QUANTITATIVE APTITUDE

AVERAGES

Directions for question number 1 to 10: There are three sets of natural numbers 1 to 100. Set A contains all the natural numbers which are prime, up to 100. Set B contains all the non-prime even natural numbers up to 100. Set c contains all the non-prime odd numbers up to 100.

A={2,3,5,7,11,…..,89,97}
B={4,6,8,10,12…..,98,100}
C={1,9,15,21,25,27,33,……..,95,99}

1) The average of all the elements of A,B and C is
c) 49.5 b) 50.50 c)55 d) None of these

2) The average of all the elements of B is :
a) 52 b) 48 c) 49 d) None of these

3) If the average (factually correct) of the set A is 42,46,then the average of the set c is:
c) 52 b)49.87
c)55.46 d)Can't determined

4) The average of the elements of the set A and C combined is:
a) 49.0588 b) 49.0372
c) 50 d) None of these

5) If an element less than 50 belongs to set A is transferred to set B, then the average of set B:
a) Increases b) Decreases
c) Remain constant d) Can't say

6) If any two elements, greater than 50, belong to set A are transferred to the set C, then the average of set C:
a) Remain constant b) Decreases
c) Increase d) Can't say

7) Any ten element of the set A are transferred to the set B, then the average of set B is :
a) Increase b) Decreases
b) Remain constant d) Can't say

8) If a least and a greatest element of the set C are transferred from set C to set A then the average of set A :
a) Increases b) Decreases
c) Remain constant d) Can't determined

9) If a smallest and a greatest element of the set B is transferred to set A then the averages of A,B ,C respectively:
a) Decrease, decrease , increase
b) Decrease , constant , increased
c) Increase, constant, increase
d) Can't be determined

10) If an element 2 is also included in the set B, then the average of B :
a) Decrease by 3
b) Increase by 2
c) Decrease by 1
d) Can't be determined

11) The average of all perfect square of set C is :
c) 35 b) 33 c)30.5 d) None of these

Directions for question number 12, 13, 14: 5 elements below 25 from the set A are transferred to set B and 10 elements lying between 25 and 50 from the set B are transferred to set C and 15 elements above 50 from the set C are transferred to set A.

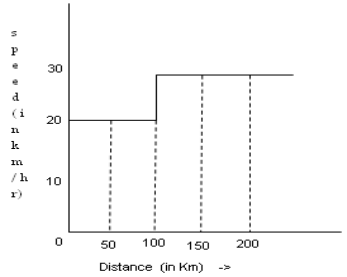
12) The overall average of all the elements of A, B and C is:
a) 39.8 b) 50.50 c) 71.2 d) cannot

13) The maximum increase in the average of set:
a) A b) B c) C d) can't say.

14) When we intended to minimize the loss in average of set B then the new average of Set B is:
a) 54.4772 b) 45.74
c) 51.84 d)cannot determined

15) If 10-10 elements are transferred from set A to set B, then set B to set C and then from set C to set A but the received elements cannot be transferred to the next set, e.g., the elements obtained from set A cannot be transferred to C through Set B. the average of which set is maximum:
a) A b) B c) C d) can't say.

Directions for question number 16 and 17: In the following graph the relation between speed and distance is given.



16) The average speed for the first 200 kms in km/hr?
a) 24 b) 25 c) 26 d) 40

17) The average speed for the first 200 km?
a) 15 b) 18 c) 25 d) none

18) Abhay working in Tele Bharati as a sales person .His monthly salary is just Rs 200.But he gets the bonus as per the given rule. If he sells the simcards for Rs. x , then his bonus will be Rs $((x/100)^2 +10)$). In the first quarter of the year his average sale was Rs 3000 per month. In the next 5 months average sale was Rs 5000 per month. In the last four months his average sale was RS 8000 per month. What is the average earning per month for the whole year?
a) Rs 3350 b) Rs 3610
c) Rs 3560 d) none

19) The price of shirts at Sahara Ganja is defined as Rs $(100+10x^2)$, where x is the number of shirts. Mallika purchased 5 shirts from the above shop .The average price of a shirt is :
a) Rs 70 b) Rs 50
c) Rs 75 d) none

20) In the above question if the sister of Mallika purchased k shirts but the average price was same as that of Mallika. Then value of K is?
a) 6 b) 4 c) 2 d) none

21) There are 100 compartments in passenger train which carries on an average 20 passengers per compartment. If at least 12 passengers were sitting in each compartment and no any compartment has equal number of passengers then maximum how many passengers can be accommodated in any compartment?
a) 64 b) 45 c) 56 d) none

22) There is twice the number of two wheelers as there are three wheelers and the number of 4 wheelers is equal to the number of two wheelers. The average number of wheel per vehicle is?
a) 3 b) 4 c) 5 d) none

23) Sone lal has 'n' magical eggs whose average weight is 'k' gm. Each of the 'n' eggs produces 'n'eggs next day such that the average weight of 'n' eggs produced is same as that of the parental (Previous generation) egg for each 'n' groups individually. i.e., each egg produces 'n' eggs in its next generation and the average weight of all the 'n' eggs of next generation is same as the weight of the mother egg. This process is continued

without any change in pattern .what is the total weight of all the eggs of r^{th} generation ,where the initial number of eggs with sone lal are considered as the eggs of first generation :

a) rnk b) $n^r.k$ c) $n.k^r$ d) $n^{r+1}k$

Directions for question number 24 to 27: A CAT training institute was established on Jan 1,2004 with 3,4 5 and 6 faculty members in the Logical Reasoning (LR), Data interpretation (DI), English Language and Quantitative Analysis (QA) area respectively, to start with. No faculty member retired or joined the institute in the first three months, of the year 2004 .In the next four years the institute recruited one faculty member in each of the four areas .All these new faculty members, who joined the institute subsequently over the years were 25 years old at that time of their joining the institute. All of them joined the institute on April 1. During these four years one of the faculty members retired at the age of 60.The following diagram gives the area wise average age (in terms of number of completed years) of faculty members as on April 1 of 2004,2005,2006 and 2007.

Faculty	2004	2005	2006	2007
LR	49.33	44	45	46
DI	50.5	51.5	52.5	47.8
English	50.2	49	45	46
Quants	45	43	44	45

24) In which year did the new faculty members join as the faculty of English?

a) 2004 b) 2005 c) 2006 d) 2007

25) What was the age of the new faculty member, who joined faculty of QA, as on April 1, 2007?

a) 25 b) 26 c) 27 d) 28

26) From which area did the faculty member retire?

a) English b) LR c) DI d) Quants

27) Professors Sarvesh and Manish ,two faculty members in the LR area ,who have been with the institute ,Since its inception share a birthday ,which falls on 30th November .One was born in 1951 and the other one in 1954. On April 1st 2009, what was the age of new faculty member, who has been in the same area since inception?

a) 47 b) 50 c) 51 d) 52

ALLIGATIONS

1) How much Pepsi Rs 6 a litre is added to 15 litre of "dew" at Rs 10 a litre so that the price of the mixture be Rs 9 a litre?

a) 5 b) 8 c) 10 d) none

2) In municipal parking there are some two wheelers and rest are 4 wheelers .If wheels are counted, there are total 520 wheels but the in charge of the parking told me that there are only 175 vehicles. If no vehicle has a stepney , then the number of two wheelers is :

a) 75 b) 100 c) 90 d) 85

3) In my pocket there are Rs 25 consisting of only the denominations of 20paise and 50 paise .Thus there are total 80 coins in my pocket .The no of coins of the denominations of 50 paise is :

a) 30 b) 70 c) 50 d) 25

4) There are some shepherds and their sheep in a grazing field, The no of total heads are 60 and total legs are 168 including both men and sheep. The no of sheep is:

a) 18 b) 26 c) 24 d) 36

5) In the 75 litres of mixture of milk and water, the ratio of milk and water is 4:1. The quantity of water required to make the ratio of milk and water 3:1 is :

a) 1 liter b) 3 liters c) 4 liters d) 5litres

6) In my office the average age of all the female employees is 21 years and that of male employees is 32 years ,where the average age of all the (male and female) employees is 28 years .The total no of employees in my office could be :

a) 35 b) 78 c)231 d) 90

7) A car agency has 108 cars. He sold some cars at 9 % profit and rest at 36 % profit. Thus he gains 17 % on the sale of all his cars. The no of cars sold at 36 % profit is :

a) 25 b) 35 c) 35 d) 75

8) Rs 69 were divided among 115 students so that each girl gets 50 paise less than a boy .thus each boy received twice the paise as each girl received. The no of girls in the class is :

a) 92 b) 42 c) 33 d) 23

9) In what proportion water is mixed with spirit to gain 12.5% by selling it at cost price?

a) 3:5 b)1:8 c)2:7 d)1:9

10) A butler stole wine from a butt of sherry containing 50 % of spirit, then he replenished it by different wine containing 20 % spirit .thus there was only 30 % strength (spirit) in the new mixture. How much of the original wine did he steal?

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

11) Mr. mittal purchased 2 steel factories, one in India and other one in Malaysia for a total of Rs 72 cores, Later on he sold the Indian factory at 16 % profit and Malaysian factory at 24 % profit .Thus he gained a total profit of 19 % . The selling price of Indian factory is :

a) 45 crore b) 52.2 crore
c) 8.55 crore d) cannot be determined

12) In a 25 litre mixture of milk and water , the water is only 20 % .How many litres of milk is required to increase the percentage of water to 90 % ?

a) 45 litre b) 70 litres
c) 115 litres d) 175litres

13) A milkman sells the milk at the cost price but he mixes the water(freely available) in it and thus he gains 9.09 %.The quantity of water in the mixture of 1 litre is :

a) 83.33ml b) 90.90ml
c) 90.09ml d) cannot be determined

14) The price of petrol is Rs 60 per litre and the price of spirit is Rs 40 per litre. In what ratio the petrol and spirit be mixed such that the profit after selling the mixture at Rs 75 per litre is 25 %?

a) 1:1 b)3:2 c)5:1
d) Such a mixture is not possible

15) A trader sells total 315 TV sets .He sells black and white TV sets at a loss of 6 % and color TV sets at a profit of 15 % .Thus he gains 9 % on the whole. The no of B/W TV sets, which be has sold ,is :

a) 126 b) 216 c) 135 d) 90

16) In a class of 30 students , the average weight of boys is 20 kg and the average weight of the girls is 25 kg .The fraction of boys out of the total students of the class is :

a) 4/5 b) 5/6
c) 3/4 d) data insufficient

17) Baniya sells two types of tea via Desi chai and videshi chasi .He sells Desi chai at Rs 18 per kg and incurs a loss of 10 % whereas on the selling the videshi chai at Rs 30 per kg. He gains 20 % .in what proportion should the Desi chai

and videshi chai be mixed such that he can gain a profit of 25 % by selling the mixture at Rs 27.5 per kg?
a) 3:2 b)2:3 c)2:5 d)3:5

18) The average age of boys in class is 16.66, while the average age of girls is 18.75, Thus the average of all the 40 students of the class is 17.5 .If the difference between the number of boys and girls is 8, then the no of girls in the class is:
a) 12 b) 16 c) 18 d) data insufficient

19) The ratio of water and alcohol in two different containers is 2:3 and 4:5, in what ratio we are required to mix the mixtures of two containers in order to get the new mixture in which the ratio of alcohol and water be 7:5?
a) 7:3 b)5:3 c)8:5 d)2:7

20) The average marks of the students in four sections A, B, C and D together is 60 %. The average marks of the students of A, B, C and D individually are 45 %, 50%, 72% and 80 % respectively. If the average marks of the students of section A and b together is 48 %, and that of the students of B and C together is 60 %.What is the ratio of number of students in sections A and D?
a) 2:3 b)4:3 c)5:3 d)3:5

21) The diluted wine contains only 8 litres of wine and the rest is water. A new mixture whose concentration is 30% is to be formed by replacing wine. How many litres of mixture shall be replaced with pure wine if there was initially 32 litres of water in the mixture?
a) 4 b) 5 c) 8 d) none

22) The average weight of boys in a class is 30 kg and the average weight of the girls in the same class is 20 kg. If the average weight of the whole class is 23.25 kg, what could be the possible strength of boys and girls in the same class?
a) 14 and 26 b) 13and 27
c) 17 and 27 d) none

23) The shopkeeper mixed 40 kg refined oil with vegetable oil worth Rs 60 per kg. Thus he gains Rs 10 after selling the mixture of two oils .The price of the first oil is:
a) 20 b) 25 c) 4 d) Cannot be determined

24) In a mixture of milk and water there is only 26 % water. After replacing the mixture with 7 litres of pure milk ,the percentage of milk in the mixture become 76%.the quantity of a mixture is :
a) 65 litre b)91litre c)38litre d)none

25) The ratio of expenditure and savings is 3:2. If the income increases by 15 % and the savings increases by 6 % then by what percent should his expenditure increases?
a) 25 b) 21 c) 12 d)24

26) 4 kg of metal contains 1/5 copper and rest is Zinc. Another 5 kg of metal contains 1/6 copper and rest is zinc. The ratio of copper and zinc into the mixture of these two metals:
a) 54 b) 90 c) 45 d) 63

27) 450 litres of a mixture of milk and water contain the milk and water in the ratio 9:1, how much water should be added to get a mixture containing milk and water in the ratio 3:1?
a) 54 b) 90 c) 45 d) 63

28) The ratio of petrol and kerosene in the container is 3:2 when 10 litres of the mixture is taken out and is replaced by the kerosene , the ratio becomes 2:3.The total quantity of the mixture in the container is:
a) 25 b) 30
c) 45 d) cannot be determined

29) From a container, 6 litres milk was drawn out and was replaced by water .Again 6 litres of mixture was drawn out and was replaced by water ,Thus the quantity of milk and water in the container after these two operations is 9:16.The quantity of mixture is :
a) 15 b) 16 c) 25 d) 31

RATIO, PROPORTION AND VARAITION

1) In two alloys the ration of Iron and copper is 4:3 and 6:1 respectively. If 14 kg of the first alloy and 42 kg of the second alloy are mixed together to form a new alloy, then what will be the ratio of copper to iron in the new alloy:
a) 11:3 b)11:8 c) 8:11 d) None of these.

