will be: a. $82\pi$  b. $50\pi$  c. $55\pi$  d. $31\pi$

296. A container contains 40 liters of milk. From this container 4 liters of milk was taken out and replaced by water. This process was repeated further two times. How much milk is now contained by the container?

A.26.34 liters B. 27.36 liters C. 28 liters D. 29.16 liters

297. A person walking at 4 Kmph reaches his office 8 minutes late. If he walks at 6 Kmph, he reaches there 8 minutes earlier. How far is the office from his house? A.)  $3\frac{1}{5}$  Km B.)  $2\frac{1}{5}$  Km C.)  $4\frac{1}{5}$  Km D.)  $5\frac{1}{5}$  Km

298.A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is: A. No profit, no loss B. 5% C. 8% D. 10% E. None of these

299.Mahesh visited his cousin Akash during the summer vacation. In the mornings, they both would go for swimming. In the evenings, they would play tennis. They would engage in at most one activity per day, i.e. either they went swimming or played tennis each day. There were days when they took rest and stayed home all day long. There were 32 mornings when they did nothing, 18 evenings when they stayed at home, and a total of 28 days when they swam or played tennis. What duration of the summer vacation did Mahesh stay with Akash? A.46 days B.36 days C.39 days D.58 days

300. You have three bags, each containing two marbles. Bag A contains two white marbles, Bag B contains two black marbles, and Bag C contains one white marble and one black marble. You pick a random bag and take out one marble. It is a white marble. What is the probability that the remaining marble from the same bag is also white?

A. $\frac{2}{3}$  B. $\frac{1}{2}$  C. $\frac{3}{4}$  D. None

301.Six persons A, B, C, D, E, F are invited to the party. i) A accepts invitation only if B or F accepts. ii)C may accept if b accept. iii) F will accept if B C and D accept. iv) E and B may accept if D accepts. What is the possible order if they accept the invitation? (a) DBECFA (b) DABEFC (c) DCBEFA (d) BFDECA

302.What will be the next term in this series 1,7,8,49,50,57,343.....? (a) 344 (b) 350 (c) 2401 (d) Cannot be determined

303.In group of 5, Anooj said, "One of us is lying". Pooja said "Exactly two of us are lying". Bitoo said "Exactly three of us are lying". Billa said "Exactly four of us are lying". Chitra said "Exactly five of us lying". Which one said the truth?

(a) Anooj (b) Pooja (c) Bitoo (d) Billa

304. $P(X) = (X^{2012} + X^{2011} + X^{2010} + \dots + X + 1) - X^{2012}$   $Q(X) = X^{2011} + X^{2012} + \dots + X + 1$

The remainder when P(X) divided by Q(X) is: (a) 1 (b) 0 (c) X+1 (d) X-1

305. There is a set of 9 numbers that relate to each other in a certain way. Find the way the first set of boxes works. The numbers in the second set work in exactly the same way. Find the number that must go in the empty box in the second set.

20	6	22	12	15	3
5	8	12	6		12
75	42	102	54	81	45

a) 16 (b) 9 (c) 12 (d) -21

306. If  $3y + x > 2$  and  $x + 2y \leq 3$ , What can be said about the value of  $y$ ? A.  $y = -1$  B.  $y > -1$  C.  $y < -1$  D.  $y = 1$
307. What is the sum of all even integers between 99 and 301? A. 40000 B. 20000 C. 40400 D. 20200
308. Of a set of 30 numbers, average of first 10 numbers = average of last 20 numbers. Then the sum of the last 20 numbers is? a. 2 X sum of last ten numbers b. 2 X sum of first ten numbers c. Sum of first ten numbers d. cannot be determined with the given data
309. Arun makes a popular brand of ice-cream in a rectangular shaped bar 6 cm long, 5 cm wide and 4 cm thick. To cut costs, the company had decided to reduce the volume of the bar by 19%. The thickness will remain the same, but the length and width will be decreased by the same percentage. The new width will be a) 6.5 m b) 4.5 m c) 5.5 m d) 7.5 m
310. Two circles of radii 5cm and 3cm touch each other at A and also touch a line at B and C so that the line drawn joining the center of the circles is parallel to BC. The distance BC in cm is? A.  $\sqrt{60}$  B.  $\sqrt{62}$  C.  $\sqrt{68}$  D.  $\sqrt{64}$
311. An army camp has provisions for 52 days. 17 days later, 300 new recruits join the camp and the remaining provisions will now last only for 21 days. How many recruits are there in the camp. A. 420 B. 750 C. 450 D. 633
312. If M is 30% of Q, Q is 20% of P and N is 50% of P, then  $M/N$  is, A.  $3/25$  B.  $6/5$  C.  $4/2$  D.  $3/250$
313. Alvin, Ben and Clinton run a race, with Alvin finishing 48 meters ahead of Ben and 72 meters ahead of Clinton, while runner Ben finishes 32 meters ahead of runner Clinton. Each runner travels the entire distance at a constant speed. What is the length of the race? A. 480 B. 96 C. 192 D. None
314. In how many arrangements of the word ERASED is the letter 'A' positioned in between the 3 'E' s? A. 80 B. 120 C. 360 D. None
315. How many 6 digit even numbers can be formed from the digits 1,2,3,4,5,6 and 7 so that the digits should not repeat and the second last digit is even? a) 6480 b) 2160 c) 720 d) 320
316. A owes B Rs.50. He agrees to pay B over a number of consecutive days starting on Monday, paying single note of Rs. 10 or Rs. 20 on each day. In how many different ways can A repay B. (Two ways are said to be different if on at least one day, a note of different denomination is given.) a) 6 b) 8 c) 7 d) 5
317. The value of a bicycle depreciates in such a way that at the end of each year, it is  $\frac{2}{5}$  of its value at the beginning of same year. If the initial value of the scooter is Rs.15,000. What is the value at the end of 4 yrs? a) 384 b) 2400 c) 960 d) 6000
318. Tim and Elan are 90 km from each other. They start to move each other simultaneously. Tim at speed 10 and Elan 5 kmph. If every hour they double their speed what is the distance that Tim will pass until he meets Elan A. 45 B. 60 C. 20 D. 80
319. Analysing the good returns that Halocircle Insurance Pvt Ltd was giving, Ratika bought a 1-year, Rs 10,000 certificate of deposit that paid interest at an annual rate of 8% compounded semi-annually. What was the total amount of interest paid on this certificate at maturity? a) 10816 b) 916 c) 11826 d) 816
320. The price of lunch for 15 people was 207 pounds, including a 15 percent gratuity of service. What was the average price per person, EXCLUDING the gratuity? a) 11 b) 12 c) 13 d) 14
321. All faces of a cube with an eight-meter edge are painted red. If the cube is cut into smaller cubes with a two-meter edge, how many of the two-meter cubes have paint on exactly one face? A. 24 B. 36 C. 60 D. 48
322. Mean of three no. is 10 more than the least of the numbers and 15 less than the greatest of the three. If the median of the three numbers is 5 then the sum of three is: A. 5 B. 20 C. 30 D. 25
323. There is a circle which circumscribes 3 unit circles which are tangential to each other. What is the circumference of the bigger circle? A.  $\pi(7+2\sqrt{3})/\sqrt{3}$  B.  $\pi(4+2\sqrt{3})/\sqrt{3}$  C. Cannot be determined D. None of these

324. Sum of the weights of mother, daughter, infant is 74kg. Mother's weight is 46 kg more than the sum of the weights of the daughter and the infant. Infant's weight is less than the daughter's weight by 60%. Find the daughter's weight.

a.10 B.7 C.4 D.60

325. In an office, at various times during the day the boss gives secretary a letter to type, each time putting the letter on the top of the pile in the secretary takes the inbox. When there is time the secretary takes the top letter of the pile and type it. If there are 5 letters in all and the boss delivers them in order 1,2,3,4,5 which of the following could not be the order in which the secretary types them: A.2,4,3,5,1 B.4,5,2,3,1 C.3,2,4,1,5 D.1,2,3,4,5

326. 6 task and 6 person p1 & p2 does not do task t1. T2 is assigned to p3 or p4. Each person should be assigned to with atleast one task. In how ways the task can be assigned? A.192 B.360 C.144 D.180

327. If  $x^y$  denotes x raised to the power of y. Find the last two digit of  $(1941^{3843}) + (1961^{4181})$

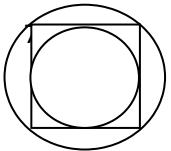
a.02 b. 82 c. 42 d.22

328. A child was looking for his father. He went 90m in the east before turning to his right again to look for his father at his uncle's place 30m from this point. His father was not there from here he went 100m to north before meeting his father in a street. How far did the son meet his father from the starting point? A.90 b. 30 c. 80 d.100

329. In how many possible ways can you write 3240 as a product of 3 positive integers a,b,c a. 450 b. 420 c. 350 d. 320

330. The saving of an employee equals income & expenditure. If the income of A,B,C are in the ratio 1:2:3. Expenses is 3:2:1. Then what is the order of employees A, B, C in the increasing order of their size of their savings? a.  $A > C > B$  b.  $b > a > c$  c.  $B > C > A$  d.  $C > B > A$

331. Radius of the bigger circle is 1. Which area will be greater?



a.5 b.4 c. cannot be determined d. none of these

332.  $77! * (77! - 2 * 54!)^3 / (77! + 54!)^3 + 54! * (2 * 77! + 54!)^3 / (77! + 54!)^3$  A.  $2 * 77! + 2 * 54!$  B.  $77! - 54!$  C.  $77! + 54!$  D.  $2 * 77! - 2 * 54!$

333. A sum is sufficient to pay either George age for 15 days or marks wage to 10 days how long together? a.9 b.5 c.6 d.8

334. 18 horses run a race. Probability of winning the race is given for H1, H2, and H3. What is the probability that any of the three winning the race?  $P(H1) = 1/7$   $P(H2) = 1/8$   $P(H3) = 1/5$  A.  $143/280$  B.  $123/280$  C.  $131/280$  D. None of these

335. When Rearranging the letters of the word IRONES. What is the 28<sup>th</sup> word according to dictionary order? A. ENOIRS B. ENRIOS C. ENIRSO D. IERONS

336. A circle of 20m radius has 2 chords of length 24 & 32 respectively, then what is the distance between those 2 chords?

A. 28 B. 4 C. Both A & B D. None of these

337. In how many ways a cricketer can score 200 runs with only 4s or 6s? A.18 B.15 C.17 D. None of these

338. Two alloys A and B are composed of two basic elements. The ratios of the composition of the two basic elements in the 2 alloys are 5:3 and 1:2 respectively. A new alloy X is formed by mixing the 2 alloys A and B in the ratio 4:3. What is the ratio of the composition of the 2 basic elements in alloy X? A. 2:3 B. 1:5 C. 1:1 D. 3:1

339. Two cars start from A and B and travel towards each other at speeds of 50 kmph and 60 kmph respectively. At the time of their meeting the second car has travelled 120 km more than the first, the distance between A and B is:

a) 600 Km b) 1320 Km c) 720 Km d) 3120 Km

340. A tree of height 36 m at the edge of a road broke at a certain height and it fell in such a way that its top touched the other edge of the road. If the breadth of the road is 12m, then the height at which the tree broke was a) 24 b) 16 c) 18 d) 12

341. A, B and C can do some work in 36 days. A and B together do twice as much work as C alone, and A and C together can do thrice as much work as B alone. Find the time taken by C to do the whole work a) 72 b) 120 c) 108 d) 96
342. Professor Absentminded has a very peculiar problem that he cannot remember number larger than 15. However, he tells his wife, I can remember any number up to 100 by remembering the three numbers obtained as reminders when the number is divided by 3, 7 and 11 respectively. For example (2, 3, 6) is 17. Professor remembers that he had (2, 4, 8) rupees in the purse, and he paid (2, 5, 4) rupees to the servant. How much money is left in the purse? a) 51 b) 55 c) 48 d) 37
343. Ahmed, Babu, Chitra, David and Eesha each choose a large different number. Ahmed says, "My number is not the largest and not the smallest". Babu says, "My number is not the largest and not the smallest". Chitra says, "My number is the largest". David says, "My number is the smallest". Eesha says, "My number is not the smallest". Exactly one of the five children is lying. The others are telling the truth. Who has the largest number? a) David b) Eesha c) Chitra d) Babu
344. Of the following, which is the closest approximation of  $(50.2 \times 0.49) / 199.8$ ? a) 0.125 b) 0.0125 c) 0.00125 d) 0.000125
345. Jake can dig well in 16 days. Paul can dig the same well in 24 days. Jake, Paul and Hari together dig the same well in 8 days. Hari alone can dig the well in a) 32 days b) 48 days c) 96 days d) 24 days
346. Apple costs L rupees per kilogram for the first 30 kgs and Q rupees per kilogram for each additional kilogram. If the price of 33 kilograms is 11.67 and for 36 kgs of Apples is 12.48 then the cost of the first 10 kgs of Apples is a) 3.62 b) 4.78 c) 6.87 d) 9.56
347. 36 people  $\{a_1, a_2, \dots, a_{36}\}$  meet and shake hands in a circular fashion. In other words, there are totally 36 handshakes involving the pairs,  $\{a_1, a_2\}$ ,  $\{a_2, a_3\}$ , ...,  $\{a_{35}, a_{36}\}$ ,  $\{a_{36}, a_1\}$ . Then the size of the smallest set of people such that the rest have shaken hands with at least one person in the set is a) 12 b) 11 c) 13 d) 18
348. If twenty-four men and sixteen women work on a day, the total wages to be paid is 11,600. If twelve men and thirty-seven women work on a day, the total wages to be paid remains the same. What is the wage paid to a man for a day's work? (a) 100 (b) 350 (c) 200 (d) 700
349. One day Eesha started 30 min late from home and reached her office 50 min late while driving 25% slower than her usual speed. How much time in min does Eesha usually take to reach her office from home? A. 70 Minutes B. 40 Minutes C. 60 Minutes D. 50 Minutes
350. In 2003 there are 28 days in February and 365 days in a year. In 2004 there are 29 days in February and 366 days in the year. If the date March 11, 2003 is Tuesday, then which one of the following would the date March 11, 2004 be? A. 3 B. 2 C. 4 D. 5
351. A shop sells chocolates. It used to sell chocolates for Rs. 2 each but there were no sales at that price. When it reduced the price all the chocolates sold out enabling the shopkeeper to realize Rs. 164.90 from the chocolates alone. If the new price was not less than half the original price quoted, how many chocolates were sold? A. 1.5 B. 2.2 C. 1.7 D. 3.5
352. Eesha bought two varieties of rice costing 50 Rs per kg and 60 Rs per kg and mixed them in some ratio. Then she sold that mixture at 70 Rs per kg making a profit of 20%. What was the ratio of the mixture? A. 1:5 B. 1:2 C. 1:3 D. 1:5
353. If  $f(1)=4$  and  $f(x+y)=f(x)+f(y)+7xy+4$ , then  $f(2)+f(5)=?$  A. 150 B. 125 C. 100 D. 175
354. A boy buys 18 sharpeners (Brown/white) for Rs. 100. For every white sharpener, he pays one rupee more than the brown sharpener. What is the cost of white sharpener and how many did he buy? A. 5, 13 B. 5, 10 C. 6, 10 D. None of these
355. Letters of alphabets from 1 to 26 are consecutively with 1 assigned to A and 26 to Z. By 27th letter we mean A, 28th B. In general,  $26m+n$ , m and n negative integers is same as the letter numbered n. Let P = 6, a strange country military general sends this secret message according to the following codification scheme. In codifying a sentence, the 1st time a letter occurs it is replaced by the pth letter from it. 2nd time

if occurred it is replaced by P<sup>2</sup> letter from it. 3rd time it occurred it is replaced by p<sup>3</sup> letter from it. What is the code word for ABBATIAL A.

A. GHNNZOOR B. GHKJZOHR C. GHHGZOGR D. GHLKZOIR

356. In how many ways a team of 11 must be selected a team 5 men and 11 women such that the team must comprise of not more than 3 men. A. 1565 B. 2256 C. 2456 D. 1243

357. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done? A. 564 B. 645 C. 735 D. 756 E. None of these

358. 2 gears one with 12 teeth and other one with 14 teeth are engaged with each other. One teeth in smaller and one tooth in bigger are marked and initially those 2 marked teeth are in contact with each other. After how many rotations of the smaller gear with the marked teeth in the other gear will again come into contact for the first time?

A. 7 B. 12 C. Data insufficient D. 84

359. A and B run a 1 km race. If A gives B a start of 50m, A wins by 14 seconds and if A gives B a start of 22 seconds, B wins by 20 meters. Find the time taken by A to run 1 km. To solve these type of questions, always keep in your mind that, the ratio of the speeds of two contestants never change. A. 150 B. 125 C. 100 D. 175

360. What was the day of the week on 28th May, 2006? A. Thursday B. Friday C. Saturday D. Sunday

361. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there? A. 159 B. 194 C. 205 D. 209 E. None of these

362. Kate wanted to buy 2kgs of apples. The vendor kept the 2kg weight on the right side and weighed 4 apples for that. She doubted on the correctness of the balance and placed 2 kg weight on the left side and she could weight 14 apples for 2 kgs. If the balance was correct how many apples she would have got? A. 6 B. 8 C. 9 D. 10

363. Find the remainder when  $32^{33^{34}}$  is divided by 11 A. 6 B. 8 C. 9 D. 10

364. A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw? A. 32 B. 48 C. 64 D. 96 E. None of these

365. There are several bags of same weight. A bag is 6 kgs plus three fourth of the weight of another bag. What is the weight of a bag? A. 15 B. 24 C. 43 D. 35

366. Find the remainder when  $6^{50}$  is divided by 215 A. 36 B. 24 C. 44 D. 15

367. Find last two digits of the following expression  $(201 \cdot 202 \cdot 203 \cdot 204 \cdot 246 \cdot 247 \cdot 248 \cdot 249)^2$  A. 76 B. 74 C. 64 D. 75

368. A jar full of whisky contains 40% alcohol. A part of this whisky is replaced by another containing 19% alcohol and now the percentage of alcohol was found to be 26%. The quantity of whisky replaced is: A.  $\frac{1}{3}$  B.  $\frac{2}{3}$  C.  $\frac{2}{5}$  D.  $\frac{3}{5}$

369. The sum of three digits a number is 17. The sum of square of the digits is 109. If we subtract 495 from the number, the number is reverse. D. Find the number. A. (8,3,3) B. (8,3,6) C. (8,6,3) D. (2,3,6)

370. A calculator has a key for squaring and another key for inverting. So if x is the displayed number, then pressing the square key will replace x by  $x^2$  and pressing the invert key will replace x by  $\frac{1}{x}$ . If initially the number displayed is 6 and one alternatively presses the invert and square key 16 times each, then the final number displayed (assuming no round off or overflow errors) will be A. 665536 B. 665336 C. 625536 D. 664536

371. How many two digit numbers are there which when subtracted from the number formed by reversing its digits as well as when added to the number formed by reversing its digits, result in a perfect square. A. 56 B. 54 C. 52 D. 55

372) A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of

- the water current respectively? A. 2 : 1 B. 3 : 2 C. 8 : 3 D. Cannot be determined  
E. None of these
- 373) If Rs20/- is available to pay for typing a research report & typist A produces 42 pages and typist B produces 28 pages. How much should typist A receive? A. Rs 7 B. Rs 8 C. Rs 12 D. Rs 10
- 374) In some game 139 members have participated every time one fellow will get bye what is the number of matches to choose the champion to be held? A. 148 matches B. 155 matches C. 138 matches D. 145 matches
- 375) One rectangular plate with length 8 inches, breadth 11 inches and 2 inches thickness is there. What is the length of the circular rod with diameter 8 inches and equal to volume of rectangular plate? A. 3.5 B. 5 C. 4 D. 2.5
- 376) A man has to get air-mail. He starts to go to airport on his motorbike. Plane comes early and the mail is sent by a horse-cart. The man meets the cart in the middle after half an hour. He takes the mail and returns back, by doing so, he saves twenty minutes. How early did the plane arrive? A. 12 min. B. 15 min. C. 8 min. D. 10 min.
- 377) 2 trees are there. One grows at  $\frac{3}{5}$  of the other. In 4 years total growth of the trees is 8 ft. what growth will smaller tree have in 2 years. A. 3.5 B. 1.5 C. 4 D. 2.5
- 378) There are 4 balls and 4 boxes of colours yellow, pink, red and green. Red ball is in a box whose colour is same as that of the ball in a yellow box. Red box has green ball. In which box you find the yellow ball? A. green B. Red C. yellow D. pink
- 379) A bag contains 20 yellow balls, 10 green balls, 5 white balls, 8 black balls, and 1 red ball. How many minimum balls one should pick out so that to make sure the he gets at least 2 balls of same color. A. 3 B. 5 C. 4 D. 6
- 380) What is the number of zeros at the end of the product of the numbers from 1 to 100 A. 17 B. 15 C. 16 D. 24
- 381) There are two numbers in the ratio 8:9. if the smaller of the two numbers is increased by 12 and the larger number is reduced by 19 the ratio of the two numbers is 5:9. Find the larger number? A. 36 B. 45 C. 18 D. 24
- 382) There are three different boxes A, B and C. Difference between weights of A and B is 3 kgs. And between B and C is 5 kgs. Then what is the maximum sum of the differences of all possible combinations when two boxes are taken each time  
A. 17kg B. 15kg C. 16kg D. 24kg
- 383) A and B are shooters and having their exam. A and B fall short of 10 and 2 shots respectively to the qualifying mark. If each of them fired atleast one shot and even by adding their total score together, they fall short of the qualifying mark, what is the qualifying mark? A. 11 B. 15 C. 13 D. 14
- 384) A, B, C, and D tells the following times by looking at their watches. A tells it is 3 to 12. B tells it is 3 past 12. C tells it is 12:2. D tells it is half a dozen too soon to 12. No two watches show the same time. The difference between the watches is 2,3,4,5 respectively. Whose watch shows maximum time? A. A B. B C. C D. D
385. Falling height is proportional to square of the time. One object falls 64cm in 2sec than in 6sec from how much height the object will fall. A. 576cm B. 500cm C. 484cm D. 496cm
386. Gavaskar average in first 50 innings was 50. After the 51st innings his average was 51 how many runs he made in the 51st innings. A. 101 B. 106 C. 135 D. 96
387. Anand finishes a work in 7 days, Bittu finishes the same job in 8 days and Chandu in 6 days. They take turns to finish the work. Anand on the first day, Bittu on the second and Chandu on the third day and then Anand again and so on. On which day will the work get over? A. 3<sup>rd</sup> B. 6<sup>th</sup> C. 9<sup>th</sup> D. 7<sup>th</sup>
388. Two out of five employees are capable of doing a certain task. Sixty percent of the five employees, including the two who are capable, are assigned to a project involving this task. what percentage of employees assigned to the project are not capable? A. 36.23 B. 45.45 C. 33.33 D. 24