2) In a zoo, there are rabbits and pigeons. If heads are counted, there are 340 heads and if legs are counted there are 1060 legs. How many pigeons are there?
a) 120 b) 150 c) 180 d) 170

3) 6 litres is taken out from a vessel full of kerosene and substituted by pure petrol. This process is repeated two more times. Finally the ration of petrol and kerosene in the mixture becomes 1701:27. Find the volume of the original solution:
a) 14 litre b) 16 litre
c) 8 litre d) 42 litre

4) In three vessels, each of 25 litres capacity, mixture of milk and water is filled. The ratio of milk and water are 3:1, 2:3, 4:3 in the respective vessels. If all the three vessels are emptied into a single large vessel, then what will be the ratio of water to milk in the resultant mixture?
a) 179:241 b) 197:214
c) 219:117 d) 179:234

5) Two liquids are mixed in the ratio 4:3 and the mixture is sold at Rs. 20 with a profit of 33 1/3%. If the first liquid is costlier than the second by Rs.7. find the sum of costs of both the liquids:
a) Rs. 11 b) Rs. 29 c) Rs. 35 d) Rs. 70

6) Two alloys made up of copper and tin. The ratio of copper and tin in the first alloy is 1:3 and in the second alloy it is 2:5. In what ratio the two alloys should be mixed to obtain a new alloy in which the ratio of tin and copper be 8:3?
a) 3:5 b)4:7 c) 3:8 d)5:11

7) Three vessels having volumes in the ratio of 2:3:5 are full of a mixture of water and milk. In the first vessel ratio of water and milk is 1:3, in second 2:3 and in the third vessel, 2:5. If all the three vessels were poured out in a large container, what is the resulting ratio of milk and water?
a) 43:96 b)438:962 c) 348:962 d)962:438

8) The number of oranges in three baskets is in the ratio of 3:4:5. In which ratio the number of oranges in first two baskets must be increased so that the new ratio becomes 5:4:3?
a) 31% b) 71% c) 49% d) 29%

9) A vessel of capacity 2 litre has 25% alcohol and another vessel of capacity 6 litre had 40% alcohol. The total liquid of a litre was poured out in a vessel of capacity 10 litre and thus the rest part of the vessel was filled with the water. What is the new concentration of mixture?
a) 31% b) 71% c) 49% d) 29%

10) Alloy A contains 40% gold and 60% silver. Alloy B contains 35% gold and 40% silver and 25% copper. Alloys A and B are mixed in the ratio of 1:4. What is the ratio of gold and silver in the newly formed alloy is?

a) 20% and 30% b) 36% and 44%
c) 25% and 35% d) 495 and 36%

11) Dia and urea are two chemical fertilizers. Dia consists of N, P and K and Urea consists of only N and P. A mixture of Dia and Urea is prepared in which the ratio of N, P and K is 26%, 68% and 6% respectively. The ratio of N, P and K in Dia is 20%, 70% and 10% respectively. What is the ratio of N and P in the urea?
a) 27% and 63% b) 33% and 67%
c) 35% and 65% d) 70% and 30%

12) The ratio of copper and nickel by weight in the two alloys X and Y are 2:7 and 5:4. How many kilogram of the alloy X and Y are required to make 42 kg of new alloy Z in which the ratio of copper and nickel is same?
a) 6 kg and 36 kg b) 10 kg and 32 kg
c) 7 kg and 35 kg d) None of these.

13) There are two alloys made up of copper and aluminum. In the first alloy copper is half of the aluminum and in the second alloy copper is thrice as much as aluminum. How many times the second alloy must be mixed with first alloy to get the new alloy in which copper is twice as that of aluminum?
a) 2 b) 3 c) 4 d) 5

14) There are 90 litres Castrol and 150 litres CRB Mobil oils. The price of Castrol is Rs. 80 per litre and price of CRB is Rs. 75 per litre. Equal amount of Castrol and CRB is taken out and then CRB is poured out in the vessel of Castrol and Castrol is poured out in the vessel in of CRB. Now the rate of both the mixtures is same. What is the amount of Mobil oil taken out from each of the vessel?
a) 45 litres b) 56.25 litres
c) 24.5 litres d) 36 litres

15) There are two containers, the first contain, 1 litre pure water and the second contain 1 litre of pure milk. Now 5 cups of water from the first container is taken out is mixed well in the second container. Then, 5 cups of this mixture is taken out and is mixed in the first container. Let A denote the proportion of milk in the first container and B denote the proportion of water in the second container then:
a) A<B b) A=B
c) A>B d) Cannot be determined.

16) Mithu Bhai sells rasagulla at Rs 15 per kg. A rasagulla is made up of filor and sugar in the ratio of 5:3 .The ratio of price of sugar and flour is 7:3 (per kg).Thus he earns 662/3% profit. What is the cost price of sugar?
a) Rs 10/kg b) Rs 9/kg
c) Rs 18/kg d) Rs 14/kg

PERCENTAGES

1) In the Awadh School Gomti Nagar, there are 500 students. 60% of the students are boys, 40% of whom play hockey and the girls don't play hockey, 75% of girls play badminton. There are only two games to be played. The number of students who don't play any game is:
a) 10% b) 36%
c) 46% d) Can't be determined

2) A fraction in reduced form is such that when it is squared and then its numerator is increased by 25% and the denominator is reduced to 80% it results in 5/8 of the original fraction. The product of the numerator and denominator is:
a) 6 b) 12 c) 10 d) 7

3) In the Chidambaram's family the ratio of expenses to the savings is 5:3. But his expenses is increased by 60% and income increases by only 25% thus there is a deficit of Rs. 3500 in the savings. The increased income of Mr. Chidambaram's family is:
a) Rs. 35,000 b) Rs. 28,000
c) Rs. 25,000 d) Rs. 18,500

4) In the Presidency College two candidates contested a presidential election. 15% of the voters did not vote and 41 votes were invalid. The elected contestant got 314 votes more than the other candidate. If the elected candidate got 45% of the total eligible votes, which is equal to the no. of all the students of the college. The individual votes of each candidate are:
a) 2250 and 1936 b) 3568 and 3254
c) 2442 and 2128 d) 2457 and 2143

5) The annual earning of Mr. Sikkawala is Rs. 4 lakhs per annum for the first year of his job and his expenditure was 50%. Later on for the next 3 years his average income increases by Rs. 40, 000 per annum and the saving was 40%, 30% and 20% of the income. What is the percentage of his total savings over the total expenditure if there is no nay interest is applied on the savings for these four years:
a) 49 37/87% b) 41 73/83%
c) 53% d) None of these

6) In an election only two candidates contested 20% of the voters did not vote and 120 votes were declared as invalid. The winner got 200 votes more than his opponents thus he secured 41% votes of the total voters on the voter list. Percentage votes of the defeated candidate out of the total votes casted is:
a) 47.5% b) 41% c) 38% d) 45%

Directions for questions 7, 8 and 9:
Pujari ji, the chief of a temple's trust, has a beautiful daughter Nirjala and a son in law, Radhey. Pujarin, the wife of Pujari ji, lives her own life by receiving the alms from the devotees and receives 9.09% earning of her husband and the daughter together. The earning of Nirjala in each month is Rs. 8000 less than her husband Radhey. The earning of Pujari ji and Radhey together is Rs. 30, 000 per month. The earning of Radhey and Nirjala together is Rs. 133.33% greater than that of Pujari ji.

7) The average earning of each Pujari ji, Nirjala and Radhey is:
a)Rs. 13333.33 b) Rs. 888.88
c) Rs. 15, 000 d) None of these

8) What is the earning of Pujarin from the alms?
a) Rs. 1800 b) Rs. 2000
c) Rs. 3600 d) can't be determined

9) The earning of Radhey is how much percent greater than that of his wife?
a) 50% b) 80%
c) 4711/13% d) None of these

10) A sales executive gets 20% bonus of the total sales value and 10% commission besides the bonus on the net profit after charging some commission. If the total sales values be Rs. 10lakh per annum and the total profit of the company be Rs. 1.32lakh, then his total earning per annum will be, given that he is not entitled to receive any fixed salary from the company:
a) 2.3lakh b) 3.2lakh
c) 2.32lakh d) 2.12lakh

11) Mr. Scindia after selling 5.5% stock at Rs. 92 realizes Rs. 3220. Then he invested 1/3 of the amount in 4.5% stock at Rs. 92, 2/5 of the amount at Rs. 115 in 5% stock and the remaining in 6% stock at Rs.56. The change in his income is?
a) Rs. 56 loss b)Rs.78 profit
c) Rs. 80 profit d) Rs. 70 loss

12) Each edge of a cube is increased by 20% then the percentage increase in surface area of the cube is:
a) 144% b) 40% c) 44% d) 72.8%

Directions for question number 13 -14:
Pate, paint and who (three persons) were playing a game. At the beginning of the game pate and paint together had 100% more money than woh. Patni and who together had 300% more than pate. By the end of the game pate and paint together had 100% more money than who had and pate had 12.5% less money than paint and who together had. Finally pate gained Rs.800 by the end of the game.

13) Who has suffered the loss?
a) Paint c) Paint and who both
b) who d) Cannot be determined.

14) The percentage change of money of paint is:
a) 40% b) 30%
c) 57.1428% d) 42.857%

15) The raw material and manufacturing cost formed individually 70% and 30% of the total cost and profit percentage is 14.28% of the raw material. If the cost of raw material increase by 20% and the cost of manufacturing is then the new profit percentage is:
a) 57% b) 65.8%
c) 60% d) cannot be determined.

16) A, B, C and D purchased a cine-multiplex for Rs.56 lakhs. The contribution of B,C and D together is 460% that of A, alone. The contribution of C is 40% that of A, B and D together. The amount contributed by D is:
a) 10 lakh b) 12 lakh
c) 16 lakh d) 18 lakh

17) In a village three people contested for the post of village Pradhan. Due to their own interest, all the voters voted and no one vote was invalid. The losing candidate got 30% votes. What could be minimum absolute margin of votes by which the winning candidate led by the nearest rival, if each candidate led by the nearest rivan, if each candidate got an integral per cent of votes?
a) 4 b) 2 c) 1 d) none of these.

18) Everyday a mango seller sells half his stock, 10% of the stock overnight gets spoiled. If 1983 mangoes rotted over 3 nights then how many did he starts with on the first day?
a) 25,000 b) 24,000
c) 30,000 d) 32, 000

19) A man lost half of his initial amount in the gambling after playing 3 rounds. The rule of gambling is that if he wins he will receive Rs.100, but he has to give 50% of the total amount after each round. Luckily he won all the three rounds. The initial amount with which he had started the gambling was:
a) 500/3 b) 700/3 c) 300 d) 600

20) In a factory there are three types of machines M1, M2 and M3 which produces 25%, 35% and 40% of the total products respectively: M1, M2 and M3 produces 2%, 4% and 5% defective products, respectively. What is the percentage of non-defective products?
a) 89% b) 97.1% c) 96.1% d) 86.1%

21) A company has 12 machines of equal efficiency in its factory. The annual manufacturing expenses are Rs.24,000 and the establishment charges are Rs.10,000. The annual output of the company is Rs.48, 000. The annual output and manufacturing costs are directly proportional to the no. of machines while the share holders get the 10% profit, which is directly proportional to the annual output of the company. If 8.33% machines remained close throughout the year. Then the percentage decrease in the amount of Share holders is:
a) 16.66% b) 14.28%
c) 8.33% d) none of these.

22) In every month Ravindra consumes 25 kg rice and 9 kg wheat. The price of rice is 20% of the price of whet and thus he spends total Rs.350 on the rice and wheat per month. If the price of wheat is increased by 20% then what is the percentage reduction of rice consumption for the same expenditure of Rs.350? given that the price of rice and consumption of wheat is constant:
a) 36% b) 40% c) 25% d) 24%

23) My friend Siddhartha Ghosh is working in the life insurance. Corporation of India. He was hired on the basis of commission and he got the bonus only on the first year's commission. He got the policies of Rs.2 lakh having maturity period of 10 year. His commission in the first second, third, fourth and for the rest of the years is 20%, 16%, 10% and 4% respectively. The bonus is 25% for the commission. If the commission if the completion of the maturity of all the policies is mandatory:
a) Rs.174,00 b) Rs.23,600
c) Rs.15,000 d) Rs.15,500

Directions for question number 24 and 25:
DELL Company has two branches: One in Ohio and second in Texas. The total no. of employees in Ohio office grew this year by 25% to 750 but the ratio of male to female employees is same as in the previous year. The no. of employees in the Texas office grew this year by 9.09% to 1200. The ratio of the male to female employees last year in the Texas office was 5:6 and the no. of male employees in the Ohio office was 20% less than that of Texas office.

24) The total no. of female employees this year in both the offices is:
a) 654 b) 546
c) 950 d) can't be determined

25) The total no. of employees in both the offices last year was:
a) 1500 b) 1700
c) 1650 d) can't be determined

26) A shepherd had n goats in the year 2000. In 2001 the no. of goats increased by 40%. In 2002 the no. of goats declined to 70%. In 2003 the no. of goats grew by 30%. In 2004, he sold 10% goats, then he had only 34, 398 goats. The percentage increase of the no. of goats in this duration was:
a) 14.66% b) 16.66%
c) 20% d) 33.33%

27) In the above question in which year the no. of goats was minimum?
a) 2000 b) 2001 c) 2002 d) 2004

Directions for questions number 28, 29 and 30:
In the IGNOU there are total 16, 000 students pursuing MBA, which offers the specialization only in Finance, HR and marketing. IGNOU accepts only science, commerce and engineering students for the two years course of MBA. The number of science. Students are 166.66% of the commerce students. Number of engineering students is equal to the number of science and commerce students together. Each student can specialize in only one of the marketing, HR and finance. 20% of science students opted the finance, which is 16.66% less than the no. of commerce students who opted finance. The total finance students are equal to 18% the total strength of the MBA students. 32% of science student's opted HR. commerce students who opted HR is equal to 25% of total students

specializing in finance and engineering students equal to 6.5% of the total strength of the MBA students opted HR.

28) The number of engineering students who opted marketing is:
a) 7850 b) 7500 c) 8850 d) None of these.

29) The percentage of commerce students who opted HR over the total strength of the MBA students is:
a) 6.6% b) 42.5% c) 4.5% d) 62.5%

30) The most preferable course among the MBA students is:
a) Finance b) HR
c) Marketing d)ITand systems.

31) P % of the students of a class passed the exam. G % of the passed students is girls and b % of the fail students are boys. The percentage of passed boys over the failed girls is :
a) (bg/p * 100)
b) 100(100-g) p/ (100-p) (100-b)
c) (100-g) (100-b)/ (100-p)
d) None

32) In the polo hospital some patients who were suffering from the Hepatitis-B were admitted for the treatment, but 9% of the patients were died within half an hour. After treatment, the percentage of patients cured out of the remaining was only 80%. Out of these patients only 70% are completely cured out and the remaining were partially cured out which were equal to 153 patients. The number of patients who were admitted for the treatment for the same was:
a) 400 b) 678 c) 560 d) 700

33) The total cost of setting up a sugarcane factory is Rs.1 crore, which produces 5000 ton per annum. Sugar is being sold at Rs.18 per kg. Manufacturing cost including raw material is Rs.3.2 per kg, labor and packing charges are Rs.1.8 per kg. Maintenance and utilities expenses are Rs.2 per kg and the 20% taxes are being paid of the gross annual earnings, then the net profit of the production of the factory per annum is:
a) 4.2 crore b) 3.2 crore
c) 5.4 crore d) none of these

34) A student appeared in the mock CAT. The test paper contained 3 sections namely QA, DI, VA. The percentage marks in VA was equal to the average of the percentage marks in all the 3 sections. Coincidentally, if we reverse the digits of the percentage marks of QA we get the percentage marks of DI. The percentage marks in VA scored by the student could be:
a) 48 b) 66 c) 69 d) 81

35) The pressure of a definite mass of a gas is directly proportional to the temperature and inversely proportional to the volume under the given conditions. If temperature is increased by 40% and the volume is decreased by 20% then the new pressure will:
a) Be increased by 75%
b) Reduce to 25%
c) Be increase by 20%
d) Increase by 28%

36) P% of the students of a class passed the exam. g% of the passed students are girls and b% of the fail students are boys. The percentage of passed boys over the failed girls is:
a) (bg/p x 100)
b) (100(100-g).P) / ((100-p)(100-b))
c) ((100-g)(100-b)) / (100-p)
d) None of these

37) A company made a cuboidal box of size 16 x 12 x 5 to sell the ice cream, but later on it was found that the capacity of box was 14.28% less than the required capacity while the height of the box was correct, which is 5 inches. As per the requirement he had to increase the length and breadth of the box in equal amount then the percentage increase in the area of the base of the box is
a) 12.5% b) 6.66%
c) 16.66% d) None of these

38) In Sabarmati Express, there are as many wagons as there is the no. of seats in each wagon and not more than one passenger can have the same berth (seat). If the middlemost compartment carrying 25 passengers is filled with 71.428% of its capacity, then find the maximum no. of passengers in the train that can be accommodated if it has minimum 20% seats always vacant.
e) 500 b) 786 c) 980 d)Can't be determined.