389. What is the next number of the following sequence 3,3,5,4,4,3,5,? A. 3 B. 6 C. 9 D. 5
390. 25% of X = 45% of Y. Then X : Y is: A. 3:5 B. 9:5 C. 5:9 D. 5:3
391. Find the ratio of purchase price and sell price if there is loss of  $12\frac{1}{2}\%$  A. 8:7 B. 8:5 C. 5:8 D. 8:3
392. A can contains a mixture of two liquids A and B is the ratio 7 : 5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7 : 9. How many litres of liquid A was contained by the can initially?  
A. 10 B. 20 C. 21 D. 25
393. A 16 stored building has 12000 sq.feet on each floor. Company A rents 7 floors and company B rents 4 floors. What is the value of sq.feet of unrented floor space A. 80000 B. 60000 C. 90000 D. 50000
394. Two pipes can fill a tank in 10 and 12 hours, while third pipe will make the tank empty in 20 hours. If all three pipes operate simultaneously. In how many hours the tank will be filled ? A. 8hrs B. 6.5hrs C. 9hrs D. 7.5hrs
395. From a vessel,  $\frac{1}{3}$ rd of the liquid evaporates on the first day. On the second day  $\frac{3}{4}$ th of the remaining liquid evaporates. What fraction of the volume is present at the end of the second day. A.  $\frac{1}{8}$  B.  $\frac{1}{6}$  C.  $\frac{1}{2}$  D.  $\frac{1}{5}$
396. A Shopkeeper divides an ice-cream brick in two halves, then cut one of the halves into several smaller portions of equal size. Each of the smaller portions weights 12 grams. The shopkeeper now has a total of 5 portions. How heavy was the original brick?  
A. 98 B. 96 C. 99 D. 95
397. In a normal 5-day work week, each of 12 employees produces 300 items per day-last week,  $\frac{1}{3}$  of the employees were absent from work for  $\frac{2}{5}$  of the days in the week. how many total items were produced last week?  
A. 15000 B. 15600 C. 16000 D. 16200
398. If a man buys 1 liter of milk for 12 rs. and mixes it with 20% water and sells it for 15 rs then wat is d %age of gain...  
A. 9.82% B. 6.92% C. 4.16% D. 9.52%
399. How many combinations are possible if 3 one rupee coin, 4 fifty paise coin and 2 twenty five paise coin are available. It is compulsory to select any one of the coin A.60 B. 62 C. 59 D. 57
400. if  $2+3=8$ ,  $3+7=27$ ,  $4+5=32$ ,  $5+8=60$ ,  $6+7=72$ , then  $7+8=?$  A.98 B. 96 C. 90 D. 92
401. In 2003, there are 28 days in Feb and there are 365 days in the year. In 2004, there are 29 days in Feb and there are 366 days in year. If the date March 11,2003 is a Tuesday, then which one be date March 11,2004  
A. Tuesday B. Monday C. Thursday D. Friday
402. How many numbers x with  $10 \leq x \leq 99$  are 18 more than sum of their digits? A. 12 B. 9 C. 18 D. 10
403. How many lattice points are there between (2,0) and (16,203) A.8 B.10 C.14 D.15
404. 4 parallel lines are drawn parallel to one side of an equilateral triangle such that it cuts the other two sides at equal intervals. The area of the largest segment thus formed is  $27\text{ m}^2$ . Find the area of the triangle  
A.100 B.75 C.80 D.54
405. In a simple subtraction problem below, single digits are replaced by letters. Find the value of  $3a+7b+4cd=?$   
A.80 B.95 C.89 D.96
406. Two dice are thrown. Find the probability of getting a multiple of 3 or 4 as the sum A.  $\frac{5}{9}$  B.  $\frac{4}{9}$  C.  $\frac{2}{9}$  D.  $\frac{1}{9}$
407. There are four couple who go for a honeymoon together. At one of the places they all have to cross a river but there is only one boat available. Wives are jealous and they don't like their husband. Travelling with other women. Husbands are also possessive and they don't like their wives travelling with other man. The number of minimum possible ways in they will cross the river are. a. 16 b. 17 c. 18 d. 19

408. An absent minded professor has a very peculiar problem in that he cannot remember numbers large than 15. However, he tells his wife, "I can remember any number upto 100 by remembering the 3 numbers obtained as remainder when the number is divided by 3,5,7 respectively. (EG: 2,2,3 is 17). Professors remember that he had (1,1,6) Rs. In the purse and he paid(2,0,6) Rs. To the server. How many money left in the purse. A. 56 b. 60 c. 72 d. 48
409. A box of fruits can be loaded in truck in 9 min by a worker and 8 boxes fill a truck completely. How many trucks can be loaded completely in  $1\frac{1}{2}$  hours if there are 16 men working together? a. 21 b. 20 c. 23 d. 22
410. Three cars A,B,C are participating in a race. A is twice as likely as B to win & B is thrice as likely as C to win. What is the probability that B will win. If only one of them can win the race? a.  $\frac{1}{2}$  b.  $\frac{2}{5}$  c.  $\frac{3}{10}$  d.  $\frac{1}{10}$
411. Consider a triangle drawn on the x-y plane with its 3 vertices at (41,0)(0,41)(0,0) each vertices being represented by its (x,y) coordinates the no of points with integer coordinates inside the triangle(excluding all points on the boundary) is  
a. 780 b. 800 c. 820 d. 741
412. Which satisfies the condition P must be greater than Q? a.  $0.9^P = 0.9^Q$  b.  $0.9^P = 0.92^Q$  c.  $0.9^P > 0.9^Q$  d.  $0.9P > 0.9Q$
413.  $ab313ba$  is completely divisible by 12 (where a and b are +ve integers). What is the sum of 'a and b'?  
A. 7 B. 13 C. 12 D. both a & b
414. The average of 24 numbers is 76. Three numbers 78, 89, 97 were inverted and noted down wrongly. What is the percentage difference between actual value and the wrong value? A. 1% decrease B. 1% increase C. No change D. None of these
415. In the magic figure shown below the sum of the numbers in each row, column and diagonal are the same. What is the value of y+z  
A. 242 B. 430 C. 216 D. 261
416. If  $f(x) = 7x + 12$ , find  $f^{-1}(x)$  for all x? A.  $(x-12)/7$  B.  $7x+12$  C.  $1/7x+12$  D. None
417. Let  $f(m,n) = 45*m + 36*n$ , where m and n are integers (positive or negative) What is the minimum positive value for  $f(m,n)$  for all values of m,n (this may be achieved for various values of m and n)?  
A. 9 B. 18 C. 27 D. 21
418. Lottery balls are numbered and coloured balls. In the famous lotto, six numbered balls are drawn at random from 49 balls. In each ticket one needs to guess the six numbers that would be drawn. If no correct guesses are received the prize money is carried to next draw. It is not uncommon to see prize money accumulating to several millions of dollars. An urn contains m white and n Black balls. A ball is drawn at random and is put back into the urn along with k additional balls of the same colour as that of the ball drawn. A ball is again drawn at random. The probability of drawing a white ball now:  
a. Does not depend on k b. Increases with k c. Cannot be determined without additional information d. Decreases with k
419. In this question,  $A^B$  refers to A raised to the power B. Assume that the rate of consumption of coal by a locomotive engine varies as the square of its speed and is 1000 kg per hour when the speed is 60 km per hour, when in motion. If coal costs the railway company Rs. 15 per 100 kg and if the other expenses of running the train is Rs. 12 per hour, find a formula for the cost in paise per kilometer when the speed is S km per hour.  
a.  $(1200/S) + (25S^2/6)$  b.  $(1200/S) + (25S/6)$  c. None of these d.  $(1200/S) + (5S^2/18)$
420. Three distinct single-digit numbers A, B and C are in Geometric Progression. If  $abs(x)$  is the absolute value of x (if x positive or zero, and  $-x$  if x is negative), then the number of different possible values of  $abs(A+B-(C))$  is  
a. 3 b. 4 c. 5 d. None of these
421. In this question,  $X^Y$  means, X raised to the power of Y. How many integers of x satisfy the equation  $(x^2 - x - 1)^{(x+2)} = 1$ ? a. 2 b. 4 c. 3 d. None of these
422. Certain positive integers have these properties:  
i) The sum of the squares of their digits is 50 ii) Each digit is larger than one to its left.  
The product of the digits of the largest integer with both properties is a) 7 b) 25 c) 36 d) 48 e) 50
423. The rupee/coin changing machine at a bank had a flaw. It gives 10 ten rupees note if you put a 100 rupee note and 10 one rupee coins if you insert a 10 rupee note, but gives 10 hundred rupee notes when you

put a one rupee coin. Sivaji, after being ruined by his rivals is left with a one rupee coin and discovers the flaw in the machine by accident. By using the machine repeatedly, which of the following amounts is a valid amount that Sivaji can have when he gets tired and stops at some stage (assume that the machine has an infinite supply of notes and coins) a) 9989 b) 35965 c) 24975 d) 17984

424. A tourist wants to visit 3 or more of the 5 major cities in India: Chennai, Bengaluru, Mumbai, Delhi and Kolkata. In how many ways can he plan his tour such that Chennai is always included? (Two plans of the tour are different if the cities in the tour or the order of the cities is different.) a)  $5! + 2!$  b)  $5! + (4 \times 4!) + (6 \times 3!)$  c)  $5! \cdot 4! + 3!$  d)  $5(4! + 3! + 2!)$

425. A sequence  $x_1, x_2$  and  $x_3 \dots$  is said to be in a harmonic progression if the reciprocals  $1/x_1, 1/x_2$  and  $1/x_3$  are in arithmetic progression. The 5th term and the 7th term for an harmonic progression are 30 and 50 respectively. What is the difference between the 6th and 4th term. a. 16 b. 14.5 c. 13.4 d. 12.5

426.  $1541^{1041} + 1671^{2356}$ . find last two digits? a. 42 B. 52 C. 62 D. 82

427. Mr and Mrs Smith have invited 9 of their friends and their spouses for a party at the Waikiki Beach resort. They stand for a group photograph. If Mr Smith never stands next to Mrs Smith (as he says they are always together otherwise). How many ways the group can be arranged in a row for the photograph? A. 20! B.  $19! + 18!$  C.  $18 \times 19!$  D.  $2 \times 19!$

428.  $N$  is an integer and  $N > 2$ , at most how many integers among  $N + 2, N + 3, N + 4, N + 5, N + 6$ , and  $N + 7$  are prime integers?

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

429) If  $\log 0.317 = 0.3332$  and  $\log 0.318 = 0.3364$  then find  $\log 0.319$ ? a) 0.3364 b) 0.4996 c) 0.3396 d) 0.2358

430) A box of 150 packets consists of 1kg packets and 2kg packets. Total weight of box is 264kg. How many 2kg packets are there? a) 114 b) 122 c) 104 d) 134

431) My flight takes off at 2am from a place at  $18^\circ\text{N } 10^\circ\text{E}$  and landed 10 Hrs later at a place with coordinates  $36^\circ\text{N } 70^\circ\text{W}$ . What is the local time when my plane landed? a) 6:00 am b) 6:40am c) 7:40am d) 7:00am

432) A plane moves from  $9^\circ\text{N } 40^\circ\text{E}$  to  $9^\circ\text{N } 40^\circ\text{W}$ . If the plane starts at 10 am and takes 8 hours to reach the destination, find the local arrival time a) 12:00 b) 12:30 c) 1:40 d) 2:00

433) The size of the bucket is  $N$  kb. The bucket fills at the rate of 0.1 kb per millisecond. A programmer sends a program to receiver. There it waits for 10 milliseconds. And response will be back to programmer in 20 milliseconds. How much time the program takes to get a response back to the programmer, after it is sent? a) 30ms b) 35ms c) 40ms d) 25ms

434) A fisherman's day is rated as good if he catches 9 fishes, fair if 7 fishes and bad if 5 fishes. He catches 53 fishes in a week  $n$  had all good, fair  $n$  bad days in the week. So how many good, fair  $n$  bad days did the fisherman had in the week

a) 4 good, 2 fair  $n$  1 bad days b) 4 good, 1 fair  $n$  2 bad days c) 3 good, 2 fair  $n$  2 bad days d) 5 good, 1 fair  $n$  1 bad days

435) Three companies are working independently and receiving the savings 20%, 30%, 40%. If the companies work combinely, what will be their net savings? a) 30% b) 35% c) 40% d) 25%

436) The ratio of incomes of C and D is 3:4. the ratio of their expenditures is 4:5. Find the ratio of their savings if the savings of C is one fourths of his income? a) 13/15 b) 12/19 c) 2/19 d) 25/27

437) If  $G(0) = -1$   $G(1) = 1$  and  $G(N) = G(N-1) - G(N-2)$  then what is the value of  $G(6)$ ? a) 0 b) 1 c) -1 d) 2

438) If A can copy 50 pages in 10 hours and A and B together can copy 70 pages in 10 hours, how much time does B takes to copy 26 pages? a) 3hrs b) 3.5hrs c) 4hrs d) 2.5hrs

439) A bus started from bustand at 8.00a m and after 30 min staying at destination, it returned back to the bustand. the destination is 27 miles from the bustand. the speed of the bus 50 percent fast speed. at what time it returns to the bustand

a) 7:00 am b) 9:40am c) 11:40am d) 11:00am

440) Let  $N$  be the greatest number that will divide 1305, 4665 and 6905, leaving the same remainder in each case. Then sum of the digits in  $N$  is: a) 4 b) 5 c) 6 d) 8

- 441) In Madras, temperature at noon varies according to  $-t^2/2 + 8t + 3$ , where  $t$  is elapsed time. Find how much temperature more or less in 4pm to 9pm. a) 7.5 more b) 7.5 less c) 8.5 more d) 7 less
- 442) A person had to multiply two numbers. Instead of multiplying by 35, he multiplied by 53 and the product went up by 443. What was the raised product? a) 780 b) 1040 c) 1590 d) 1720
- 443). Gauri went to the stationers and bought things worth Rs. 25, out of which 30 paise went on sales tax on taxable purchases. If the tax rate was 6%, then what was the cost of the tax free items? A. Rs. 15 B. Rs.15.70 C. Rs. 19.70 D. Rs. 20
- 444) The total expense of a boarding house are partly fixed and partly variable with the number of boarders. The charge is Rs.70 per head when there are 25 boarders and Rs.60 when there are 50 boarders. Find the charge per head when there are 100 boarders. a) 65 b) 55 c) 50 d) 45
- 445) Amal bought 5 pens, 7 pencils and 4 erasers. Rajan bought 6 pens, 8 erasers and 14 pencils for an amount which was half more than what Amal had paid. What % of the total amount paid by Amal was paid for pens? a) 37.5% b) 62.5% c) 50% d) None of these
- 446) I lost Rs.68 in two races. My second race loss is Rs.6 more than the first race. My friend lost Rs.4 more than me in the second race. What is the amount lost by my friend in the second race? a) 41 b) 35 c) 57 d) 45
- 447)  $(1-1/6)(1-1/7)....(1-(1/(n+4)))(1-(1/(n+5))) = ?$  a)  $5/(n+5)$  b)  $4/(n+5)$  c)  $3/(n+5)$  d)  $6/(n+5)$
- 448) A face of the clock is divided into three parts. First part hours total is equal to the sum of the second and third part. What is the total of hours in the bigger part? a) 3hrs b) 5hrs c) 4hrs d) 6hrs
- 449) With 4/5 full tank vehicle travels 12 miles, with 1/3 full tank how much distance travels a) 3miles b) 5 miles c) 4 miles d) 2.5 miles
- 450) wind blows 160 miles in 330min. for 80 miles how much time required a) 175 min. b) 155 min. c) 165 min. d) 145 min.
- 451) A person was fined for exceeding the speed limit by 10mph. another person was also fined for exceeding the same speed limit by twice the same if the second person was travelling at a speed of 35 mph. find the speed limit a) 17 b) 15 c) 16 d) 14
- 452) A sales person multiplied a number and get the answer is 3 instead of that number divided by 3. what is the answer he actually has to get. a) 1/7 b) 1/5 c) 1/6 d) 1/3
- 453) Low temperature at the night in a city is 1/3 more than 1/2 hinge as higher temperature in a day. Sum of the low temp and high temp is 100 c. then what is the high temp. a) 30 b) 50 c) 40 d) 60
- 454) A work is done by the people in 24 min. One of them can do this work alone in 40 min. How much time required to do the same work for the second person a) 30 mins. b) 50 mins. c) 40 mins. d) 60 mins.
- 455 In a company 30% are supervisors and 40% employees are male if 60% of supervisors are male. What is the probability? That a randomly chosen employee is a male or female? a) 0.3364 b) 0.264 c) 0.3396 d) 0.2358
456. Hanuman can complete a bridge in 10 days and Ravan can complete the same bridge in 20 days. Now they are working together and they are completing the bridge in 20 days. What is the contribution of Ravan in constructing the bridge? (a) Half the work (b) One-third of the work (c) Two-fourth of the bridge (d) Destructing the bridge
- 457 .(a% of a) + (b% of b) = 2% of ab, then what percentage of a is b? (a) 50% (b) 75% (c) 100 % (d) Cannot be determined.
- 458 .When numbers are written in base b, we have  $15*22 = 414$ , the value of b is (a) 8 (b) 7 (c) 6 (d) None of these
459. 5 coffee and 4 tea costs Rs.96, 5 badam milk and 6 coffee costs Rs. 32 and 7 tea and 6 badam milk costs Rs.37. What is the combined price of 1tea, 1 coffee and 1 badam milk? (a) 12 (b) 15 (c) 20 (d) 16

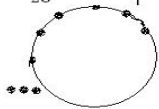
460. There is a set of numbers that relate to each other in a certain way. Find the way the first set of boxes works. The numbers in the second set work in exactly the same way. Find the number that must go in the empty box in the first set.

30	11	128	67		219
6	3	6	3	6	3
144	19	634	131	1724	435

(a) 343 (b) 346 (c) 349 (d) 643

461. A circle has 29 points arranged in a clockwise manner numbered from 0 to 28, as shown in the figure below. A bug moves clockwise around the circle according to the following rule. If it is at a point  $i$  on the circle, it moves clockwise in 1 second by  $(1 + r)$  places, where  $r$  is the remainder (possibly 0) when  $i$  is divided by 11. Thus if it is at position 5, it moves clockwise in one second by  $(1 + 5)$  places to point 11. Similarly if it is at position 28 it moves  $(1 + 6)$  or 7 places to point 6 in one second.

If it starts at point 28, at what point will it be after 9994 seconds?



(a) 1 (b) 5 (c) 7 (d) 3

462. Jake is faster than Paul. Jake and Paul each walk 40 km. The sum of their speeds is 13 km/h and the sum of time taken by them is 13 hours. Then Jake's speed is equal to : (a) 7Kmph (b) 8Kmph (c) 13Kmph (d) 9Kmph

463.  $P(x) = (x^{999} + x^{998} + x^{997} + \dots + x + 1)^2 - x^{999}$   $Q(x) = x^{998} + x^{997} + \dots + x + 1$

The remainder when  $P(x)$  is divided by  $Q(x)$  is (a)  $x + 1$  (b) 0 (c) 1 (d)  $x - 1$

464. A Samsung duo and a Galaxy are bought for Rs.40000. The Duo is sold at a profit of 33.33% and the Galaxy is sold at a loss of 20%. There was no loss or gain. Find the cost price of the Samsung duo ? (a) Rs.15,000 (b) Rs.25,000 (c) Rs.20,000 (d) Rs.18,000

465. If a Strawberry and a Butterscotch together cost Rs. 18.00, a Vanilla and a Strawberry cost Rs. 9.00 and a Butterscotch cost Rs.9.00 more than a Vanilla or a Strawberry then which of the following can be the price of Butterscotch?

(a) Rs. 13.5 (b) Rs.10 (c) Rs. 12 (d) Rs. 13

466. If KMNOQ is 7- 5 - 4 - 3 - 1 and DEFIJ is 4-5-6-9-8 and RSWYZ is 2-3-7-9-8 then AGVXH is

(a) 1 - 7 - 6 - 8 - 8 (b) 1 - 7 - 3 - 5 - 7 (c) 9 - 3 - 7 - 6 - 5 (d) 7 - 8 - 4 - 5 - 3

467. My next door neighbour lies a lot. In fact, he only tells the truth on one day a week! One day he told me, "I lie on Mondays and on Tuesdays." The next day he said, "Today is either Thursday, Saturday or Sunday." The next day he said, "I lie on Wednesdays and Fridays." On which day of the week does my neighbour tell the truth? (a) Monday (b) Tuesday (c) Wednesday (d) None of these

468. The addition  $457 + 982 + 896 = 2345$  is incorrect. What is the least digit that can be changed to make the addition correct?

(a) 5 (b) 7 (c) 6 (d) 3

469. A child was looking for his father. He went 42 metres in the East before turning to his right. He went 20 metres before turning to his right again to look for his father at his uncle's place 30 metres from this point. His father was not there. From here he went 25 metres to the North before meeting his father in a street. How far did the son meet his father from the starting point? (a) 7 (b) 25 (c) 13 (d) 11

470. At the end of 1994 Rohit was  $\frac{1}{4}$ th as old as his grandmother. The sum of the years in which they were born is 3843. How old Rohit was at the end of 2001? (a) 48 (b) 36 (c) 29 (d) 34

471. Raj writes a number. He sees that the number of two digits is 9 less than 3 times the number. If the number is increased by 45, the result is the same as the number formed by reversing the digit. Find the number. (a) 35 (b) 27 (c) 36 (d) 49

472. Find the value of "n" where  $3^{48} + 3^{1996} + 3^{3943} + 3^{3n}$

(a) 1963 (b) 1964 (c) 1960 (d) 1991

473. There are 5 sweets – Milk peda, Ice cream, Rasagulla Paper sweet and Rasamalai that I wish to eat on 5 consecutive days – Monday through Friday, one sweet a day, based on the following self imposed constraints:

1) Paper sweet is not eaten on Monday      2) If Milk peda is eaten on Monday, then Paper sweet must be eaten on Friday

3) If Paper sweet is eaten on Tuesday, Ice cream should be eaten on Monday

4) Rasagulla should be eaten on the day preceding to the day of eating Milk peda.

Based on the above, Rasagulla can be eaten on any day except?      (a) Tuesday (b) Monday (c) Wednesday (d) Friday

474 .Raj drives slowly along the perimeter of a rectangular park at 24 kmph and completes one full round in 4 minutes 30 seconds. If the ratio of the length to the breadth of the park is 5 : 7, what are its dimensions?