39) The prepaid card of Reliance Infocom gives 19% less talk time than the prepaid card of Tata Indicom, having same price. Again the post-paid card of same price of Tata Indicom gives 10% less talk time than its prepaid card. Similarly the post paid card of same price of Reliance gives 11.11% less talk time than its prepaid card. How much percent less talk time we get from the Reliance post paid card than the post paid card of Tata Indicom?
a) 21.11% b) 20%
c) 30.11% d) None of these

40) In the half yearly exam only 70% of the students were passed. Out of these (passed in half yearly) only 60% student are passed in annual exam. Out of those who did not pass the half yearly exam, 80% passed in annual exam. What percent of the students passed the annual exam?
a) 42% b) 56%
c) 66% d) None of these

41) The marks obtained by the students of a school are given below: maximum marks are 50.

Marks	Percentage of students
< 10	15%
< 20	32%
< 30	40%
< 40	70%
< 50	100%

The ratio of no. of girls who passed the exam is 7 : 6. It is known that a student can pass the exam only when he obtained at least 20 marks in the exam. The total no. of students in the school if the no. of girls who are passed is 480:
a) 1100 b) 1200 c) 1300 d) 1430

Directions for questions 42 to 45:
After defeating Ravana, Ram and his family won a lot of assets in war .It consist of horses, chariots and some land of Ravana's kingdom. The cost of each horse and chariot was Rs 20,000 and Rs 8,000 respectively while the cost of 1 acre land was Rs 5000.All the property was shared among the four persons in such a way that Ram and sita got together the same wealth as Laxman and Urmila got together. Ram got more than Sita and Laxman got more than Urmila.
Ram got 1/3 rd horses and 20% chariots while Laxman received 50% chariots as 50 % of his total wealth .The no. of horses that Ram and Sita together got was 50% more than that of Laxman and Urmila together had. Sita got 8 horses and Urmila got 7 horses but Ram and Sita got equal no of chariots and Urmila got 20 chariots less than that of Laxman. Urmila got twice the land than that of Sita but got 20% less than Laxman.

42) What is the difference between the wealth of Ram and the wealth of Urmila?
a) 1.2 Lakhs b) 1Lakhs

c) 1.4lakhs d) can't be determined.

43) If Laxman wanted to exchange all his chariots with the horses, then who can exchange with his/her horses interms of wealth:
a) Ram b) Sita
c) Urmila d) can't be determined.

44) The wealth of Urmila is how many percent less than that of Laxman:
a) 42% b) 45%
c) 35% d) None of these.

45) The wealth due to land and chariot together is how much greater in percent, than the wealth due to horses:
a) 25% b) 20%
c) 33.33% d) None of these.

46) A big cube is formed by rearranging the 160 colored and 56 non colored similar cubes in such a way that the exposure of the colored cubes to the outside is minimum. The percentage of exposed area that is colored is:
a) 25.9% b) 35%
c) 44.44% d) None Of these.

47) Selections into IIMs (Indian Institute of Management) are quite simple. In our coaching institute some student qualified CAT (The first stage of entrance into IIMs) but coincidentally the no. of boys who qualified CAT is equal to the No. of girls. Besides these boys and girls got call from only IIM Ahmadabad and IIM Bangalore, but each of these from both the IIMs. 60% of the boys failed in the group discussion (the second phase of selection process) and thus equal to the no. of boys (but distinct) appeared for the personnel interview of IIM-A and IIM-B (interview is third and final stage of selection of a candidate) but 20 % of boys appeared for the interview in IIM-A and 60% of boys appeared for the interview in IIM- B failed. If it is possible that a candidate can receive the calls from more than one IIMs but he/she can face the interview of only one IIM. Given that only 24 boys from our coaching institute were selected by the next stage only if he / she qualify the previous stage of the Exam, then find the no. of girls who qualified the CAT (common Admission Test).
a) 100 b) 250 c) 300 d) 600

48) In an office there were initially n employees. The HR manager hired P% employees and after a month q% employee left the office, then there were finally n employees remain in the office, the value of p-q is.
a) pq b) pq/100
c) p/q d) none of these

49) in the Garber jhala, Aminabad a shopkeeper first raises the price by x%. After one such up down cycle, the price of a jewellery decreased by Rs. 21025. After a second up down cycle the jewelry was sold for Rs. 484416. What was the original price of the jewellery?
a) Rs.5,00,000 b) Rs.6,00,625
c) Rs.5,25,625 d) Rs.5,26,000

50) The amount of work in a leather factory is increased by 50%. By what percentage is it necessary to increase the number of workers to complete the new amount of work in previously planned time, if the productivity of the new labor is 25% more.
a) 60% b) 66.66%
c) 40 % d) 33.33%

PROFIT LOSS AND DISCOUNT

1) An automated agency launched a scheme that if a customer purchases two jabaaj Discover bikes, one extra jabaaj Discover will be free and if he purchases 3 jabaaj pulser he will get one extra jabaaj pulser free. If the cost price of 3 jabaaj Discover and 4 jabaaj Pulser be Rs 67500 and Rs 232500 respectively. If a customer buys 2 jabaaj Discover and 3 bikes of jabaaj Pulser as per scheme he availed 1 bike free of each category. Then at what price these bikes should be sold so that the agency can get overall profit of 17.5% :
a) 235250 b) 352500
c) 368000 d) 268000

2) Rahul went to purchase a nokia mobile handset, the shopkeeper told him to pay 20% tax if he asked the bill. Rahul manages to get the discount of 5 % on the actual sale price of the mobile and he paid the shopkeeper Rs 3325 without tax. Besides he manages to avoid to pay 20% tax on the already discounted price, what is the amount of discount that he has gotten?
a) 750 b) 375 c) 875 d) 525

3) When bicycle manufacturer reduced its selling price by 50 %, the number of bicycles sold radically increased by 600 %. Initially the manufacturer was getting only 140% profit. What is the percentage increase of his profit?
a) 10% b) 14%
c) 0% d) can't be determined.

4) A trader marks his goods such that he can make 32 % profit after giving 12 % discount. However a customer availed 20 % discount instead of 12 %.What is the new profit percentage of trader?
a) 20% b) 44% c) 30% d) 28.8%

5) A retailer bought 3850 Linc pens and 1848 cello pens at the same price. He sells Linc pens in such a way that he can buy 650 Linc pens with the sale price of 481 Linc Pens. Again he can buy 408 cello pens with the sale price of 629 pens. What is the overall percentage of profit for the retailer?
a) 4.8% b) 9.6%
c)13% d) None of these

6) The ratio of selling price of 3 articles A, B and C is 8: 9: 5 and the ratio of percentage profit is 8: 7: 14 respectively. If the profit percentage of A is 14.28% and the cost price of B is Rs 400, what is the overall percentage gain?
a) 14.28% b) 14.87%
c) 16.66% d) None of these

7) Anna sold his car to Boney at a profit of 20% and Boney sold it to Chakori at a profit of 10%.Chakori sold it to mechanic at a loss of 9.09%.Mechanic spent 10 % of his purchasing price and then sold it at a profit of 8.33 % to Anna once again. What is the loss of Anna?
a) 23% b) 29% c) 50% d) 40%

8) In an office the number of employees reduces in the ratio of 3 : 2 and the wages increases in the ratio of 20 : 27.What is the profit percentage of employees over the previous wages ?
a) 10% b) 9.09%
c) 11.11% d) None of these

9) I asked the shopkeeper the price of a wristwatch; I found that I had just the required sum of money. When the shopkeeper allowed me a discount of 25%, I could buy another watch worth Rs 940 for my younger sister. What is the price I have paid for my own watch?
a) 2700 b) 1800
c) 2820 d) 3760

10) A and B are two partners and they have invested Rs 54000 and 90000 in a business. After one year A received 1800 as his share of profit out of total profit of 3600 including his certain commission on total profit since he is a working partner and the rest of the profit is received by

B. What is the commission of A as a percentage of the total profit?
a) 20% b) 10% c) 5% d) 25%

11) A trader sells goods to a customer at a profit of K% over the cost price, besides if he cheats his customers by giving 880g only instead of 1 kg. Thus his overall profit percentage is 25%.Fing the value of K.
a) 8.33% b) 8.25%
c) 10% d) 12.5%

12) A trader sells two brands of petrol , one is Extra premium (EP) and other one is Speed (SP).He mixes 12 litres of EP with 3 litres of speed and by selling this mixture at the price of EP he gets the profit of 9.0.9%.If the price of Extra premium be Rs.48 per litre ,then the price of speed SP is ?
a) Rs 38 per litre b) Rs 42 per litre
c) Rs 28 per litre d) none of these

13) A,B and C invest in the ratio of 3:4:5 .The percentage of return on their investments are in the ratio of 6:5:4. Find the total earnings, if B earns Rs 250 more than A:
a)Rs6000 b)7250 c)5000 d)none of these

14) Ajay bought a motor cycle for Rs 50,000. 2 years later he sold it to Bijoy at 10 % less of the cost price .Bijoy spend 5 % of the purchasing price on maintenance .Later Bijoy displayed his motorcycle Rs 50000.Chetan wanted to purchase it at 15 % discount but Bijoy gave him two successive discounts of 10% and 5% instead of 15 % in one time. What is the actual discount availed by chetan?
a)15% b)15.5% c)14.5% d)none of these

15) Kamal bought a house in sushant city, whose sale price was Rs 8 lakh. He availed 20% discount as a early bird offer and then 10 % discount due to cash payment .After that he spent 10 % of the cost price in interior decoration and lawn of the house .At what price should he sell the house to earn a profit of 25 %?
a) Rs 9 lakh b) Rs 7.99 lakh
c) Rs 7.92 lakh d) none of these

16) I wanted to purchase 10 chairs for the class room whose cost was Rs 200 each. The trader offered me a discount If I were to purchase a set of 12 chairs .So I calculate that if I assume the normal price of 10 chairs then we can purpose 2 extra chairs which cost only Rs 80 each of two chairs at the cost price of 12 chairs after discount ,what is the percentage discount ?
a)6 % b)8% c)12% d)10%

17) The cost of servicing of a Maruti car at Maruti care Pvt.Ltd is Rs 400.Manager of service centre told me that for the second service within a year a customer can avail a 10 % discount and further for third and fourth servicing he can avail 10 % discount of the previous amount paid ,within a year .Further if a customer can get more than 4 services within a year he has to pay just 60% of the servicing charges on these services. A customer availed 5 services from the same servicing station .what is the total percentage discount fetched by the customer?
a) 19.42% b)18.5% c)17.6% d)26%

18) The cost price of an article is C and selling price of the same article is S,where Z is the profit or loss percentage ,if the cost price and selling price both are increased by same amount then which of the following is true :
a) Z increases b) Z decreases
c) remains constant d) none

19) Cost price of 12 oranges is equal to the selling price of 9 oranges and the discount of 10 oranges is equal to the profit on 5 oranges. What is the percentage point difference between the profit percentage and discount percentage?
a) 20 b) 22.2 c) 16.66 d)15

20) A car mechanic purchased 4 old cars for Rs 1 lakh .He spent total 2 lakh in the maintenance and repairing of these four cars .what is the average sale price of the rest three cars to get 50 % total profit if he has already sold one of the four cars at Rs 1.2 lakh?
a) Rs 1.5 lakh b) Rs 1.1 lakh
c) Rs 1.2 lakh d) Rs 1.65 lakh

21) The cost of setting up a magazine is Rs 2800.The cost of paper and ink etc is Rs80 per 100 copies and printing cost Rs 160 per 100 copies. In the last month 2000 copies were printed but only 1500 copies could be sold at Rs 5 each. Total 25 % profit on the sale price was realized. There is one more resource of income from the magazine which is advertising. What sum of money obtained room the advertising in magazine?
a) 1750 b) 2350 c) 1150 d) 1975

22) DSNL charges a fixed rental of Rs 350 per month .It allows 200 calls free per month. Each call is charged at Rs 1.4 when the no of call exceeds 200 per month and it charges Rs 1.6 when the number of calls exceeds 400 per month and so on…..A customer made 150 calls in February and 250 calls in march. By how much % each call is cheaper in march than each call in February?
(a) 28% (b) 25%
(c) 18.5% (d) none of these

23) In the bargain bazaar, everyone purchases with a fair bargaining, so the traders mark up the prices too much. A trader marked up an article Rs m expected huge profit if it is sold on the marked price. But a customer purchased it at m/2 with his fine bargaining skills so the expected profit of the trader diminished by 66.66%.What is the percentage discount fetched by the customer through bargaining?
a) 33.33% b) 50%
c) 66.66% d) none of these.

24) Tika Chand has a weighing balance in which there is a technical fault. The right pan of his balance measures always 200 grams more than its left pan. Tika Chand a s usual misutilized this balance in his business. While purchasing the articles he puts goods in the left pan and weight in the right pan while selling he reversed the order that is goods in the right pan weight in the left pan. He uses only 2 kg weight for the measurement and to measure 2n kg weight he measures n times by 2-2 kg but he sells goods at costprice.What is his profit percentage?
(a) 20% (b) 22 2/9%
(c) 18 2/ 11% (d) none of these.