(a) 1500m x 700m      (b) 375m x 525m      (c) 35m x 49m      (d) 100m x 100m

475 .In a office, at various times during the day the boss gives the secretary a letter to type, each time putting the letter on the top of the pile in the secretary's inbox. When there is time, the secretary takes the top letter off the pile and type's it. If there are five letter in all , and the boss delivers in the order of 5 4 3 2 1, which of the following could be the order in which secretary types them.

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

476 .Daniel can do some work in 12 hours, Roy can do the same work in 10 hours while Hillari can do the same work in 477. hours. All the three of them start working at 9 a.m while Daniel stops works at 11 a.m and remaining two complete the work. Approximately at what time will the work be finished? (a) 1.30 pm (b) 12.30 am (c) 2.00 pm (d) 1.00 pm

648. At a dinner party every two guests used a bowl of rice between them, every three guests used a bowl of dal between them and every four used a bowl of meat between them. There were altogether 65 dishes. How many guests were present at the party ?      A. 60      B. 65      C. 90      D. None of these

478 .In the equation  $A + B + C + D + E = FG$  where FG is the two digit number whose value is  $10F + G$  and letters A, B , C , D , E, F and G each represent different digits. If FG is as small as possible. What is the value of G? (a) 4 (b) 2      (c) 0 (d) 3

479 .In this question,  $A^B$  means A raised to power B. If  $x^2 * y * z < 0$ , then which one of the following statements must also be true? I.  $yz < 0$       II.  $z < 0$       III.  $x < 0$       (a) I only (b) III only (c) I & II only (d) None of the above

480 .At 12.00 hours Ravi starts to walk from his house at 8 kms an hour. At 13.30 hours, Shankar follows him from Ravi's house on his bicycle at 12 kms per hour. When will Ravi be 6 kms behind Paul?

(a) 18:00hrs (b) 18:30hrs (c) 20:00hrs (d) 19:30hrs

481 .What is the value of  $(222224 * 444445 * 222221 + 666668) / 222222$       (a) 444444 (b) 444447 (c) 222224 (d) 444222

482 .Seven varsity basket ball players (A, B, C, D, E, F and G) are to be honoured at a special luncheon. The players will be seated on the dias in a row. A and G have to leave the luncheon early and so must be seated at the extreme right .B will receive the most valuable player's trophy and so must be in the centre to facilitate presentation .C and D are bitter rivals and, therefore must be seated as far apart as possible.

Which of the following pair cannot occupy the seats on either side of B? (a) F and D (b) D and E (c) E and G (d) C and F

483 .An organization has 4 committees. Only 3 persons are members of all four committees, but every pair of committees has 4 members in common. What is the LEAST possible number of the members on any one committee?

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

484 .Aravind can do a work in 24 days. Mani can dig the same well in 36 days. Aravind, Mani and Hari can do a work together in 8 days. Hari alone can do the work in      (a) 12days (b) 18 days (c) 16 days (d) 24 days

485 .A farmer has a rose garden. Every day he either plucks 7 or 6 or 24 or 23 roses. The rose plants are intelligent and when the farmer plucks these numbers of roses, the next day 37 or 36 or 9 or 18 new roses bloom in the garden respectively. On Monday, he counts 189 roses in the garden. He plucks the roses as per his plan on consecutive days and the new roses bloom as per intelligence of the plants mentioned above.

After some days which of the following can be the number of roses in the garden? (a) 26 (b) 249 (c) 232 (d) 27

486. What is the unit's digit of  $21^3 \times 21^2 \times 34^7 \times 46^8 \times 77^8$ ? (a) 4 (b) 8 (c) 6 (d) 2

487. Sum of the CP's of two cars is Rs.150,000. 1st car is sold at a profit of 20% and the second car at the loss of 20%. However, their S.P's are same. What is the cost price of the 1st car? (a) 60,000 (b) 64,000 (c) 72,000 (d) 75,000

488. Four friends namely Rahul, Ravi, Rajesh and Rohan contested for a dairy milk chocolate. To decide which friend will get the chocolate they decided to throw two dice. Every friend was asked to choose a number and if the sum of the numbers on two dice equals that number, the concerned person will get the chocolate. Rahul's choice was 7, Ravi's choice was 9, Rajesh's choice was 10 and Rohan's choice was 11. Who has the maximum probability of winning the amount?

(a) Rahul (b) Ravi (c) Rajesh (d) Rohan

489. J, K, L, M and N collected stamps. They collected a total of 100 stamps. None of them collected less than 10. No two among them collected the same number. (i) 3 collected the same number as K and M together. (ii) L collected 3 more than the cube of an integer (iii) The no. collected by J was the cube of an integer. (iv) Total no. collected by K was either the square or cube of an integer. The number of stamps collected by N was: (a) 10 (b) 11 (c) 12 (d) 13

490. The present ratio of students to teachers at a certain school is 30 to 1. If the student enrollment were to increase by 50 students and the number of teachers were to increase by 5, the ratio of the teachers would then be 25 to 1. What is the present number of teachers?

(a) 10 (b) 15 (c) 20 (d) 25

491. What is the remainder when  $6^{17} + 117^6$  is divided by 7? (a) 1 (b) 6 (c) 0 (d) 3

492. A turtle is crossing a field. What is the total distance (in meters) passed by turtle? Consider the following two statements

(X) The average speed of the turtle is 2 meters per minute (Y) Had the turtle walked 1 meter per minute faster than his average speed it would have finished 40 minutes earlier

(a). Statement X alone is enough to get the answer (b). Both statements X and Y are needed to get the answer

(c) Statement Y alone is enough to get the answer (d) Data inadequate

493. If the price of an item is decreased by 10% and then increased by 10%, the net effect on the price of the item is

(a) A decrease of 99% (b) No change (c) A decrease of 1% (d) An increase of 1%

494. (i)  $x^2 < 1/100$ , and  $x < 0$  what is the highest range in which  $x$  can lie?

(a)  $-1/10 < x < 0$  (b)  $-1 < x < 0$  (c)  $-1/10 < x < 1/10$  (d)  $-1/10 < x$

494. (ii) A father purchases dress for his three daughters. The dresses are of same color but of different size. The dress is kept in dark room. What is the probability that all the three will not choose their own dress. (a)  $2/3$  (b)  $1/3$  (c)  $1/9$  (d) none of these

495. Messrs. Siva Constructions, leading agents in Chennai prepared models of their lands in the shape of a rectangle and triangle. They made models having same area. The length and width of rectangle model are 24 inches and 8 inches respectively. The base of the triangle model is 16 inches. What is the altitude of triangle model from the base to the top?

(a) 24 inches (b) 8 inches (c) 20 inches (d) 32 inches

496. From a deck of 52 cards, 3 cards drawn randomly. What is the probability of getting 1 spade, 1 red queen and 1 black king?

(a) 0.235 (b) 0.0235 (c) 0.00235 (d) 0.0346

497. In a stream running at 2 kmph, a motorboat goes 6 km upstream and back again to the starting point in 33 minutes. Find the speed of the motorboat in still water? (a) 20 km/h (b) 22 km/h (c) 24 km/h (d) 27 km/h

498. The milk and water in two vessels A and B are in the ratio 4 : 3 and 2 : 3 respectively. In what ratio, the liquids in both the vessels are mixed to obtain a new mixture in vessel C containing half milk and half water?

(a) 5:7 (b) 7:5 (c) 1:1 (d) none of these

499. An article manufactured by a company consists of two parts X and Y. In the process of manufacturing of part X, 9 out of 500 parts may be defective. Similarly, 5 out of 100 are likely to be defective in the manufacturer

of Y. Calculate the probability that the assembled product will not be defective? (a) 0.6485 (b) 0.6565 (c) 0.8645 (d) none of these

500. Y catches 5 times more fishes than X. If total number of fishes caught by X and Y is 42, then number of fishes caught by X? (a) 7 (b) 8 (c) 9 (d) 10

501. There are 4 boxes colored red, yellow, green and blue. If 2 boxes are selected, how many combinations are there for at least one green box or one red box to be selected? (a) 1 (b) 6 (c) 9 (d) 5

502. A completes a piece of work in  $\frac{3}{4}$  of the time in B does, B takes  $\frac{4}{5}$  of the time in C does. They got a profit of Rs. 40000 how much B gets? (a) Rs.12765 (b) Rs.12000 (c) Rs.13400 (d) None of these

503. The diagonal of a square is twice the side of equilateral triangle the ratio of Area of the Triangle to the Area of Square is?

(a)  $\sqrt{3}:8$  (b)  $\sqrt{2}:5$  (c)  $\sqrt{3}:6$  (d)  $\sqrt{2}:4$

504. My name is PREET. But my son accidentally types the by interchanging a pair of letters in my name.

What is the probability that despite this interchange, the name remains unchanged? (a) 10% (b)

12.5% (c) 20% (d) 25%

505. In month of 31 days, there are exactly 4 Thursdays and 4 Sundays. What is the day of the week on the first of that month? (a) Wednesday (b) Friday (c) Saturday (d) Monday

506. The length and breadth of a field is 300x400ft, if there are 3 ants on average per square inch of field, find the number of ants in field. (a) 31840000 (b) 41840000 (c) 51840000 (d) 61840000

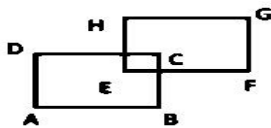
507. If 'm' is an odd integer and 'n' an even integer, which of the following is definitely odd?

(a)  $(2m+n)(m-n)$  (b)  $(m+n^2)+(m-n^2)$  (c)  $m^2+mn+n^2$  (d)  $m+n$

508. There are 20 balls which are red, blue or green. If 7 balls are green and the sum of red balls and green balls is less than 13, at most how many red balls are there? (a) 4 (b) 5 (c) 6 (d) 7

509. Two cyclists begin training on an oval racecourse at the same time. The professional cyclist completes each lap in 4 minutes; the novice takes 6 minutes to complete each lap. How many minutes after the start will both cyclists pass at exactly the 15th lap, at the same spot where they began to cycle? (a) 12 (b) 165 (c) 180 (d) 24

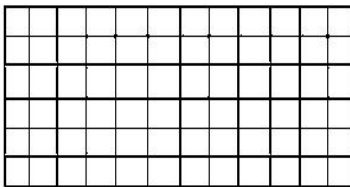
510. In the adjoining diagram, ABCD and EFGH are squares of side 1 unit such that they intersect in a square of diagonal length  $(CE) = \frac{1}{2}$ . The total area covered by the squares is



(a) 2 (b) 1 (c) Data Insufficient (d) None of these

511. In base 7, a number is written only using the digits 0, 1, 2, ..., 6. The number 135 in base 7 is  $1 \times 7^2 + 3 \times 7 + 5 = 75$  in base 10. What is the sum of the base 7 numbers 1234 and 6543 in base 7. (a) 11101 (b) 11110 (c) 10111 (d) 11011

512. Find the number of rectangles from the adjoining figure (A square is also considered a rectangle)



(a) 864 (b) 3276

(c) 1638

(d) None

513. The sequence  $\{A_n\}$  is defined by  $A_1 = 2$  and  $A_{n+1} = A_n + 2n$  what is the value of  $A_{100}$ .

(a) 9902 (b) 9900 (c) 10100 (d) 9904

514. Arun, Akash, Amir and Aswanth go for a picnic. When Arun stands on a weighing machine, Akash also climbs on, and the weight shown was 132 kg. When Akash stands, Amir also climbs on, and the machine shows 130 kg. Similarly the weight of Amir and Aswanth is found as 102 kg and that of Akash and Aswanth is 116 kg. What is Aswanth's weight?