25) Akram Miya has two types of grapes. One is the fresh grapes containing 80% water and dry grapes containing 25% water. He sells 20kg dry grapes, by adding water to the dry grapes, at cost price. What is the total profit percentage when after adding water the weight of 20 kg dry grapes increased in the proportion of water in fresh grapes?
a) 275% b) 200% c) 80% d) 125%

26) Pankaj and Sushil invested some amount of money in the ratio 3:5 for the same period in a business. They decided that at the end of year 20% profit was to be given to AIDS Control Society of India as a donation. Out of the remaining, 75% was to be reinvested and the rest of the profit was to be divided as interest on their capitals. If the difference in their shares is Rs. 1200. Find the total profit?
a) Rs. 18000 b) Rs. 24000

c) Rs. 20000 d) None of these

27) Jagran group launched a new magazine in January 2004. The group printed 10000 copies initially for Rs. 50000. It distributed 20% of its stock freely as specimen copy and 25% of the rest magazines are sold at 25% discount and rest at 16.66% discount whose printing price was Rs. 12 per copy. What is the overall gain or loss in the first month's issue of magazine, if the magazine could not realize the income from advertisements or other resources?
a) 56% profit b) 27% loss
c) 16.66% profit d) 38% profit

28) Teenagers shoe company sells the shoes whose prices i.e., cost prices and selling prices are the multiples of either 13, 14, 15, 16, 17, 18 or 19, starting from Rs.399 to Rs. 699 (i.e., 399 ≤ CP / SP ≤ 699). What can be the maximum profit of the company?
a) Rs. 292 b) Rs. 398
c) Rs. 298 d) Rs. 300

29) Jhun Jhunwala makes 1000 toys and incurs a cost of Rs. 1.2 for each toy. He marks-up the price in such a way that if he sells only 70% of the manufactured toys he will realize 16.66% overall profit. He sells only 750 articles at the marked price since rests of the toys are found to be defective so can't be sold. What is the net profit or loss of Jhun Jhunwala?
a) 14.44% loss b) 25% profit
c) 33.33% profit d) none of these

30) Anupam sells a painting to Bhargava at 4/5th the rate of profit at which Bhargava sells it to Chaudhary. Further Chaudhary sells it to Dara Singh at half the rate of profit at which Anupam sold it to Bhargava. If Chaudhary earns a profit of 10% by selling it to Dara Singh for Rs. 2805. What is the cost price of painting for Bhargava?
a) 1896 b) 2040 c) 1680 d) 2000

31) A dishonest retailer cheats his wholesaler and customer both. He purchases 19% more from the wholesaler and sells 15% less while selling to its customer. What is profit percentage by selling the goods at cost price?
a) 36.78% b) 34%
c) 40% d) 36.85%

32) Rotomac produces very fine quality of writing pens. Company knows that on an average 10% of the produced pens are always defective so are rejected before packing. Companies always defective so are rejected before packing. Company promises to deliver 7200 pens to its wholesaler at Rs. 10 each. It estimates the overall profit on all the manufactured pens to be 25%. What is the manufacturing cost of each pen?
a) Rs. 6 b) Rs. 7.2
c) Rs. 5.6 d) Rs. 8

33) Pratibha printers prepare diaries expecting to earn a profit of 40% by selling on the market price. But during transportation 8% diaries were got spoiled due to at random rain and 32% could be sold only at 75% of the cost price. Thus the remaining 60% diaries could be sold at the expected price. What is the net profit or loss in the whole consignment?
a) 6% b) 10%
c) 8% d) can't be determined

34) Radhey Lal markup the prices of sweets by 40% and he sold only 40% of those at this price. He sells half of the rest at 14 2/7% discounts and rest at 25% discount. What is the net profit of Radhey Lal?
a) 26.5% b) 23.5%
c) 30% d) 28.6%

35) The price of an article reduces to 576 after two successive discounts. The markup is 80% above the cost price of Rs. 500. What is the new profit percentage if instead of two successive discounts the markup price was further increased successively two times by the same percentage?
a) 259.2% b) 59.2%
c) 159.2% d) can't be determined

36) A trader marks-up his goods by 80% and gives discount of 25%. Besides it he weighs 10% less amount while selling his goods. What is the net profit of trader?
a) 50% b) 35% c) 45% d) 55%

37) A dishonest trader marks up his goods by 80% and gives discount of 25%. Besides he gets 20% more amount per kg from wholesaler and sells 10% less per kg to customer. What is the overall profit percentage?
a) 80% b) 60%
c) 70% d) None of these

38) A dishonest dealer purchases goods at 20% discount of the cost price of Rs x and also cheats his wholesaler by getting 20% extra through false weighing, per kf. Then he marks up his goods by 80% of x, but he gives a discount of 25% besides he cheats his customer by weighing 10% less than the required. What is his overall profit percentage?
a)125% b) 100%
c)98.66% d) 120%

39) Anjuli, Bhoomika and Chawla went to market to purchase the rings whose costs were same. But each ring was available with two successive discounts. Anjuli availed two successive discounts of 5% and 20%. Bhoomika availed two successive discounts 10% and 15% while Chawla availed two successive discounts of 12% and 13%. Who gets the maximum possible discount?
a) Anjuli b) Bhoomika
c) Chawla d) All of these

40) An egg seller sells his eggs only in the packs of 3 eggs, 6 eggs, 9 eggs, 12 eggs, etc., but the rate is not necessarily uniform. One day Raju (which is not the same egg seller) purchased at the rate of 3 eggs for a rupee and the next hour he purchased equal number of eggs at the rate of 6 eggs for a rupee. Next day he sold all the eggs at the rate of 9 eggs for Rs. 2. What is his percentage profit or loss?
a) 10% loss b) 11.11% loss
c) 3% loss d) 2.5% profit

41) Virendra and Gurindra purchased one camera each at the same prices. Later on Amrendra purchased both cameras at equals prices from Virendra and Gurindra. But the profit percentage of Virendra was P while the same of Gurindra was Q since Gurindra calculated his profit on the selling price. Thus Q = 41 2/3% of P. If Amrendra sells one of the camera to Dholakiya at P% profit then what is the cost price for Dholakiya, while Amrendra purchased each of the camera at Rs. 240?
a) Rs. 676 b) Rs. 500
c) Rs. 576 d) None of these

42) A merchant earns 25% profit in general. Once his 25% consignment was abducted forever by some goondas. Trying to compensate his loss he sold the rest amount by increasing his selling price by 20%. What is the new percentage profit of loss?
a) 10% loss b) 12.5% loss
c) 12.5% profit d) 11.11% loss

43) A milkman purchases 10 liters of milk at Rs. 7 per litre and forms a mixture by adding freely available water which constitutes 16.66% of the

mixture. Later on he replaced the mixture by some freely available water and thus the ratio of milk is to water is 2:1. He then sold the new mixture at cost price of milk and replaced amount of mixture at twice the cost of milk then what is the profit percentage?
a) 68% b) 34%
c) 40% d) None of these

44) Profit on selling 10 candles equals selling price of 3 bulbs. While loss on selling 10 bulbs equals selling price of 4 candles. Also profit percentage equals to the loss percentage and cost of a candle is half of the cost of a bulb. What is the ratio of selling price of candle to the selling price of a bulb?
a) 5:4 b) 3:2 c) 4:5 d) 3:4

45) Cost price of two motorcycles is same. One is sold at a profit of 15% and the other for Rs. 4800 more than the first. If the net profit is 20%. Find the cost price of each motorcycle:
a) Rs. 48000 b) Rs. 52000
c) Rs. 36000 d) Rs. 42500

CI/SI/INSTALLMENTS

1) The compound interest on a certain sum for 2years is Rs. 756 and SI (simple interest) is Rs. 720. If the sum is invested such that the SI is Rs. 900 and the number of years is equal to the rate per cent per annum, find the rate per cent:
a) 4 b) 5 c) 6 d) 1.0

2) Jalela and Dalela have to clear their respective loans by paying 3 equal annual installments of Rs. 30000 each. Jalela pays @ 10% per annum of simple interest while Dalela pays 10% per annum compound interest. What is the difference in their payments?
a) Rs. 300 b) Rs. 425
c) Rs. 245 d) Rs. 333.33

3) Akbar lends twice the interest received from Birbal to Chanakya at the half of the interest at which he lent to Birbal. If Akbar lent Rs. P @ r% per annum for 1 year to Birbal then the interest received by Akbar from Chanakya is:
a) $Pr^2/100$ b) $(Pr/10)^2$
c) $P(r/10)^2$ d) $P(r/100)^2$

4) Equal amounts of each Rs. 43892 are lent to two persons for 3 years. One @ 30% SI and second @ 30% CI is greater than the simple interest received in this 3 years duration?
a) 23% b) 33%
c) 33.33% d) None of these.

5) Rs. 3500 was lent partly @ 4% and partly @ 4% and partly @ 6% SI. The total interest received after 3 years is 498. What is the amount lent @ 4% SI?
a) Rs. 1300 b) Rs. 1800
c) Rs. 200 d) Rs. 2200

6) The population of vultures in a particular locality is decreases by a certain rate of interest (compounded annually). If the current population of vultures be 29160 and the ratio of decrease in population for second year and 3rd year be 10:9. What was the population of vultures 3 years ago?
a) 30000 b) 35000
c) 40000 d) 50000

7) The ratio of the amount for two years under CI annually and for one year under SI is 6:5. When the rate of interest is same, what was the population of vultures 3 years ago?
a) 12.5% b) 18%
c) 20% d) 16.66%

8) A bicycle can be purchased on cash payment of Rs.1500. The same bicycle can also be purchased at the down payment (initial, at the time for purchasing) of Rs.350 and rest can be paid in 3 equal installments of Rs.400 for next 3 months. The rate of SI per annum charged by the dealer is:
a) 23 9/17% b) 17 9/23%
c) 13 9/17% d) None of these

9) Data Ram lends equal sum of money at the same rate of interest to A and B. the money lends to A becomes twice of the original amount in just four years at simple interest. While Data Ram lends to B for the first two years at compound interest and for the rest two years at simple interest. While Data Ram lends to B for the first two years at compound interest and for the rest two years at simple interest. If the difference between the amount of A and B after 4 years is Rs. 2750. What is the amount of money that Data Ram lends to each one?
a) Rs. 40000 b) Rs. 6000
c) Rs.8000 d) Rs.80000

10) Akram Ali left an amount of Rs. 34000 to be divided between his two sons aged 10 years and 12 years such that both of them would get an equal amount when each attain 18 years age. What is the share of elder brother if the whole amount was invested at 10% simple interest:
a) 12000 b) 18000
c) 120000 d) 180000

11) Satyan took loa from IDIDI Bank for his 2 years course of MBA at IMD. He took the loan of Rs.6 lakh such that he would be charged at 8% per annum at CI during his course and at 10% CI after the completion of his studies and remaining after 2 years. What is the total amount returned by Saranya?
a) Rs. 7.73323 lakh b) Rs. 7.58 lakh
c) Rs. 7.336 lakh d) none of these.

12) We had 1000 goats at the beginning of year 2001 and the no. of goat each year increases by 10% by giving birth (compounded annually). At the end of each year we double the no. of goats by purchasing the same no. of goats as there is the no. of goats with us at the time. What is the no. of goats at the beginning of 2004?
a) 10600 b) 10648 c) 8848 d) 8226

13) Rs. 100000 was invested by Mohan in a fixed deposit @ 10%per annum at CI. However every year he has to pay 20% tax on the compound interest. How much money does Mohan has after 3 years?
a) 128414 b) 108000
c) 126079.2 d) none of these

14) A property dealer bought a rectangular plot (of land) in Noida 5 years ago at the rate of Rs. 1000 per m^2. The cost of plot is increases by 5% in every 6 years and the worth of a rupee falls down at a rate of 2% in every 5 years. What is the approximate value of the land per $meter^2$ 25 years hence?
a) Rs. 995 b) Rs. 1134
c) Rs. 1500 d) Rs. 1495

15) A and B run a joint Venture in which the profit earned A and B are in the ratio 28:15. A invest his share at the start of the year and B joins in after 9 months of the same year. What is the ratio of their initial investment respectively?
a) 7:15 b) 8:13
c) 5:17 d) 15 : 7

16) In the previous problem if A gets the profit of Rs. 4200 the amount invested by B is:
a) 2250 b) 2600
c) 1350 d) can't be determine

17) Arvind and govind each invested Rs. 15000 for three years at same rate of interest but

Arvind's investments is compounded annually but govind's investment is charged on simple interest. What amount did Arvind receive more than govind?
a) Rs. 680 b) Rs. 3450
c) Data insufficient d) none of these

18) Sham Lal take a loan of Rs 10500 at 10% .p.a compounded annually which is to be repaid in two equal annual installments. One at the end of one year and the other at the end of the second year. The value of each installments is:
a) 5987 b) 6050
c) 6352.5 d) 5678.5

19) Hari Lal and Hari Prasad have equal amounts. Hari Lal invested his entire amount at 10 % compounded annually for 2 years and Hari Prasad invested ¼ at 10% compound Interest (annually) and rest at r% per annum Simple Interest for the same 2 years period. The amount received by both at the end of 2 years period was the same. What is the value of r?
a) 14% b) 12.5% c) 10.5% d) 11%

20) The annual sales of company in the year 2000 was Rs. 1000 and in the year 2005 was 2490.Find the compounded annual growth rate (CAGR)of sales in the given period of the same company;
a) 14.289% b) 10% c) 15% d) 20%

21) HDFC lends 1 million to HUDCO AT 10 % simple interest p.a for 2 years and HUDCO lends the same amount to SAHARA STATE HOUSING Corporation at 10% p.a. of compound interest for 2 years. What is the earning of HUDCO in this way?
a) 133100 b) 33100
c) 131000 d) no profit or loss.

22) ICICI lent Rs 1 Lakh to captain Ram Singh @ 6% per annum of simple interest for 10 years period. Meanwhile ICICI offered discount in rate of interest for armed forces. Thus the rate of interest of ICICI decreased to 4 %. In this way Ram Singh had to pay a total amount of 1.48 Lakhs.
After how many years ram Singh got the discount in rate of interest?
a) 3 years b) 4 years
c) 6 years d) 5 years

23) Sanjay purchased a hotel worth Rs.10 Lakh and barkha purchased a car worth Rs 16 Lakh. The value of the hotel increases every year by 20% of the previous value and the value of the car depreciates by 25%.What is the difference between the price of the car and the hotel?
a) Rs 925000 b) Rs 1053000
c) remains constant d) Can't be determined.

TIME AND WORK

Directions for question number1 to 5: in a nult-bolt factory 180 workers there are working for 6 hours a day. Out of 180 workers there are some men, some women and rest boys. All the workers can produce either nut or bolt or both of them. A man can produce 60 nuts and 80 bolts in each hour and a woman can produce 30 nuts and 60 bolts per hour. A man is thrice as efficient as a boy and 3/2 times as efficient as a woman. Given that all men, all women and all boys produce equal number of articles of one kind (i.e., either nut or bolt) per hour.

1) Working 6 hours a day, how many nuts they can produce with 52500 bolts in each day?
a) 17500 b) 26250
c) 50850 d) can't be determined

2) In how many hours can 15 men, 12 women and 8 boys can produce 12000 nuts and 8200 bolts?
a) 3 b) 5 c) 6 d) None of these

3) If 30 women and 50 boys can produce 5400 bolts in one hour then to produce equal number of nuts in one hour how many men are required?
a) 30 b) 40 c) 50 d) None of these

4) If the efficiency of each boy is doubled then what is the increase in production per hour?
a) 100% b) 50%
c) 33.33% d) None of these

5) If the manager of factory wanted equal number of men, women and boys in his factory but the efficiency of a man , women and a boy remains constant, then the change in production is :
a) Increased by 10% b) Decreased by 10%
c) Increased by 8.33% d) None of these

6) Ram lal is a renowned packager of fruits in Varanasi .He packs 70 mangoes or 56 guavas everyday working 7 hours per day. His wife also helps him. She packs 30 mangoes or 24 guavas everyday working 6 hours per day. Ramlal has to pack 3300 mangoes and 2400 guavas with the help of this wife. They work alternatively, each day 10 hours. His wife started packaging on the first day and works on every alternate day. Similarly, Ram lal started his work on second day. In how many days the work will be finished?
a) 85 b) 85(2/5) c) 84 d) none

Directions for question number 7 to11:
A company produces three products. The products are processed on 3 different machines. The time required to manufacture one unit of each the three products and the daily capacity of three machines are given in the table below:

Mac hine	Time per unit (in min.) Pro duct 1	Pro duct 2	Pro duct 3	Machine capacity (min./ day)
M_1	2	2	3	450
M_2	2	5	-	410
M_3	3	-	4	480

7) How many units of product 1 can be produced in one day?
a) 160 b) 205 c) 225 d) 64

8) 8. If maximum 20 units of P_1 and 30 units of P_2 have to be produced, then what are the maximum units of P_3 that can be produced in a day?
a) 116 b) 105 c) 205 d) 220

Directions for questions 9, 10 and 11: Read the following additional data for question number 9, 10 and 11. The profit per unit for product 1, 2 and 3 is Rs. 3, Rs. 4 and Rs.5.