(a) 58kg (b) 78 kg (c) 44 kg (d) None



515. Roy is now 4 years older than Erik and half of that amount older than Iris. If in 2 years, Roy will be twice as old as Erik, then in 2 years what would be Roy's age multiplied by Iris's age? (a) 28 (b) 48 (c) 50 (d) 52

516. X, Y, X and W are integers. The expression  $X - Y - Z$  is even and the expression  $Y - Z - W$  is odd. If X is even what must be true? (a)  $Y - Z$  must be odd (b) Z must be odd (c) W must be odd (d) None of these

517. The telephone company wants to add an area code composed of 2 letters to every phone number. In order to do so, the company chose a special sign language containing 124 different signs. If the company used 122 of the signs fully and two remained unused, how many additional area codes can be created if the company uses all 124 signs?

(a) 246 (b) 248 (c) 492 (d) 15128

518. Q is a prime number bigger than 10. What is the smallest positive number (except 1) that 3Q can be divided by equally? (a) 3Q (b) Q (c)  $Q-3$  (d)  $Q+3$

519. The "Racing magic" takes 120 seconds to circle the racing track once. The "Charging bull" makes 40 rounds of the track in an hour. If they left the starting point together, how many minutes will it take for them to meet at the starting point for the second time? (a) 3 (b) 6 (c) 16 (d) 12

520. Given the following information, who is youngest? C is younger than A; A is taller than B C is older than B; C is younger than D B is taller than C; A is older than D (a) D (b) B (c) C (d) A

521. In a class there are 60% of girls of which 25% poor. What is the probability that a poor girl is selected is leader?

(a) 15/40 but 15% (b) 1/15 (c) 0 (d) 1/100

522. A completes a work in 20 days B in 60 days C in 45 days. All three persons working together on a project got a profit of Rs.26000 what is the profit of B? (a) Rs.6000 or 4875 (b) Rs.6400 (c) Rs.3000 (d) Rs. 3600

523. A bakery opened yesterday with its daily supply of 40 dozen rolls. Half of the rolls were sold by noon and 80 % of the remaining rolls were sold between noon and closing time. How many dozen rolls had not been sold when the bakery closed yesterday?

(a) 40 (b) 16 (c) 4 (d) 20

524. A necklace is made by stringing N individual beads together in the repeating pattern red bead, green bead, white bead, blue bead and yellow bead. If the necklace begins with a red bead and ends with a white bead, then N could be: (a) 5 (b) 30 (c) 68 (d) 70

525. A snail, climbing a 20 feet high wall, climbs up 4 feet on the first day but slides down 2 feet on the second. It climbs 4 feet on the third day and slides down again 2 feet on the fourth day. If this pattern continues, how many days will it take the snail to reach the top of the wall? (a) 12 (b) 16 (c) 17 (d) 20

526. M, N, O and P are all different individuals; M is the daughter of N; N is the son of O; O is the father of P; Among the following statements, which one is true? A. M is the daughter of P B. If B is the daughter of N, then M and B are sisters C. If C is the granddaughter of O, then C and M are sisters D. P and N are brothers. (a) B (b) A (c) C (d) None of these

527. The volume of water inside a swimming pool doubles every hour. If the pool is filled to its full capacity with in 8 hrs ,in how many hours was it filled to one quarter of its capacity? (a) 2 (b) 4 (c) 5 (d) 6

528. Find the value of x? (a) 33 (b) 66 (c) 18 (d) 54

3	7	14
23	36	49
X	83	104

529. The ratio between the number of sheep and the number of horses at the Stewarfarm is 4 to 7, If each horse is fed 230 ounces of horse food per day and the farm needs a total 12,880 ounces of horse food per day. What is the number of sheep in the farm ? (a) 18 (b) 28 (c) 32 (d) 56

530. John traveled 80% of the way from Yellow-town to Green-fields by train at an average speed of 80 miles per hour. The rest of the way John travelled by car at an average speed of v miles per hour. If the average speed for the entire trip was 60 miles per hour ,What is v in miles per hour? (a) 30 (b) 40 (c) 50 (d) 55

531. In a psychology school the grade of the students is determined by the following method: At the end of the first year the grade equals to twice the age of the student. From then on, the grade is determined by twice the age of the student plus half of his grade from the previous year. If Joey's grade at the end of the first year is 40, what will be his grade at the end of the third year? (a) 44 (b) 56 (c) 62 (d) 75

532. 15 Java programmers, working in a constant pace, finish a web page in 3 days. If after one day, 9 programmers how many more days are needed to finish the remaining job? (a) 2 (b) 4 (c) 5 (d) 6

533. Given that  $0 < a < b < c < d$ , which of the following is the largest?

a.  $(c+d) / (a+b)$       b.  $(a+d) / (b+c)$       c.  $(b+c) / (a+d)$       d.  $(b+d) / (a+c)$

534. Eesha bought 18 sharpeners for Rs.100. She paid 1 rupee more for each white sharpener than for each brown sharpener. What is the price of a white sharpener and how many white sharpeners did she buy? a.

Rs.5, 10      b. Rs.6, 10      c. Rs.5, 8      d. Rs.6, 8

535. Mark told John "If you give me half your money I will have Rs.75. John said, "if you give me one third of your money, I will have Rs.75/- How much money did John have? a. 45 b. 60 c. 48 d. 37.5

536. Eesha has a wheat business. She purchases wheat from a local wholesaler of a particular cost per pound. The price of the wheat of her stores is \$3 per kg. Her faulty spring balance reads 0.9 kg for a KG. Also in the festival season, she gives a 10% discount on the wheat. She found that she made neither a profit nor a loss in the festival season. At what price did Eesha purchase the wheat from the wholesaler? a. 3

b. 2.5 c. 2.43 d. 2.7

537. Raj goes to market to buy oranges. If he can bargain and reduce the price per orange by Rs.2, he can buy 30 oranges instead of 20 oranges with the money he has. How much money does he have? a. Rs.100 b. Rs.50 c. Rs.150 d. Rs.120

538. There are 3 classes having 20, 24 and 30 students respectively having average marks in an examination as 20, 25 and 30 respectively. The three classes are represented by A, B and C and you have the following information about the three classes. a. In class A highest score is 22 and lowest score is 18 b. In class B highest score is 31 and lowest score is 23

c. In class C highest score is 33 and lowest score is 26. If five students are transferred from A to B, what can be said about the average score of A; and what will happen to the average score of C in a transfer of 5 students from B to C?

a. definite decrease in both cases      b. can't be determined in both cases  
c. definite increase in both cases      d. will remain constant in both cases

539. The value of a scooter depreciates in such a way that its value at the end of each year is  $\frac{3}{4}$  of its value at the beginning of the same year. If the initial value of the scooter is Rs.40,000, what is the value at the end of 3 years?

a. Rs.13435      b. Rs.23125      c. Rs.19000      d. Rs.16875

540. Rajiv can do a piece of work in 10 days, Venky in 12 days and Ravi in 15 days. They all start the work together, but Rajiv leaves after 2 days and Venky leaves 3 days before the work is completed. In how many days is the work completed? a. 5 b. 6 c. 9 d. 7

541. A man has a job, which requires him to work 8 straight days and rest on the ninth day. If he started work on Monday, find the day of the week on which he gets his 12th rest day. a. Thursday b. Wednesday c. Tuesday d. Friday

542. On a 26 question test, five points were deducted for each wrong answer and eight points were added for each correct answer. If all the questions were answered, how many were correct, if the score was zero? a. 10 b. 12 c. 11 d. 13

543. In a series of numbers, the next number is formed by adding 1 to the sum of the previous numbers, and the 10th number is 1280. Then what is the first number in the series? (series will be like this  $x, x+1, (x+(x+1))+1, \dots$ )

a. 1 b. 4 c. 5 d. None of these

544. Mr. Bean chooses a number and he keeps on doubling the number followed by subtracting one from it, if he chooses 3 as initial number and he repeats the operation for 30 times then what is the final result?

a.  $(2^{30}) - 1$       b.  $(2^{30}) - 2$       c.  $(2^{31}) - 1$       d.  $2^{31} + 1$

545. Tony alone can paint a wall in 7 days and his friend Roy alone can paint the same wall in 9 days. In how many days they can paint the wall working together? Round off the answer to the nearest integer. a) 3 b) 4 c) 5 d) 7
546. A company selects an employee at his 25th age and offers salary as Rs.40000 per annum for first 2 years. Afterwards, every year he gets increment of Rs.4000 for next 15 years and his salary become constant till his retirement. If Rs.80,000 is his average salary (throughout his career) then at what age he retires? a) 52 b) 58 c) 42 d) 48
547. A man hired by a company at his 20th age with starting salary of Rs.20000 per year. After 3 years, he gets Rs.2000 per year as increment for next 10 years. Afterwards, he gets Rs.3000 per year as increment for the remaining years till he retired. If he retires at his 40th age, then what will be his average salary per annum (throughout his career)?  
a) Rs.26900 b) Rs.42300 c) Rs.29900 d) Rs.36700
548. In a game show, the percentage of participants qualified to the number of participants participated from team A is 60%. In team B, the number of participants participated is 40% more than the participants participated from team A and the number of participants qualified from team B is 40% more than the participants qualified from team A. What is the percentage of participants qualified to the number of participants participated from team B?  
a) 20% b) 40% c) 60% d) 80%
549. There are 4 containers W, X, Y and Z, each of which can hold a maximum quantity of 200 kg of a particular item. Container W has 40% more than X, X has 40% more than Y and Y has 30% less than Z. If W has 102.9 kg of contents, then what percentage of full quantity did Z has? a) 37.5% b) 12.9% c) 45.8% d) 82.4%
550. A can write 3 notebooks in 48 days and B can write 4 notebooks in 48 days. If, with the help of their friend C, they write 5 notebooks in 20 days, then C alone can write 5 notebooks in: a) 42 days b) 48 days c) 36 days d) 38 days.
551. A can complete  $\frac{1}{8}$  of a piece of work in 5 hours; B can complete 80% of the same piece of work in  $3\frac{1}{3}$  days and C can complete  $\frac{2}{3}$  of the work in  $1\frac{1}{12}$  days. Who is the fastest worker? a) A b) B c) C d) B and C
552. The face of the square and an equilateral triangle are equal with 12 inches. Find the quantitative relation of their area.  
a) 3:4 b) 2:3 c)  $4:\sqrt{3}$  d)  $2:\sqrt{3}$
553. An equilateral triangle whose face is 4 cm and an isosceles triangle whose bottom is 8 cm have equal areas. What is the length (in cm) of the other side of the isosceles triangle? a)  $\sqrt{21}$  b) 17 c)  $\sqrt{19}$  d) 15
554. If 1 can of pure milk is to be mixed with 3 cans of water to make coffee then how many six litre can of pure milk are needed to prepare hundred servings of 3 litre of coffee? a) 12 b) 13 c) 14 d) 15
555. On his holiday, a man watches N number of musical competitions from 5 different channels in the repeating pattern of A, B, C, D and E. If he takes up with the channel A and ends with the channel D then N would be:  
a) 35 b) 42 c) 59 d) 63.
556. A bead seller arranged some beads in multi-layer box. The first layer of the box was square shaped with 4 rows and 6 columns. Each layer was 1 less in each dimension of the previous layer. What will be the maximum number of beads that could have been in the fourth layer from the first? a) 3 b) 1 c) 12 d) 24
557. There are 4 machines namely P, Q, R and S in a factory. P and Q running together can finish an order in 10 days. If R works twice as P and S works  $\frac{1}{3}$  as much as Q then the same order of work can be finished in 6 days. Find the time taken by P alone to complete the same order. a) 11.5 days b) 12.5 days c) 13.5 days d) 14.5 days
558. X and Y individually can complete a task in 30 days and 40 days respectively. If X and Y worked together for 12 days and B alone worked for the remaining part of task. Then how many part of the task is completed by B alone ?  
a)  $\frac{2}{7}$  b)  $\frac{3}{10}$  c)  $\frac{8}{15}$  d)  $\frac{1}{3}$