9) What combination of P_1, P_2 and P_3 will yield maximum profit, under the manufacturing constraints?
$P_1 – 25, P_2 – 50, P_3 – 100$
$P_1 – 20, P_2 – 60, P_3 – 80$
$P_1 – 100, P_2 – 0, P_3 – 50$
$P_1 – 0, P_2 – 80, P_3 – 100$
a) 4 b) 2 c) 3 d) 1

10) Which of the machine if it breaks down will affects probability the least?
a) Machine 1 b) Machine 2
c) Machine 3 d) Machine 1 or 3

11) If no production of product 2 is scheduled today and it is decided to only produce one type of product today, then what are the maximum profits that can be had today?
a) Rs. 480 b) Rs. 750
c) Rs. 600 d) None of these

Directions for question number 12-15: Ready Tailoring Services is very well known in its quality and time bound services. The company (Ready Tailoring Services) received a large order for stitching military uniforms. It has two different orders to prepare the shirts one for Officers and second for Jawans (non-officers). It has three cutters who will cut the fabric. Six tailors who will do the stitching and 3 assistants to stitch the buttons and iron the shirts. Each of these 12 persons will work for exactly 8 hours a day. Each of the officer's uniform requires 20 minutes for cutting the fabric, 1 hour for stitching and 20 minutes for stitching buttons and ironing the shirts. Whereas Jawan's uniform requires 15 minutes for cutting the fabric and 60 minutes for stitching and 10 minutes for buttons and ironing.

12) If the company has to supply 40 officer's uniforms only and no other on a particular day, how many man-hours are utilized on that day?
a) 33 1/3 hours b) 66 2/3 hours
c) 40 hours d) 60 hours

13) If the number of tailors will be increased by 50% then maximum how many uniforms for officers can be completed in a day?
a) 48 b) 50 c) 60 d) 72

14) If the Company can increase maximum three employees for any category then for which category it should hire to get maximum increase in production capacity, assuming that it needs to stitch only officer's uniform?
a) Cutter b) tailor
c) Assistant d) cannot be determined

15) If the company has to produce the shirts for only one category then of which category it can produce maximum no of uniforms ?
a) Officers b) jawans
c) Either a or b d) none

TIME, SPEED AND DISTANCE

Directions for question number 1-4:
Aishwarya is going to cover a distance of 360 km from Ambala to Khandala. The first one-third of the distance she covers on a cycle. The second one-third she covers by an auto-rickshaw and the remaining distance she travels by car. The average speed of the journey by a car is 5 times the average speed by cycle and 20 km/h more than the average speed by auto-rickshaw, but she took 1 hour more by auto-rickshaw than by car.

1) What is the average speed of the whole journey?
a) 15 km/h b) 24 km/h
c) 20 km/h d) None of these

2) What is the time taken in the whole journey?
a) 10 h b) 12 h
c) 15 h d) None of these

3) What is the distance covered by her in last five hours of her journey?
a) 250 km b) 240 km
c) 200 km d) can't be determined

4) Instead of travelling the first one-third by cycle if she travels by same auto-rickshaw with the same average speed, then what is the percentage decrease/increase in time taken during the entire journey?
a) 46.66% b) 33.33%
c) 50% d) 25%

5) Bipasha and Mallika leave towns Kolkata and Ambala at 6 am and travel towards Ambala and Kolkata respectively. Speed of Bipasha is 60 km/h and speed of Mallika is 120 km/h. Rani leaves Kolkata for Ambala sometime later and travels at a speed of 90 km/h. If the distance between Kolkata and Ambala is 1080 km and all three meet at the same point on the way, at same time, then at what time did Rani leave Kolkata?
a) 7 am b) 8 am c) 7:30 am d)10 am

6) A passenger sitting in a train of length '*l*' m, which is running with speed of 60 km/h passing through two bridges, notices that he crosses the first bridge and the second bridge in time intervals which are in the ratio 7:4 respectively. If the length of first bridge be 280m, then the length of second bridge is:
a) 490 m b) 220 m
c) 160 m d) Can't be determined

7) Pathik and Rahi started from two places Andheri and Bhavnagar towards Bhavnagar and Andheri respectively, at 8:20 am. The speeds of Pathik and Rahi are in the ratio of 4:5. They meet at Chandni Chowk, somewhere between Andheri and Bhavnagar, spent some-time together enjoyed coffee and burger and then both started towards their destination at 9:27am. If Pathik reaches Bhavnagar at 10:32 am, how much time did they spent together?
a) 8 min b) 2 min
c) 15 min d) can't be determined

8) A train with 120 wagons crosses Arjun who is going in the same direction, in 36 seconds. It travels for half an hour from the time it starts overtaking the Arjun(he is riding on the horse) before it starts overtaking Sri Krishna (who is also riding on his horse) coming from the opposite direction in 24 seconds. In how much time (in seconds) after the train has crossed the Srikrishna do the Arjun meets to Srikrishna?
a) 3560 sec b) 3600 sec
c) 3576 sec d) Can't be determined

9) Kareena and Shahid start from Kurla and Worli towards Worli and Kurla respectively, at the same time. After they meet at Shantakruz on the way from Kurla to Worli, Kareena reduces her speed by 33.33% and returns back to Kurla and Shahid increases his speed by 33.33% and returns back to Worli. If Kareena takes 2 hours for the entire journey, what is the time taken by Shahid for the entire journey?
a) 96 min b) 84 min
c) 168 min d) can't be determined

10) Due to the technical snag in the signal system two trains start approaching each other on the same rail track from two different stations, 240 km away from each other. When the train starts a bird also starts moving to and fro between the two trains at 60 km/h touching each time each train. The bird is initially sitting on the top of the engine of one of the trains and it moves so till these trains collide. If these trains collide one and a half hour after the start, then how many kilometers bird travels till the time of collision of trains?
a) 96 min b) 84 min
c) 168 min d) can't be determined

11) Einstein walks on an escalator at a rate of 5 steps per second and reaches the other end in 10 seconds. While coming back, walking at the same speed he reaches the starting point in 40 seconds. What is the number of steps on the escalator?
a) 40 b) 60 c) 120 d) 80

12) A girl while walking diametrically across a semicircular playground takes 3 minutes less than if she had kept walking round the circular path from A to B. if she walks 60 meters a minute. What is the diameter of the play ground:
a) 60m b) 84m c) 48m d) 315m

13) Two trains start simultaneously from two stations Howrah and Bandra, respectively towards each other on the same track. The

distance between the two stations is 560 km and the speed of trains are 30 and 40 km/h. simultaneously with the trains, a sparrow sitting on the top of one of the train starts towards the other and reverses its direction on reaching the other train and so on. If the speed of sparrow is 80 km/h then the distance that the sparrow flies before being crushed between the train is:

a) 70 km b) 560 km
c) 640 km d) 650 km

14) A surveillance plane is moving between two fixed places Pukhwara and Kargil at 120 km/h. The distance between two places is 600 km. after 18 hour what will be the distance between the Kargil and its position if it starts moving from Pukhwara?

a) 360 km b) 300 km
c) 240 km d) none of these.

15) The speed of a car during the second hour of its journey is thrice that in the first hour. Also its third hours speed is the average speed of the first two hours. Had the car travelled at the second hours speed during all the first three hours, then it would have travelled 150 km more. Find the percentage reduction in time in the second case for the first three hours:

a) 33 1/3% b) 40% c) 25% d) 50%

16) There are three runners Tom, Dick and Harry with their respective speeds of 10 km/h, 20 km/h, and 30 km/h. they are initially at P and they have to run between the two points P and Q which are 10 km apart from each other. They start their race at 6 am and end at 6 pm on the same day. If they run between P and Q without any break, then how many times they will be together either at P and Q during the given time period?

a) 5 b) 7 c) 4 d) 12

Directions for question number 17 and 18:

Arjun and Srikrishna go by chariot from Mathura to Kurkshetra which is on the way to Hastinapur. Abhimanyu goes from Hastinapur to kurukshetra. The distance between Mathura to Hastinapur is 700 km and the distance between Hastinapur and kurukshetra is 300 km. speed of Arjun and srikrishna's chariot is 25 km/h and speed of Abhimanyu is 10 km/h. all the three persons start their journey at 10 am. After travelling some miles Srikrishna sees Duryodhan going (by riding on his horse) at 20 km/h to kurukshetra. Arjun and Srikrishna go ahead meet Abhimanyu and pick him up. Then they return immediately to kurukshetra and thus all the four reach at the same time.

17) What is the total distance travelled by Arjun?

a) 400 b) 500
c) 600 d) cannot be determined.

18) What is the total time taken to reach Kurukshetra?

a) 10 h b) 15 h c) 18 h d) 24 h

19) Priyanga, Akshay and Salman started out on a journey to watch the newly released movie "Mujhse shaadi karogi", which was being shown at wave cine-multiplex. The multiplex was 120 km away from their starting point of journey. Priyanga and Salman went by car at the speed of 50 km/h, while Akshay travelled by Tonga at 10 km/h. after a certain distance Salman got off and travelled the rest distance by another Tonga at 10 km/h, while Priyanga went back for Akshay and reached the destination at the same time that Salman arrived. The number of hours required for the trip was:

a) 4h b) 5h
c) 4.8h d) cannot be determined.

Directions for question number 20:

Ajai and Kajol start towards each other at the same time from Barabanki and Fatehpur for their destinations Fatehpur and Barabanki respectively which are 300 km apart. They meet each other 120 km away from Barabanki.

20) Shahrukh starts from Barabanki to Fatehpur, 1 hour after Ajai starts. Shahrukh meets Kajol 1.5 hours after Shahrukh starts. If the speed of Shahrukh is at least 20km/h faster than the speed of kajol. Which of the following statements is true?

a) The minimum possible speed of Ajai is 45km/hr
b) The maximum possible speed of Ajai is 45km/hr
c) the minimum possible speed of kajol is 60 km/hr.
d) the maximum possible speed of kajol is 60 km/hr.

21) What is the minimum speed of Shahrukh to overtake Ajai, before he meets Kajol? (Use the data from previous question, if necessary)

a) 30 b) 40 c) 60 d) None of these

Directions for question number 22-24:

Raghupati goes at a speed of 60 km/h. Raghav goes at a speed of 36 km/h. Raja Ram can go from Azamgarh to Barelley in 2 hours. The distance between Azamgarh to Barelley is equal to the distance between Azamgarh to Chandoli. Raghav takes the same time travelling from Barelley to Azamgarh as from Barelley to Chandoli at his regular speed which is twice the speed of Raja Ram.

22) What is the distance between Azamgarh and Chandoli?

a) 60 km b) 27 km
c) 36 km d) 18 km

23) How much time will Raghupati take to complete a round trip of the three cities?

a) 1 h 12 min b) 1 h 48 min
c) 1 h 30 min d) 1 h 36 min

24) If Raghupati and Raja Ram travel towards each other from Barelley and Chandoli respectively, how far from Barelley will they meet each other?

a) 60/13 b) 27 9/13 km
c) 37 9/13 d) 360/9

Directions for question number 25-26:

Mohan, Namit and Pranav travel from Shantipur to Hulchulpur. They have a two seeter bike which can be driven by only Mohan. It is known that due to very stringent traffic rules only two persons can ride at a time. Hulchulpur is 180 km away from Shantipur. All of them can walk at 6 km/hr, but reach to Hulchulpur simultaneously also they started their journey simultaneously.

25) If the speed of the bike is 36 km/hr, then what is the total distance that the bike travels?

a) 400 km b) 380 km
c) 200 km d) 320 km

26) If the speed of the bike is 36 km/h, then what is the shortest possible time in which all three of them can complete the journey?

a) 7 1/3 h b) 9 4/7 h
c) 9 3/7 h d) Can't be determined

27) While walking down on the pavements of New York City. I notice that every 20 minute there is a city bus coming in the opposite direction and every 30 minute there is a city bus overtaking me from behind. What is the time gap between on city bus passing a stationary point known as Local Bus Stop beside the route and the immediately next city bus in the same direction passing the same stationary point?

a) 27 minb) 24 min

c) 25 mind) can't be determined

28) Abhinav and Brijesh start from Allahabad and Barabanki respectively with uniform velocities. Abhinav is headed towards Barabanki and Brijesh towards Allahabad and both cities are 600km apart. Abhinav rests whenever Brijesh is on the move and Brijesh rest whenever Abhinav is on the move. Abhinav's speed is 25 km/h and Brijesh's speed is 30 km/h. If Abhinav starts first and reaches Barabanki in 36 hours, then find the least time that Brijesh would take to reach his destination after Abhinav makes a start:
a) 20 h b) 36 h c) 44 h d) None of these

29) A man can cross a downstream river by steamer in 40 minutes and same by boat in 1 hour. If the time of crossing the river in upstream direction by streamer is 50% more than downstream time by the streamer and the time required by boat to cross the same river by boat in upstream is 50% more than the time required in downstream by boat. What is the time taken for the man to cross the river downstream by streamer and then return to same place by boat half the way and by streamer the rest of the way?
a) 85 min b) 115 min
c) 120 min d) 125 min

Directions for question number 30 and 31:
Awadh express and Bokaro express start simultaneously from Lucknow and Jamshedpur towards each other and continuously shuttle between these two places. Every time these trains meet each other, they turn back after exchanging their respective speeds; the initial ratio of their speeds is 2:1.
30) What is the number of distinct places at which they will meet?
a) 1 b) 2 c) 5 d) None of these

31) Let these two trains first time meet at Patna, then what is the ratio of distances covered by Awadh express and Bokaro express till they meet for the third time at the same place Patna:
a) 1:1 b) 14:13
c) 10:11 d) None of these

32) Mahindra starts a journey for his home. An hour after starting meets with a minor accident. He takes one hour in resuming his journey. After that he proceeds at 5/6 th of his former speed and arrives at the office 1 hour 36 minutes late than the schedule time. Had the accident occurred 80 kms further from the actual place of accident, he would have arrived 1 hour 20 minutes beyond the scheduled time. What is the distance between his office and his home?
a) 180 km b) 240 km
c) 250 km d) 300 km

33) A soldier fired two bullets at an interval of 335 seconds moving at a uniform speed V_1. A terrorist who was running ahead of the soldier in the same direction, hears the two shots at an interval of 330 seconds? If the speed of sound is 1188 km/h, then who is the faster and by how much?
a) Terrorist, 22 km/h
b) Terrorist, 25 km/h
c) Terrorist, 18 km/h
d) Terrorist, 20 km/h

34) A hunter fired two shots from the branch of a tree at an interval of 76 seconds. A tiger separating too fast hears the two shots at an interval of 83 seconds. If the velocity of the sound is 1195.2 km/h, then find the speed of tiger?
a) 112.8 km/h b) 100.8 km/h
c) 80.16 km/h d) none of these

35) A man goes to the fair in fun city with his son and faithful dog. Unfortunately man misses his son which he realizes 20 minutes later. The son comes back towards his home at the speed of 20 m/min and man follows him at 40m/min. the dog runs to the son (child) and comes back to the man (father) to show him the direction of his son. It keeps moving to and from at 60m/min between son and father, till the man meets the son. What is the distance travelled by the dog in the direction of the son?
a) 800m b) 1675 m c) 848 m d) 1000 m

36) Amaranth express left Amritsar for Gorakhpur. Two hours later Gorakhnath express left from Amritsar to Gorakhpur. Both train reached Gorakhpur simultaneously. If Amaranth express had started from Amritsar and Gorakhpur at the same time and travelled towards each other they would meet in 1h 20 min. Find the time taken by Amaranth express to travel from Ameristar to Gorakhpur (in hours):
a) 2 b) 4 c) 5 d) 6

37) Akbar and Birbal set out at the same time to walk towards each other respectively from Agra and Banaras 144 km apart. Akbar walks at the constant speed of 8 Km/h, while Birbal walks 4 km in the first hour, 5 km in the second hour, 6 km in the third hour and so on. Then the Akbar and Birbal will meet :
a) In 6 h b) in 8 h
c) Midway between Agra and Banaras
d) 80 Km away from Banaras

38) A tiger is 50 of its own leaps behind a deer. The tiger takes 5 leaps per minute to the deer's 4. If the tiger and the deer cover 8m and 5m per leap respectively , what distance will the tiger have to run before it catches the deer
a) 600m b) 700m c) 800m d) 1000m

39) Soniya and Priyanga started from Amethi and Bellari for Bellari and Amethi, which are 645 KM apart. They meet after 15 hours. After their meeting, Sonia increased her speed by 3 km/h and Priyanga reduced her speed by 3 Km/h, they arrived at Bellari and Amethi respectively at the same time. What is the initial speed?
a) 24 km/h and 30 km/h
b) 25 km/h and 18 km/h
c) 18 km/h and 21 km/h
d) 20 km/h and 23 km/h

40) Den Bosch and Eastbound are two famous cities 300km apart. Maradona starts from Den Bosch at 8 : 24am. An hour later Pele starts from Den Bosch. After travelling for 1 hour, Pele reaches Nottingham that Maradona had passed 40 minutes earlier. Nottingham falls on the way from Den Bosch to Eastbourne. If Pele and Maradona just reaches Eastbourne at the same time, what are the speeds of the Maradona and Pele respectively?
a) 100 km/h, 125 km/h
b) 60 km/h, 80 km/h
c) 60 km/h, 75 km/h
d) 75 km/h, 100 km/h

41) A thief sees a jeep at a distance of 250 m, coming towards him at 36 km/h. thief takes 5 seconds to realize that there is nothing but the police is approaching him by the jeep and start running away from police at 54 km/h. but police realize after 10 seconds, when the thief saw police did police catch up with him and what is the distance police had to travel to do so?
a) 50 s, 1000m b)65s, 1150m
c) 65s, 1300m d)45s, 1050m

42) Inspired by the golden quadrilateral project UP government recently accomplished a diamond triangular project. Under this project

the state government laid down 6 lane roads connecting three cities ayodhya, Banaras and chitrakoot, which are equally separated from each other in terms of geometry they from ayodhya and Banaras respectively, towards chitrakoot. When angad covers 100 kms, bajrang covers such a distance that the distance between angad and bajrang makes 90 angle with the road joining Banaras and chitrakoot. When bajrang reaches chitrakoot, angad is still 150 km away from chitrakoot what is the distance between ayodhya and Banaras

a) 250 kms b) 450 kms
c) 300 kms d) none of these

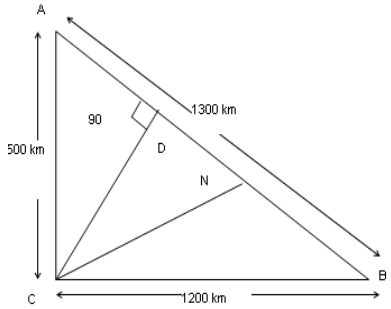
43) Two trains Ajanta express and barouni express simultaneously started on two parallel tracks from Meerut to Nagpur, which are 390 km apart. The ratio of the speed of Ajanta express and barouni express is 6:7. After how long (in kms) travelling, barouni express exchanges the speed with Ajanta express so that both the trains reach at their destination simultaneously :

a) 150 kms b) 190 kms
c) 210 kms d) can't be determined.

44) In a circus there were a leopard and a tiger walking in the two different rings of same radii. There I observed that when leopard moved 3 steps, tiger moved 5 steps in the same time but the distance traversed by leopard in 5 steps in the same time, but the distance traversed by leopard in 5 steps is equal to the distance traversed by tiger in 4 steps. What is the number of rounds that a leopard made when tiger completed 100 rounds?

a) 120 b) 48
c) 75 d) none of these

Directions for question number 45-48: In the following figure the route is shown which is followed by Professor Jai and Professor Jaya, who are visiting faculty at IIM-A and IIM-B respectively. A, B denote IIM-A and IIM-B respectively and C denotes the residence of Prof. Jai and Prof. Jaya. They leave home for classes at the same time and their driving speeds are 500/13 km/h and 1200/13 lm/h respectively. Also they finish the classes at the same time to reach home.



The path adopted by jai and jaya is CADC and CBDC respectively. Prof. Jai and Jaya are husband and wife respectively.

45) If both of them start and finish the classes at the same time, then who returned home earlier than other, if no one of them halts for anywhere in the route and they just leave the institution as soon as they finish the lectures?

a) Prof. Jai b) Prof. Jaya
c) Return at the same time
d) Cannot be determined

46) In the shown figure N and D denotes Noida and Delhi respectively, who returned home late and by how much time, if Jaya turned from Noida instead of Delhi:

a) Jai, 9 h 10 min b) Jaya, 9 h 50 min
c) Jai, 2 h 55 min d) Jai, 16 h 10 min

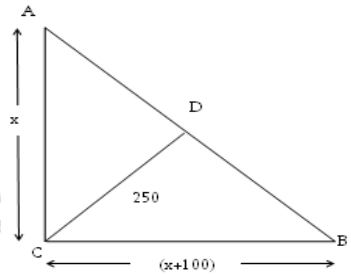
47) In the above question how many per cent time Jaya saved in going via Noida of the total time taken previously:

a) 10% b) 25% c) 50% d) 17%

48) If Mrs. Jaya wants to watch the premier show of a movie at Wave Cinema in Noida while returning from institute through BNC. When will she return home given that she spends total time 3 hours at wave cinema?

a) At the same time as normal
b) 5 min late than her husband
c) At the same time when her husband returns
d) Cannot be determined

49) Preetam and Devi start running a race on the given track as shown in figure.



Where AC and BC are mutually perpendicular and CD is the median of triangle paths ABC ,BC is 100 km longer than that of AC , again CD is 250 km. the speeds of Preetam and Devi are 30 km /h and 40 km/h initially and their respective paths of running are CADC and CBDC. After how much time they reverse their speeds so that they return C at the same time?

a) 50/h b) 120/7 h
c) 80/11h d) none of these

50) After reaching east of the shop it can't move on further than the given distance on the current path. For how many markets can it supply its Tiffin directly?

a) 4 b) 5 c) 7 d) can't be determined

51) The total distance covered by the carriers in providing the Tiffin from centre 'O' to the last point in one way only is :

a) 30 km b) 28 km
c) 35 km d) none of these

52) The ratio of distances covered on the circular path P^2 to that on the last path, where the carrier reaches directly eastward of its shop is:

a) 1:1 b) 2:7 c) 2:p d)none of these

53) What is the ratio of speeds of jackal and cat?

a) 4:3 b) 5:3 c) 1:1 d) can't be determined

54) The ratio of speed of jackal is to train is :

a) 5:1 b)3:5 c)1:5 d)can't of determined

55) If jackal moves towards OPA, it will meet with meet with train at M1 then AM1 is

a) 20 km b) 16 km
c) 10 km d) can't be determined

56) If jackal moves towards OPB and cat moves towards POA who will not meet with accident with the train?

a) Jackal b) cat
d) Both a and b d)can't be determined

57) The ratio of time taken by cat and jackal in moving OAPO and PBOP respectively given that they do not meet with accident

a) 1:1 b) 3:4 c) 5:4 d) none of these

58) A candle of 6 cm long burns at the rate of 5 cm in 5 h and another candle of 8 cm long burns at the rate of 6 cm in 4 h. what is the time required by each candle to remain of equal lengths after burning for some hours, when they start to burn simultaneously with uniform rate of burning?

a) 1h b) 1.5h c) 2h d) none of these

59) Two boats start at the same instant to cross a river W meter wide. The faster boat reaches the other bank and returns back immediately. What

is the distance travelled by them when they meet. Where the speeds of these boats are b1 & b2?
a) 2w/ (b1 + b2), 2w/ (b1 – b2)
b) 2w/ (b1 + b2) & 2w/ (b1 + b2) b2
c) W/ (b1 + b2) b1, w/ (b1 + b2)
d) Data insufficient

60) Mariya was travelling in her boat when the wind blew her hat off and the hat started floating back downstream. The boat continued to travel upstream for 12 more minutes before Mariya realized that her hat had fallen off and tuned back downstream. She caught up with that as soon as it reached the starting point. Find the speed of river if Mariya's hat flew off exactly 3 km from where she started:
a) 5 km/h b) 6 km/h
c) 7.5 km/h d) cannot determined

61) Akbar, Birbal and Chanakya run around a circular track of length 500 m. Akbar and Birbal run with the speeds of 15 m/s and 20 m/s in the same direction respectively and Chanakya being very intelligent run in the opposite direction with a speed of 25 m/s. if all three of them start at the same time, then:
a)Akbar meets Chanakya more frequently than Birbal does
b)Akbar and Chanakya meet as frequently as Birbal and Chanakya
c) Akbar meets Birbal least frequently
d) Nothing can be concluded

62) Arun and Barun run with the speeds of 30 m/s and 20 m/s around a circular track of 600 m. they participate in a 3000 m race. What is the distance covered by Arun when he passes Barun for the 5th time?
a) 2200 m b) 2250 m
c) 2850 m d) None of these

63) Akkal and Bakkal are running on a circular track of radius 175 meters. Akkal can complete a round in 100 seconds and the speed of Bakkal is twice the speed of Akkal. They started simultaneously towards each other from two points 350 meters diametrically opposite on the circular path. If they first meet at a point they called it love point, which is between the two points P and Q from where they have started their race, after how much time from the start do they meet at love point for the third time?
a) 218 2/5s b) 216 2/3s
c) 221 s d) None of these

64) Arti and Barkha start swimming towards each other from the deep end and shallow end respectively of a swimming pool in Fun city. They start their swimming simultaneously in the length of 300 m pool. The ratio of their speeds is 1:2 respectively. Each swimmer rests for 6 seconds once the teaches the other end and starts swimming back. Where will they meet for the second time in the still water of swimming pool?
a) 30 m from the shallow end
b) At the shallow end
c) At the deepend
d) Cannot be determined

65) A and B runs around a circular track. A beats B by one round or 10 minutes. In this race, they had completed 4 rounds. If the race was only of one round, find the A's time over the course:
a) 8 min b) 7.5 min c) 12.5 min d) 12 min

66) A, B and C participated in a race. A covers the same distance in 49 steps, as B covers in 50 steps and C in 51 steps. A takes 10 steps in the same time as B takes 9 steps and C takes 8 steps. Who is the winner of the race?
a) A b) B c) C d) cannot be determined

67) Shambhu drives his car very fast at 36 m/s. moving ahead for some hours he finds some problem in headlights of the car. So he takes 20 seconds in changing the bulb of hte headlight by stopping the car. Mean while he notices that another car which was 400 m back is now 200 m ahead of his car. What is the speed of this car?
a) 100 km/h b) 92 km/hr
c) 108 km/h d) 300 km/h

68) Two persons start from the opposite ends of a 90 km straight track and run to and fro between the two ends. The speed of first person is 30 m/s and the speed of other is 125/6 m/s. They continue their motion for 10 hours. How many times they pass each other?
a) 10 b) 9 c) 12 d) none of these

69) At what time after 3:10 am, the acute angle made by the minute and hour-hand is double to that of at 3:10 am, for the first time?
a) 4h 43 min b) 3h 48 min
c) 3h 320/11 min d) none of these

70) If the two incorrect watches are set at 12:00 noon at correct time, when will both the watches show the correct time for the first time given that the first watch gains 1 min in 1 hour and second watch loses 4 min in 2 hours:
a) 6 pm, 25 days later
b) 12:00 noon, 30 days later
c) 12 noon, 15 days later
d) 6 am 45 days later

71) Rajeev and Sanjeev are too close friends Rajeev's watch gains 1 minute in an hour and Sanjeev's watch loses 2 minutes in an hour. Once they set both the watches at 12:00 noon, with my correct watch. When will the two incorrect watches of Rajeev and Sanjeev show the same time together?
a) 8 days late b) 10 days later
c) 6 days later d) cannot be determined

72) At a railway station a 24 hour watch loses 3 minutes in 4 hours. If it is set correctly on Sunday noon when will the watch show the correct time?
a) 6 pm after 40 days
b) 12 noon after 75 days
c) 12 pm after 100 days
d) 12 noon after 80 days

73) A Swiss watch is being shown in a museum which has a very peculiar property. It gains as much in hte day as it loses during night between 8 pm to 8 am. In a week how many times will the clock show the correct time?
a) 6 times b) 14 times
c) 7 times d) 8 times

74) A wrist watch which is running 12 minutes late on a Sunday noon is 16 minutes ahead of the correct time at 12 noon n the next Sunday. When is the clock 8 minutes ahead of time?
a) Thursday 10 am b) Friday noon
b) Friday 8 pm d) Tuesday noon

75) A clock loses 2 minutes in an hour and another clock gains 2 minutes in every 2 hours. Both these clocks are set correctly at a certain time on Sunday and both the clocks are set correctly at a certain time on Sunday and both the clocks stop simultaneously on the next day with the time shown being 9 am and 10:06 am. What is the correct time at which they stopped?
a) 9;54 am b) 9:44 pm
c) 9:46 am d) 9:44 am

76) David sets his watch at 6:10 am on Sunday, which gains 12 minutes in a day. On Wednesday if this watch is showing 2:50 pm. What is the correct time?
a) 1:50 pm b) 2:10 pm

c) 2:30 pm d) 3:30 pm

77) Ramu purchased a second hand Swiss watch which is very costly. In this watch the minute-hand and hour hand coincide after every 65 3/11 minutes. How much time does the watch lose or gain per day?
a) 4 min b) 5 min
c) 4 min, 20 sec d) none of these

78) My watch was 8 minutes behind at 8 pm on Sunday but within a week at 8 pm on Wednesday it was 7 minutes ahead of time. During this period at which time this watch has shown the correct time:
a) Tuesday 10:24 am
b) Wednesday 9:16 pm
c) It cannot show the correct time during this period
d) None of these.