559. Two pipes P and Q together can fill a tank in 18 hours. If P alone takes  $\frac{1}{2}$  of the time of thrice Q's then the time taken by Q alone to fill the tank is: a) 29 hours b) 32 hours c) 28 hours d) 30 hours.
560. A certain company retirement plan has a rule that allows an employee to retire when 100 minus years of employment with the company is  $\frac{2}{3}$  of employee's age when he retired from the company. Then what is the experience (in years) of an employee joined on his 25th age be eligible to retire under the rule? a) 40 b) 45 c) 50 d) 65
561. In what year could an employee joined in 1959 on his 29th age be eligible to retire from the company, which has a retirement rule such as an employee to retire when the difference between employee's age when he hired by the company and years of employment with the company is 5? a) 1983 b) 1999 c) 1985 d) 1992
562. There are five boxes in Cargo hold. The weight of first box is 200 kg and second box is 20% higher than third box, whose weight is 25% higher than the first box. The fourth box at 350 kg is 30% lesser than the fifth box. Find the difference in the average weight of 4 heaviest boxes and 4 lightest boxes. A. 75 B. 80 C. 125 D. 175
563. 12 divides  $ab313ba$  (in decimal notation) where a, b are digits  $> 0$ , then the smallest value of  $a+b$  a. 7 b. 6 c. 2 d. 4
564. 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 35 km/hr and the distance travelled by the Ferrari is 490 km, find the total time taken for Rohit to drive that distance. a) 1.5 b) 2.6 c) 3.5 d) 7.8
565. For the FIFA world cup, Paul the octopus has been predicting the winner of each match with amazing success. It is rumoured that in a match between 2 teams A and B, Paul picks A with the same probability as A's chances of winning. Let's assume such rumors to be true and that in a match between Ghana and Bolivia; Ghana the stronger team has a probability of  $\frac{2}{3}$  of winning the game. What is the probability that Paul will correctly pick the winner of the Ghana-Bolivia game? a)  $\frac{1}{9}$  b)  $\frac{4}{9}$  c)  $\frac{5}{9}$  d)  $\frac{2}{3}$
566. A circle has 29 points arranged in a clockwise manner numbered from 0 to 28. A bug moves clockwise around the circle according to the following rule. If it is at a point  $i$  on the circle, it moves clockwise in 1 second by  $(1 + r)$  places, where  $r$  is the remainder (possibly 0) when  $i$  is divided by 11. Thus if it is at position 5, it moves clockwise in one second by  $(1 + 5)$  places to point 11. Similarly if it is at position 28 it moves  $(1 + 6)$  or 7 places to point 6 in one second. If it starts at point 23, at what point will it be after 2012 seconds? (a) 1 (b) 7 (c) 15 (d) 20
567. What is the value of  $(44444445 * 88888885 + 44444442 + 44444438) / 44444444^2$   
(a) 88888883 (b) 88888884 (c) 88888888 (d) 44444443
568. John told Mark that if Mark gives  $\frac{1}{3}$ rd of his money to him, he will have Rs 75. Mark told John that if John gives  $\frac{1}{2}$  his money to him, he will have Rs 75. How much money did they have totally? (a) 105 (b) 125 (c) 150 (d) 75
569. A King's durbar consists of a knight, a spy and a knave. Knight speaks only truth, spy can speak either a truth or a lie and knave speaks only lies. From the following statements made by 3 people A, B and C comprising the knight, spy and knave thought not necessarily in the that order, Identify the spy?  
A -----> I am knight B -----> A is not Knave C -----> If you had asked me, I would say A is the spy.  
(a) A (b) B (c) C (d) Cannot be determined
570. Large, medium and small ships are used to bring water. 4 large ships carry as much water as 7 small ships. 3 medium ships carry the same amount of water as 2 large ship and 1 small ship. If 15 large, 7 medium and 14 small ships, each made 36 journey and brought a certain quantity of water. In how many journeys would 12 large, 14 medium and 21 small ships bring the same quantity?  
A. 32 B. 29 C. 49 D. 25
571. A, B, C and D play a game of cards. A says to B "If I give you 8 cards, you will have as many as C has and I shall have 3 less than what C has. Also if I take 6 cards from C, I shall have twice as many as D has". If B and D together have 50 cards, how many cards have A got? A. 40 B. 37 C. 23 D. 27

572. In what year could an employee hired in 1995 on his 30th age be eligible to retire from his company with a retirement plan which has a rule that allows an employee to retire when the sum of employee's age and years of employment with the company is 90? a) 2025 b) 2055 c) 2005 d) 2015
573. In a mathematical test, Ram was asked to find the average of some numbers. By using the average  $5\frac{1}{3}$  of X, Y and Z, he found 6 values X, Y, Z, X+Y, Y+Z and Z+X. Find the average of all the seven values. a) 87.12 b) 88.57 c) 79.92 d) 78.12
574. The average score of three participants is 55 points. If the average score of 1st two is 50 points and that of the last two be 53 points. Then the score of 2nd participant is: a) 41 b) 42 c) 43 d) 44
575. A survey made among 280 college students highlighted the following facts:  
 1) 50 students are from village, comes by government bus and takes canteen lunch.  
 2) 110 students are from village and takes canteen lunch 3) 160 students are from village  
 4) 90 students comes by government bus and takes canteen lunch 5) 130 students comes by government bus  
 6) 30 students are from village, comes by government bus but do not take canteen lunch  
 7) 50 students are not from village, do not come by government bus and do not take canteen lunch  
 Find how the number of students who take canteen lunch ? a) 220 b) 120 c) 170 d) none of these
576. Let ABCD be a square. Alex wants to draw 5 circles of equal radius 'r' with their centres on BD such that the two extreme circles touch two sides AB, BC and AD, CD of the square respectively and each middle circle touches two circles on either side. Find the ratio of r to that of BD. a) 2 : 11.828 b) 5 : 19.214 c) 1 : 10.828 d) 1 : 12.515
577. In a  $3 \times 3$  grid, comprising 9 tiles can be painted in red or blue. When tile is rotated by 180 degrees, there is no difference which can be spotted. How many such possibilities are there? a. 16 b. 32 c. 64 d. 256
578. Here is 15 dots. If you select 3 dots randomly, what is the probability that 3 dots make a triangle?  
 . . . . .  
 . . . . .  
 . . . . . a. 440/455 b. 394/455 c. 449/455 d. 438/455
579. The famous church in the city of Kumbakonnam has a big clock tower and is said to be over 300 years old. Every Monday 10.00 A.M the clock is set by Antony, doing service in the church. The Clock loses 6 mins every hour. What will be the actual time when the faulty clock shows 3 P.M on Friday? (a) 4 A.M (b) 3.16 P.M. (c) 4.54 A.M. (d) 3 A.M
580. Pinky and Ponky decided to have a car race. Initially Pinky was 20 miles behind Ponky's car. Both of them took the race in the same direction along the same route. Pinky was travelling at a constant speed of 68 miles per hour, while Ponky was travelling at a constant speed of 60 miles per hour. How many hours will it take for Pinky to overtake and drive 8 miles ahead of Ponky? (a) 1.7 hours (b) 2.0 hours (c) 3.0 hours (d) 3.5 hours
581. Eveson was working for a multinational company. The pressure of work in the company was too heavy due to seasonal sales. Eveson decided to go weekend trip with his wife for relaxation. Husband and wife decided that the proposed trip should not exceed 8 hours driving in a day. They decided to maintain the average Speed of forward journey to 40 mph. Due to traffic on Sundays the return journey average speed can only be at 30 mph. How far the couple can select a picnic spot?  
 (a) 142 Miles (b) 200 Miles (c) 137 Miles (d) 220 Miles
582. Rambabu is driving a Honda Unicorn Power bike at 80 km per hour. However being sugar patient, Rambabu could not travel continuously. He takes small breaks each of 2 minutes for every 15 minute of his drive. How much distance Rambabu will cover in 90 minutes? a) 118Km b) 89Km c) 112Km d) 104km
583. If the taxi fares were Re 1.00 for the first  $\frac{1}{5}$  mile and Rs 0.20 for each subsequent  $\frac{1}{5}$  miles thereafter, then what would be the fare for a trip of 3 miles? (a) Rs 1.56 (b) Rs 2.40 (c) Rs 3.00 (d) Rs 3.80  
 (The fare for the first mile will be Rs 1.80 and for every subsequent mile it will be Re 1.00)
584. A computer routine was developed to generate two numbers (x and y) the first being a random number between 0 and 100 inclusive, and the second being less than or equal to the square root of the first. Each of the following pair satisfies the routine except: (a) (99,10) (b) (85,9) (c) (50,7) (d) (1,1) (e) (1,0)

585. A digital wristwatch was set accurately at 8.30 a.m and it started losing 2 seconds every 5 minutes. What time was indicated on the watch at 6.30 p.m of the same day if the watch had operated continuously during that time ? (a) 5:56 (b) 5:58 (c) 6.00 (d) 6.26
586. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salts. If 1.5 litres of the solution spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?  
(a) 7.5% (b) 9.5% (c) 10.5% (d) 12% (e) 15%
587. 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?(a) 69 (b) 70 (c) 40 (d) 45
588. A Sheet of paper has statements number from 1 to 20. Statement n says "At least n of the statements on this sheet are true". Which statements are true and which are false. a. The even no statements are true and the odd no statements are false. b. The 1st 13 statements are false and rest are true. c. The 1st 6 statements are true and rest are false d. The odd no statements are true and even no. are false.
589. A hollow cube of size 5cm is taken, with a thickness of 1cm. It is made of smaller cubes of size 1cm. If 4 faces of the outer surface of the cube are painted, totally how many faces of the smaller cubes remains unpainted? a.488 b.588 c.198 d.258
- 590) If a publication occurs every seven years and the sum of the years is 13524. Then find the first year  
(A) 1611 (B) 1711 (C) 1811 (D) 1911
- 591) If  $A = \frac{2}{3}(B-C)$  and  $c = \frac{1}{2}(A+B)$  and  $A+B+C=3000$ , then find C ? (A) 4000 (B) 3000 (C) 2000 (D) 1000
- 592) In a cricket match, two batsman scores are 96,96 respectively. They require only 5 runs in 3 balls, can both the batsman complete their centuries? (A) no (B) yes (C) insufficient data (D) none of these
- 593) Find the sum of number between 200 and 300, which is multiple of 3? (A) 8217 (B) 8317 (C) 8417 (D) 8517
- 594) 6 positive integers are taken at random and multiplied together. Then what is the probability that products ends in an odd digit other than 5? (A)  $(.4)^6$  (B)  $(.4)^5$  (C)  $(.4)^4$  (D)  $(.4)^3$
- 595) There is a square field of side 10m. A man runs with different speed 10kmph, 15kmph, 20kmph, 25kmph on the four sides of the field. What is the average speed of man ? (A) 18.75 (B) 16.00 (C) 15.00 (D) 15.58
- 596) There are two bottles A and B, each filled with milk and water in the ratio 5:3 and 1:2 respectively. A new mixture is formed by mixing the contents of A and B in the ratio 4:3. What is the ratio of composition of milk and water in the new mixture?  
(A) 1:1 (B) 1:2 (C) 2:1 (D) 2:3
- 597) \* "LEADING" arrange it in such a way that atleast two vowels always together ? (A) 720 (B) 2160 (C) 3600 (D) 5040
- 598) In a mixture of a, b, & c, if a and b are mixed in 3:5 ratio and b and c are mixed in 8:5 Ratio and if the final mixture is 35 liters, find the amount of b? (A) 15.73 (B) 21.5 (C) 17.56 (D) 16.66
- 599) \* If  $m+n$  gives remainder 8 &  $m-n$  gives remainder 6 when divided by 12, what is remainder when  $mn$  divided by 6?  
(A) 1 (B) 2 (C) 4 (D) 7
- 600) \*B moves by taking 3 steps forward and 1 step backward (each step in one second) He walks up a stationary escalator in 118 sec. However on moving escalator he takes 40 sec to reach top. Find speed of escalator.  
(A) 1 step/sec (B) 2 step/sec (C) 3 step/sec (D) 4 step/sec
- 601) Ram Goes A To B. If He Takes  $\frac{1}{4}$  Time Less Than To Cover The Same Distance When Run At Normal Speed By What % He Has Increased His Speed? (A) 17.6 (B) 33.3 (C) 48.6 (D) 66.6
- 602) Find the missing numbers in the series: 0,2,5,?,17,28,?, (A) 11,31 (B) 31,51 (C) 10,41 (D) 21,40