79) Out of the following four choices which does not show the coinciding of the hour hand and minute-hand:
a) 3:16:2 b) 6:32:43
c) 9:59:05 d) 5:27:16

80) Kumbhakarna starts sleeping between 1 am and 2 am and he wakes up when his watch shows such a time that the two hands (i.e., hour-hand and minute hand) interchange the respective places. He wakes up between 2 am and 3 am on the same night. How long does he sleep?
a) 55 5/13 min b) 110 10/13 min
c) 54 6/13 min d) none of these

MENSURATION

Directions for question number 1,2 and 3: Each edge of a equilateral triangle is 'a' cm. A cone is formed by joining any two sides of the triangle.

1) What is the radius and slant height of the cone?
a) a, a/ 2*π b) a/ π , a/2
c) a/2 * π d) 2a, a/ π

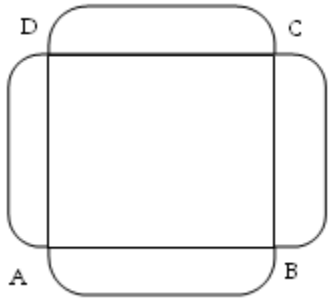
2) What is the volume of the cone?
a) $a^2 * \sqrt{4 - \pi^2} / 24 * \pi^3$
b) $a^3 * \sqrt{4\pi^2 - 1} / 24 * \pi^3$
c) $a^3 * \sqrt{1 - 4\pi^2} / 8 * \pi^3$
d) $(a/\sqrt{3}) * \pi^2 * (1 - 2/\pi)$

3) If the cone is cut along its axis from the middle, the new shape new shape we obtain after opening the paper is :
a) isosceles triangle
b) Equilateral triangle
c) Right angle triangle
d) None of these

4) if the sum of the radius and the height of a closed cylinder is 35 cm and the surface area of the cylinder is 1540 cm^2 , then the circumference of the base of the cylinder is :
a) 66 cm b) 44 cm
c) 56 cm d) can't be determined

5) An iron pillar has some part in the form of a right circular cylinder and remaining in the form of right circular cone. The radius of base of cone, as well as cylinder is 21 cm. the cylindrical part is 80 cm high and conical part is 16 cm high. find the weight of the pillar, if 1 cm^3 of iron weight 8.45 g :
a) 999.39 kg b) 111 kg
c) 1001 kg d) 989 kg

6) ABCD is a square of side a cm. AB, BC, CD and AD all are the chords of circles with equal radii each. If the chords subtends an angle of 120 degree at their respective centers , find the total area of the given figure, where arcs are part of the circle :



a) $[a^2 + 4 (\pi * a^2/9 - a^2/3\sqrt{2})]$
b) $[a^2 + 4 (\pi * a^2/9 - a^2/4\sqrt{3})]$
c) $[9a^2 - 4 \pi - 3\sqrt{3} a^2]$
d) None of these

7) A rectangle has a perimeter of 26. How many combinations of integral valued length are possible?
a) 4 b) 8 c) 6 d) 12

8) A hollow sphere of outer diameter 24 cm is cut into two equal hemispheres. The total surface area of one of the hemisphere is 1436 (2/7) cm^2. Each one of the hemisphere is filled water. What is the volume of water that can be filled in each of the hemisphere?
a) 3358 (2/3) cm^3 b) 3528 (2/3) cm^3
c) 2359 (2/3) cm^3 d) 9335 (2/3) cm^3

9) A big cube of side 8 cm is formed by rearranging together 64 small but identical cubes each of side 2 cm. further, if the corner cubes in the topmost layer of the big cube?
a) 16 cm^2, decrease b) 48 cm^2, decrease
c) 32 cm^2, decrease
d) Remains the same as previously

10) A large solid sphere of diameter 15 cm is melt and recast into several small spheres diameter 3m. What is the percentage increase in the surface area of the smaller spheres percentage over that of the large sphere?
a) 200% b) 400%
c) 500 d) can't be determined

11) A cone is made of a sector with a radius of 14 cm and an angle of 60 degree. What is the total surface area of cone?
a) 119.78 cm^2 b) 191.87 cm^2
c) 196.5 cm^2 d) none of these

12) Krishna Chand is a very laborious farmer; he erected a fence around his paddy field in a square shape. He used 26 poles in each side, each at a distance of 4m. What is the area of field?
a) 1.6 hectare b) 2.6 hectare
c) 5.76 hectare d) 1 hectare

13) A rectangular lawn is surrounded by path of width 2m on all side. Now if the length of the lawn and the area of path becomes 13/11 times, what is the length of the original lawn?
a) 8m b) 9 m c) 10 m d) 12 m

Direction for question number 14, 15: A cylinder with height and radius 2:1 is filled with soft drinks and then it is tilted so as to allow some soft drink to flow off to an extent where the level of soft drink just touches the lowest point of the upper mouth.

14) If the 2.1 L soft drinks are retained in the cylinder, what is the capacity of the cylinder?
a) 3.6 L b) 4L c) 1.2 L d) 4.2 L

15) If the quantity of the soft drink left poured into conical flask whose height and base radius are same as that of the cylinder so as to fill the conical flask completely, the quantity of soft drink left in the cylinder as the fraction of its total capacity is:
a) 1/3 b) 1/6 c) 1/9 d) 1/10

16) An elephant of length 4m is at one corner of the rectangular cage 16m * 30m and facing towards diagonally opposite corner. If the elephant starts moving towards the diagonally opposite corner it takes 15 seconds to reach the opposite corner. Find the speed of the elephant:

a) 1 m/s b) 2 m/s
c) 1.87 m/s d) can't be determined

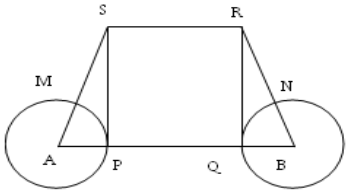
17) What is the height of the cone which is formed by joining the two ends of the sector of circle with radius r and angle 60 degree?

a) $\sqrt{35}$ / 6 b) $\sqrt{25}$ / 6 r
c) $r^2/\sqrt{3}$ d) none of these

18) If the cube of maximum possible volume is cut off from a solid sphere of diameter d , then the volume of the remaining (waste) material of the sphere would be equal to :

a) $d^3/3\ (\pi - d/2)$ b) $d^3/3\ ((\pi/2) - (1/\sqrt{3}))$
c) $d^2/4\ (\sqrt{25} - \pi)$ d) none of these

19) In the adjoining figure PQRS is a square and MS = RN and A, P, Q and B lie on the same line. Find the ratio of the area of two circles to the area of the square. Given that AP= MS:

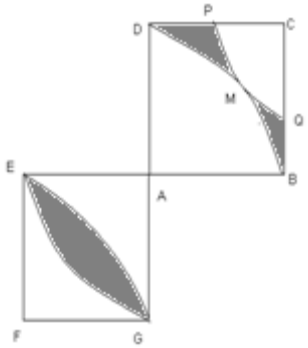


a) π /3 b)2 π /3 c) 3π /2 d) 6/ π

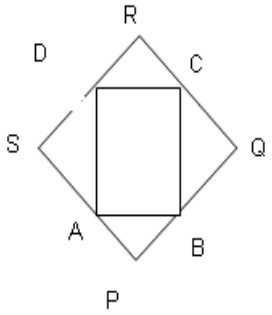
20) ABCD is the rectangle and there are four equilateral triangles. Area of ∆ASD equals to area of ∆BQC and area of ∆DRC equals to area of ∆APB. The perimeter of the rectangle is 12cm. Also the sum of the areas of the four triangles is $10\sqrt{3}$ cm² then the total area of the figure thus formed :

a) $2(4 + 5\sqrt{3})$ cm² b) $5(4 + 2\sqrt{3})$ cm²
c) $42\sqrt{3}$ cm² d) none of these

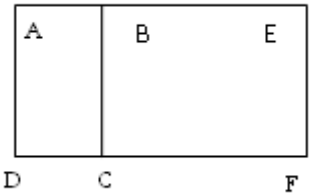
21) ABCD and EFGA are the squares of side 4 cm, each. In square ABCD, DMB and PMQ are the arcs of circles with centers at A and C respectively. In square AEFG, the shaded region is enclosed by two arcs of circles with center at A and F, respectively. What is the ratio of the shaded regions of the squares ABCD and AEFG respectively:



a) $2+ \pi\ (\sqrt{2} - 2)/\ (\pi - 2)$
b) $(\pi - 2)/\ 2\ (\sqrt{2}+1 - \pi)$
c) 4/3 d) none of these

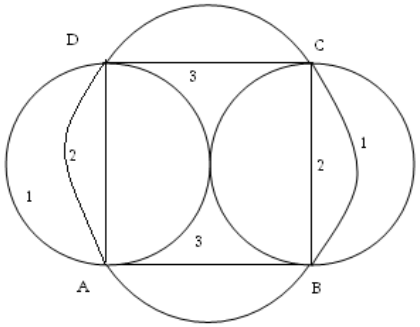


22) In the adjoining figure AB / BC = AD / EF, where EBCF is a square. Find the ratio of AE / EF:



a) $(1+-\sqrt{7})/3$ b) $(1-\sqrt{7})/2$
c) $(1+\sqrt{5})/2$ d) $(1+-\sqrt{5})/2$

Direction for question number 23 – 25: In the adjoining figure ABCD is a square. A circle ABCD is passing through all the four vertices of the square. There are two more circles on the sides AD and BC touching each other inside the square , AD and BC are respectively diameters of the two smaller circles. Area of the square is 16 cm².



23) . What is the area of region 1?

a) 2.4 cm² b) $[2 - \pi/4]$ cm²
(c) 8 cm² d) $(4\pi - 2)$ cm²

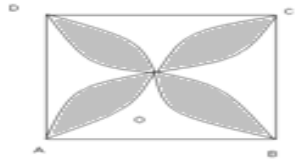
24) What is the area of region 2?

a) $3(\pi - 2)$ cm² b) $(\pi - 3)$ cm²
c) $(2\pi - 3)$ cm² d) $4(\pi - 2)$ cm²

25) What is the area of region 3?

a) $(4 - 4\pi)$ cm² b) $4(4 - \pi)$ cm²
c) $(4\pi - 2)$ cm² d) $(3\pi - +2)$ cm²

26) In the adjoining figure ABCD is a square. Four equal semicircles are drawn in such a way that they meet each other at 'O'. Sides AB, BC, CD and AD are the respective diameters of the four semicircles. Each of the sides of the square is 8 cm. Find the area of the shaded region:



a) $32\ (\pi - 2)$ cm² b) $16(\pi - 2)$ cm²
c) $(2\pi - 8)$ cm² d) $(3/4\ \pi - 4)$ cm²

27) ABCD is a square. Another square EFGH with the same area is placed on the square ABCD such that the point of interaction of diagonals of square ABCD and square EFGH coincide and the sides of square EFGH are parallel to the diagonals of square ABCD. Thus a new figure is formed as shown in the figure. What is the area enclosed by the given figure if each side of the square is 4 cm:

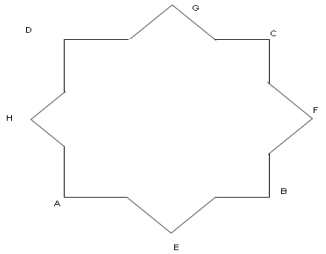
a) $32\ (2 - \sqrt{2})$ b) $16[3 + \sqrt{2}/\ 2 + \sqrt{2}]$
c) $32[2 + \sqrt{2}/\ 3 - \sqrt{2}]$ d) none of these

28) A piece of paper is in the form of a right angle triangle in which the ratio of base and perpendicular is 3: 4 and hypotenuse is 20 cm. What is the volume of the biggest cone that can be formed by taking right angle vertex of the paper as the vertex of the cone?

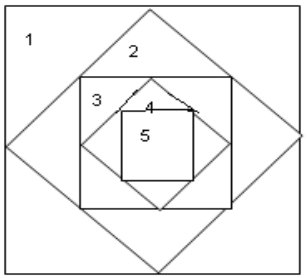
a) 45.8 cm² b) 56.1 cm²
c) 61.5 cm² d) 48 cm²

29) In a particular country the value of diamond is directly proportional to the surface area (exposed) of the diamond. Four thieves steel a cubical diamond piece and then divide equally in four parts. What is the maximum percentage increase in the value of diamond after cutting it?
a) 50% b) 66.66% c) 100% d) none of these

Directions for question number 30 and 31 : In the figure shown square 2 is formed by joining



the mid – points of square1, square 3 is formed by joining the mid-points of square 2 and so on. In this way total five squares are drawn. The sides of the square 1 are 'a' cm.



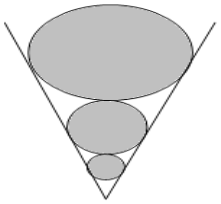
30) What is the perimeter of all five squares?
a) $(4\sqrt{2} + 1)$ a b) $(4\sqrt{2} - 1)$ a $/(\sqrt{2}+1)$
c) 5/6 a d) $(7+3\sqrt{2})$ a

31) What is the total area of all the five square?
a) $(4\sqrt{2} - 1) a^2 / (4\sqrt{2} -1)$
b) $(4\sqrt{2} - 1)$ a $/4(\sqrt{2}-1)$
c) 31/16 a^2
d) none of these

Directions for question number 32-35: Each edge of the cube is equally divided into n parts, thus there are total n^3 smaller cubes. Let,
N_0 = Number of smaller cubes with no exposed surfaces
N_1= Number of smaller cubes with one exposed surfaces
N_2= Number of smaller cubes with two exposed surfaces
N_3= Number of smaller cubes with three exposed surfaces

32) What is the number of unexposed smaller cubes (N_0)?
a) $(n-2)^3$ b) n^3 c) n! d) 8
33) What is the number of smaller cubes with one exposed surface (N_1)?
a) $4(n-3)^3$ b) $6(n-2)^2$
c) $(n-3)^2$ d) $(n+1)^2$

34) What is the value of (N_2)?
a) $8(n-2)^2$ b) $6(n-2)$
c) $12(n-2)$ d) $3(n-3)^2$



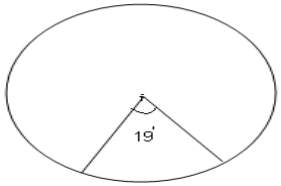
35) What is the value of N_3 ?
a) (n-1)! b) $(n-2)^2$
c) $n(n+1)/2$ d) 8

36) In a bullet the gun powder is to be filled up inside the metallic enclosure. The metallic enclosure is made up of a cylindrical base and conical top with the base of radius 5 cm. The ratio of height of cylindrical and cone is 3:2. A cylindrical hole is drilled through the metal solid with the height two-third the height of metal solid. What should be the radius of the hole, so that the volume of the hole (in which gun powder is to be filled up) is one- third the volume of metal solid after drilling?
a) $\sqrt{(88/5)}$ cm b) $\sqrt{(55/8)}$ cm
c) 55/8 cm d) 33π cm

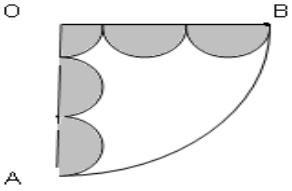
37) A sector of the circle measures 19 degree (see the figure). Using only a scale, compass and a pencil, is it possible to split the circle into 360 sectors of 1 degree central angle?
a) Yes b) No
c) Yes, only if radius is known
d) Can't be determined

38) A circular paper is folded to form a quadrant. Then it is cut as shown in the figure, after it the paper was reopened in the original circular shape. Find the ratio of the original circular shape. Find the ratio of the original paper? (The shaded portion is cut off from the quadrant OAB is 5 cm and radius of each semicircle is 1 cm):
a) 25 : 16 b) 25:9
c) 20:9 d) none of these

39) A cubical cake is cut into several smaller cubes by dividing each edge in 7 equal parts. The cake is cut from the top along the two



diagonals forming four prism. Some of them get cut and rest remained in the cubical shape. A complete cubical (smaller) cake was given to adults and the cut off part of a smaller cake was given to a child (which is not an adult) the cakes were given equality each piece to a person, total how many people could get the cake?
a) 343 b) 448 c) 367 d)45



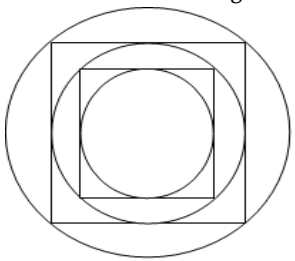
Directions for question number 40 – 42:
A square is inscribed in a circle then another circle is inscribed in the circle. Finally a circle is inscribed in the inner most square. Thus there are 3 circles and 2 squares as shown in the figure. The radius of the outer- most circle is R.
40) What is the radius of the inner-most circle?
a) R/2 b)$R/\sqrt{2}$
c) $\sqrt{2}$ R d)none of these

41) What is the sum of areas of all the squares shown in the figure?
a) $3R^2$ b) $3\sqrt{2}R^2$
c) $3R^2/\sqrt{2}$ d) none of these

42) What is the ratio of sum of circumferences of all the circles to the sum of perimeters of all the squares?
a) $(2 + \sqrt{3})\pi R$ b) $(3 + \sqrt{2})\pi R$
c) $3\sqrt{3}\pi R$ d) none of these

Directions for question number 43-45:

A regular hexagon is inscribed in a circle of radius R. Another circle is inscribed in the hexagon. Now another hexagon is inscribed in



the second (smaller) circle.