- 603) A motor boat covers a certain distance downstream in 30 minutes, while it comes back in 45 minutes. If the speed of the stream is 5 kmph what is the speed of the boat in still water? (A) 10 kmph (B) 15 kmph (C) 20 kmph (D) 25 kmph
604. The prime factorization of integer N is  $A \cdot B \cdot C$  where A,B,C are all distinct prime integers. How many factors does N have? (a)24 (b)12 (c)4 (d)6
605. At the end of 1894 Suresh was half as old as his grandmother. The sum of the years in which they were born is 3644. How old suresh was at the end of 1899? (a)48 (b)55 (c)49 (d)53
606. Mother + daughter + infant age is 74. mother age is 46 more than daughter and infant. and infant age is 0.4 of daughter. find daughters age. a)10 b)12 c)15 d)18
607. There are 6 working days in a regular week and for each day, the working hours are 10. A man earns Rs. 2.10 per hour for regular work and Rs. 4.20 per hour for overtime. If he earns Rs.525 in 4 weeks, how many hours did he work?  
A. 245 B. 285 C. 275 D.255
608. There is a school where 60% are girls and 35% of the girls are poor. Students are selected at random, what is the probability of selecting a poor girl out of total strength. a)1/21 b)2/41 c)cannot be determined d)none of these
609. Four girls (G1, G2, G3, G4) and three boys (B1, B2, B3) are to sit for a dinner such that no two boys should sit together nor two girls. If they are successively sitting, what is the position of B2 and G3? a. 5<sup>th</sup> and 6<sup>th</sup> b. 9<sup>th</sup> and 5<sup>th</sup> c. 3<sup>rd</sup> and 9<sup>th</sup> d. 2<sup>nd</sup> and 3<sup>rd</sup>
610. There are 30 plants of Chiku, Guava, Sitafal and Mango in a row. There is one pair of Mango plants after Chiku and Guava and Mango plants are followed by one Chiku and one Sitafal plant and so on. If the row begins with a plant of Chiku, then which of the following will be the last in the row? a. Guava b. Mango c. Chiku d. Sitafal
611. The angles of elevation of the top of a tower, from the top and the foot of a pole of height 10 m are 30 and 60 respectively. The height of the tower is: a. 20 m b. 15 m c. 10 m d. None of these
612. An alloy of zinc and copper contains the metals in the ratio 5:3. The quantity of zinc to be added to 16 kg of the alloy so that the ratio of the metal may be 3:1 is: (a) 2 kg (b) 4 kg (c) 3 kg (d) 8 kg
613. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is: (a) 2.3m (b) 4.6m (c) 7.8m (d) 9.2m
614. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream. (a) 2 hours (b) 4 hours (c) 3 hours (d) 5 hours
615. If 40% of a number is equal to two-third of another number, what is the ratio of first number to the second number?  
A. 2 : 5 B. 3 : 7 C. 5 : 3 D. 7 : 3
616. X, Y, Z and W are integers. The expression X-Y-Z is even and the expression Y-Z-W is odd. If X is even, then what must be true? (a)W must be even (b)W must be odd (c)Y-Z must be odd (d)Z must be odd
617. How many 4-digit numbers that do not contain the digits 3 or 6 are there? (a)5040 (b)4096 (c)7200 (d)3584
618. In a rectangular coordinate system, what is the area of a triangle whose vertices have the coordinate (4,), (6,3), (6,-3)?  
(a)6 (b)7.5 (c)6.5 (d)7
619. 2ab5 is a four digit number divisible by 25. If a number formed from the two digits ab is a multiple of 13, then ab is  
A.52 B.45 C.10 D.25
620. Mani sells vegetables and he marks up the prices at 5% above his cost price. Also the weighing stones used by him weigh only 90% of the correct weight. Find his effective percentage of mark-up. a.15% b.16\*2/3% c.14\*1/2% d.20%
621. given equation is  $137+276=435$ , how much is  $731+672=....$  find the result.. 435 534 3261 1623

622. Amy spends 70% of her income on household expenditure, 60% of the remaining on the education of her children and then 40% of the remaining is given to her old mother. Finally, she has US \$576 in her hand. Her salary is  
a. US \$6000    b. US \$8000    c. US \$9000    d. US \$10000
623. Four friends - Arjan, Bhuvan, Guran and Lakha were comparing the number of sheep that they owned. It was found that Guran had ten more sheep than Lakha. If Arjan gave one-third to Bhuvan, and Bhuvan gave a quarter of what he then held to Guran, who then passed on a fifth of his holding to Lakha, they would all have an equal number of sheep. How many sheep did each of them possess? Give the minimal possible answer.  
A. 80, 50, 55, 45    b. 90, 50, 55, 45    c. 90, 40, 55, 45    d. 90, 50, 50, 45
624. Adding  $\frac{1}{4}$  of the time from midnight to the present time, to  $\frac{1}{2}$  of the time from present until midnight, gives the present time. What is the present time.    10.32    12.03    9.36    6.36
625. Light glows for every 13 seconds. How many times did it between 1:57:58 and 3:20:47 am  
a. 384    b. 325    c. 365    d. 312
626. A chain is broken into three pieces of equal lengths containing 3 links each. It is taken to a blacksmith to join into a single continuous one. How many links are to be opened to make it?    a. 0    b. 2    c. 4    d. 6
627. Grass in lawn grows equally thick and in a uniform rate. It takes 24 days for 70 cows and 60 for 30 cows. How many cows can eat away the same in 96 days?    A. 18 or 19    b. 23 or 24    c. 32 or 33    d. 12 or 13
628. There is a certain four digit number whose fourth digit is twice the first digit. Third digit is three more than second digit. Sum of the first and fourth digits twice the third number. What was that number?  
a. 2340 and 4368    b. 2304 and 4368    c. 2034 and 4068    d. 2034 and 4368
629. I lost my wallet and the money in that. But I remember that before I lost my wallet I purchased two things. First one I purchased by paying 10% of what in my wallet and also for second one I also pay 10% of what has been left in my wallet - that is equal to 9. Then how much money I lost?    A. 81    b. 25    c. 63    d. 54
630. Of the 38 people in my office, 10 like to drink chocolate, 15 are cricket fans, and 20 neither like chocolate nor like cricket. How many people like both cricket and chocolate?    a. 7    b. 10    c. 15    d. 18
631. Arjun and Beema have a certain number of apples and mangoes between them. The ratio of number of apples with Arjun to the number of apples with Beema is same as that of the ratio of number of mangoes with Arjun. If the total number of fruits (apples and mangoes) with Arjun is one more than those with Beema. Then what is the minimum possible number of fruits that they have between them?    A. 22    b. 15    c. 9    d. 6
632. Radha moves towards South-East a distance of 7 km, then she moves towards West and travels a distance of 14 km. From here she moves towards North-West a distance of 7 km and finally she moves a distance of 4 km towards East. How far is she now from the starting point?    A. 3 km    b. 4 km    c. 10 km    d. 11 km
633. \* n is a natural number and  $n^3$  has 16 factors then how many max factors can  $n^4$  have?    a. 21    b. 24    c. 25    d. 27
634. The average (arithmetic mean) test score of Torres in four tests is 78. If the total average score of the student is 80. What is his score in the fifth test?    A. 88    b. 84    c. 86    d. 90
635. There were 35 students in a hostel. Due to the admission of 7 new students, the expenses of the mess were increased by Rs. 42 per day while the average expenditure per head diminished by Rs 1. What was the original expenditure of the mess?    A. 420    B. 440    C. 500    D. 540
636. When a producer allows 36% commission on retail price of his product, he earns a profit of 8.8%. What would be his profit % if the commission is reduced by 24%?    a. 40%    b. 49.6%    c. 52%    d. 56.7%
637. Hari has a piece of cake 60 cm long. He gives Raja half of it. He then gives Gopal  $\frac{1}{4}$ th of what is left. After giving a piece to Sahi, he is left with  $\frac{1}{10}$ th of the original. How much did he give to Sahi?    A. 21.5 cm    B. 16.5 cm    C. Rs. 5    D. Rs. 3
638. A cask is filled with alcohol and water in the ratio 5:3. Sixteen gallons of this are drawn off and the cask is filled with water and then the proportion of alcohol to water becomes 5:11. How many gallons does the cask hold?  
A. 32    B. 36    C. 38    D. 40
639. A's capital is equal to twice B's capital and B's capital is three times C's capital. The ratio of the capital is :



A. 2:1:3      B. 1:2:6      C. 6:3:1      D. 1:3:6

640. A sum of money amounts to Rs. 9800 after 5 years and Rs. 12005 after 8 years at the same rate of simple interest. The rate of interest per annum is:    A. 5%      B. 8%      C. 12%      D. 15%

641. A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned?    A. Rs. 35      B. Rs. 245      C. Rs. 350      D. Cannot be determined

642. In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?      A. 810      B. 1440      C. 2880  
D. 50400      E. 5760

643. 1.12.91 is the first Sunday. Which is the fourth Tuesday of December 91?

A. 20.12.91    B. 22.12.91    C. 24.12.91    D. 25.12.91

644. 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?

A. 20 years.    B. 22 years    C. 25 years    D. 24 years

645. 3, 22, 7, 45, 15, ?, 31    A. 91    B. 82    C. 90    D. 72

646. Two trains are running in opposite directions with the same speed. If the length of each train is 120 metres and they cross each other in 12 seconds, then the speed of each train (in km/hr) is:

A. 10    B. 18    C. 36      D. 72

647. How many bricks, each measuring 25 cm x 11.25 cm x 6 cm, will be needed to build a wall of 8 m x 6 m x 22.5 cm?

A. 5600      B. 6000      C. 6400      D. 7200