43) What is the sum of perimeters of both the hexagons?

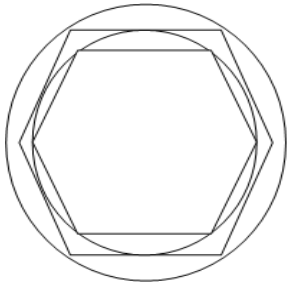
a) $(2+\sqrt{3})R$ b) $3(2+\sqrt{3})R$
c) $3(3+\sqrt{2})R$ d) none of these

44) What is the ratio of area of inner circle to the outer circle?

a) 3:4 b) 9:16
c) 3:8 d) none of these

45) If there are some more circles and hexagons inscribed in the similar way as given above, then the ratio of each side of outer hexagon (largest one) to that of the fourth (smaller one) hexagon is (fourth hexagon means the hexagon which is inside the third hexagon from the outside):

a) $9: 3\sqrt{2}$ b) 16 : 9
c) $8: 3\sqrt{3}$ d) none of these



Directions for question number 46 – 47:

Five spheres are kept in a cone in such a way that each sphere touch the lateral surface of the cone, this is due to increasing radius of the spheres starting from the vertex of the cone. The radius of the smallest sphere is 16 cm.

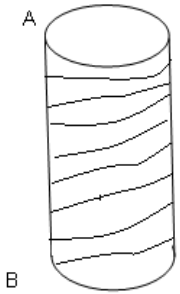
46) If the radius of fifth (i.e., largest) sphere be 81 cm , then find the radius of third (i.e., middlemost) sphere:

a) 25 cm b) $25\sqrt{3}$ cm
c) 36 cm d) data insufficient

47) What is the least distance between the smallest sphere and the vertex of the cone?

a) 64 cm b) 80 cm
c) 28 cm d) none of these

48) Saumya has a pencil box of volume 60 cm^3. What can be the maximum length of a pencil that can be accommodated in the box. Given that all the sides are integral (in cm) and



different from each other?

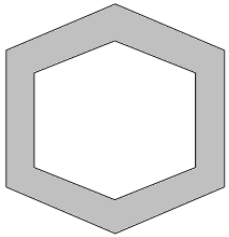
a) $7\sqrt{2}$ cm b) $\sqrt{905}$ cm
c) $\sqrt{170}$ cm d) $\sqrt{3602}$ cm

49) There are two concentric hexagons. Each of the side of both the hexagons is parallel. Each side of both the hexagon is 8 cm. what is the area of the shaded region, if the distance between corresponding parallel sides is $2\sqrt{3}$ cm :

a) $120\sqrt{3}$ cm^2 b) $148\sqrt{3} cm^2$
c) 126 cm^2 d) none of the above

50) ABCD is a square. a circle is inscribed in the square. Also taking A,B,C,D (the vertices of square) as the centers of four quadrants, drawn inside the circle, which are touching each other on the on the mid-points of the sides of square. Area of square is 4 cm^2. What is the area of square is 4 cm^2. What is the area of the shaded region?

a) $(4- 3\pi /2)$ cm^2 b) $(2\pi - 4)$ cm^2
c) $(4 - 2\pi)$ cm^2 d) none of these



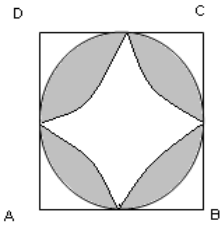
51) In a factory there are two identical solid blocks of iron. When the first block is melted and recast into spheres of equal radii 'r', then 14cc of iron was left, but when the second block was melted and recast into sphere each of radii '2r', then 36 cc of iron was left. The volumes of the solid blocks and all the spheres are in integers. What is the volume (in cm^3) of each of the larger spheres of radius '2r'?

a) 176 b) 12 π
c) 192 d) data insufficient

52) There is a vast grassy farm in which there is a rectangular building of the farm- house whose length and breadth is 50m and 40 m respectively. A horse is tethered at a corner of the house with a tether of 80m long. What is the maximum area that the horse can graze?

a) 5425 π b) 5245 π
c) 254 π d) none of these

53) A cube of side 6 cm is painted on all its 6 faces with red color. It is then broken up into 216 smaller identical cubes. What is the ratio of



N_0: N_1: N_2.

Where, N_0 -> number of smaller cubes with no colored surface.

N_1 -> number of smaller cubes with 1 red face.

N_2 -> number of smaller cubes with 2 red faces:

a) 3:4:6 b) 3:4:5
c) 4:6:3 d) can't be determined

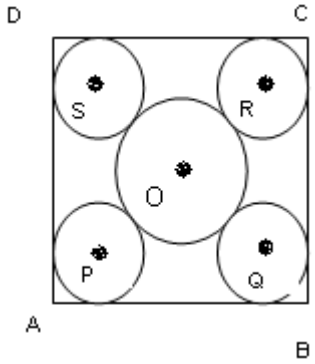
54) Assume that a mango and its seed, both are spherical, now if the radius of seed is 2/5 of thickness of the pulp. The seed lies exactly at the centre of the fruit. What per cent of the total volume of the mango is its pulp?

a) 63 3/5 % b) 97.67 %
c) 68 2/3 % d) none of these

55) In the adjoining diagram ABCD is a square with side 'a' cm. In the diagram the area of the larger circle with centre 'o' is equal to the sum of the areas of all the rest four circles with equal radii, whose centers are P,Q,R and S. what is ratio between the side of square and radius of a smaller circle?

a) $(2\sqrt{2}+3)$ b) $(2+3\sqrt{2})$
c) $(4+3\sqrt{2})$ d) can't be determined

56) Initially the diameter of a balloon is 28 cm. It can explode when the diameter becomes 5/2 times of initial diameter. air is blown at 156 cc/s. It is known that the shape of balloon will explode?
a) 1078 s b) 1368 s



c) 1087 s d) none of these

57) The radius of a cone is $\sqrt{2}$ times the height of the cone. A cube of maximum possible volume is cut from the same cone. What is the ratio of the volume of the cone to the volume of the cube?
a) 3.18 π b) 2.25 π
c) 2.35 π d) can't be determined

58) Raju has 64 small cubes of 1 cm^3. He wants to arrange all of them in a cuboidal shape, such that the surface area will be minimum. What is the diagonal of this larger cuboid?
a) $8\sqrt{2}$ cm b) $\sqrt{273}$ cm
c) $4\sqrt{3}$ cm d) $\sqrt{129}$ cm

59) The volume of a cylinder is 48.125 cm^3, which is formed by rolling a rectangular paper. If a cuboidal box (without any lid i.e., open at the top) is made from the same sheet of paper by cutting out the square of side 0.5 cm from each of the four corners of the paper sheet, then what is the volume of this box?
a) 20 cm^3 b) 38 cm^3
c) 19 cm^3 d) none of these

Directions for question number 60 - 62: Consider a cylinder of height h cm and radius r=4/ pi cm as shown in figure. A string of certain length when wound on its cylindrical surface, starting at point A, gives maximum of n turns.

60) What is the vertical spacing (in cm) between two consecutive turns?
a) h/n b) $\sqrt{h}/n$
c) h^2/n d) can't be determined.

61) If there is no space between any two consecutive turns and the width of string B x cm,then the required length of the string is:
a) 8x/h cm b) 8h/x cm
c) 8hx cm d) $2\sqrt{2}$ h/x cm

62) If the string is wounded on the exterior four walls of a cube of side a cm starting at point C and ending at point D exactly above C, making equally spaced four turns. The side of the cube is
a) $a=2n/\sqrt{255}$ b) $a=n^2/16$
c) $a=8n/\sqrt{257}$ d) $a=2\sqrt{15}\,n$

63) A blacksmith has a rectangular iron sheet 10 feet long. He has to cut out seven circular disc from this sheet. What is the minimum possible width of the iron sheet if the radius of each disk is one feet?
a) $2\sqrt{3}$ ft b) $2+\sqrt{3}$ ft
c) $3+\sqrt{2}$ ft d) $2+2\sqrt{3}$ ft

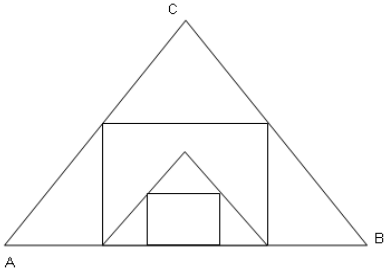
64) The perimeter of a square, a rhombus and a hexagon are same, the area of square rhombus and hexagon be s, r, h respectively, then which of the following is correct.
a) r>s>h b) f>h>r
c) h>s>r d) data insufficient.

65) In the adjoining fig. ABC is an equilateral triangle inscribing a square of maximum possible area again in this square there is an equilateral triangle whose side is same as that of the square further the smaller equilateral triangle inscribes a square of maximum possible area. What is the are of the inner most square if the each side of the outermost triangle is 0.01 m?
a) $873-504\sqrt{3}$ cm^2 b) $738-504\sqrt{3}$ cm^2
c) $873-405\sqrt{2}$ cm^2 d) None of These

66) A blacksmith has a rectangular sheet of iron. He has to make a cylindrical vessel both circular ends are closed. When he minimize the waste of the sheet of iron then what is the ratio of wastage to utilized area of sheet?
a) 1/11 b) 2/17 c) 3/22 d) none of

67) Barun makes an open box of capacity $864m^3$.Actually where he lives, the rates of paints are showing high so he wants to minimize the surface area of the box keeping the capacity of the box same as required. What is the base area and height of such a box?
a) $36m^2$, 24m b) $216m^2$, 4m.
c) 144m2, 6m d) None of these.

68) There are 2 cylindrical containers of equal capacity and equal dimensions. If the radius of one of the container is increased by 12 ft and the



height of another container is increased by 12 ft, Then the capacity of both container is equally increased by K cubic feet. If the actual height of each of the container is 4 ft then find the increased volume of each of the container?
a) 1680 pi cu .ft b) 2304 pi cu. ft
c) 1480 picu. Ft d) can't be determined.

TRIGONOMETRY

1) If $0< \theta < 90°$, then $(\sin\theta+\cos\theta)$ is :
a) Less than 1 b) equal to 1
c) Greater than 1 d) Greater than 2

2) The value of x satisfying the equation $\sin x + 1/\sin x = 7/2\sqrt{3}$ is :
a) 10 ° b) 30 ° c) 45 ° d) 60 °

3) If $\sin\theta - \cos\theta = 0$ and $0<\theta\leq\prod/2$, then θ is equal to :
a) π /2 b) π /4 c) π/6 d) 0

4) Given that θ is an acute and then $\sin\theta = 3/5$. Let x,y be positive real number such that$3(x-y)=1$, then one set of solution for x and y expressed in terms of θ is given by:
a) x= sec θ, y= cosec θ
b) x= cot θ , y = tan θ
c) x= cosec θ, y= cot θ
d) x= sec θ, y= tan θ

5) Which of following pair is correctly matched?
IF Then
a) $x= (1+\sin 60° - \cos 60°)/(1+\sin 60° + \cos 60°)$ $x= \tan 60°$
b) $x=(1+\sin 90° - \cos 90°)/(1+\sin 90° - \cos 90°)x= \tan 30°$
c) $x= 2\tan 30°/ 1-\tan^2 30° x= \tan 60°$
d) $x = (1-\tan^2 30°)/(1+\tan^2 30°)$ $x= \cos 60°$
If $x \tan 45°. \cos 60° = \sin 60° \cot 60°$, then x is equal to
a) 1 b) ½ c) √3 d) 1/√2

6) If θ lies in the second quadrant, then $\sqrt{(1-\sin\theta)/(1+\sin\theta)} + \sqrt{(1+\sin\theta)/(1-\sin\theta)}$ is equal to:

a) -2 sec θ b) 2 sec θ
c) 2 cosec θ d) 2 tan θ

7) $Sin^6 A + cos^6 A$ is equal to:
a) $1- 3 sin^2 A cos^2 A$
b) 1- 3 sin A cos A
c) $1+3 sin^2 A cos^2 A$
d) 1

8) If sec x = P, cosec x=Q, then:
a) $P^2 + Q^2 = PQ$ b) $P^2 + Q^2 = P^2Q^2$
c) $P^2 – Q^2 = P^2Q^2$ d) $P^2 +Q^2 = -P^2Q^2$

9) $sin^2A cos^2 B-cos^2A sin^2B$ simplifies to:
a) $sin^2A + sin^2 B$ b) $cos^2A +cos^2 B$
c) $Sin^2A -sin^2 B$ d) $sin^2A -cos^2 B$

10) If sin 2x=n sin 2y, then the value of tan(x+y) / tan(x-y) is:
a) (n+1) / (n-1) b) (n-1) / (n+1)
c) (1-n) / (n+1) d) (1+n) / (1-n)

11) The least value of $2sin^2θ + 3cos^2 θ$ is:
a) 1 b) 2 c) 3 d) 5

12) The value of tan (180 + θ).tan(90- θ) is:
a) 1 b) -1 c) 0 d) none of these

13) Log tan 1° + log tan 2° + …..+ log tan 89° is:
a) 1 b) 1/√2 c) 0 d) -1

14) If we convert sin(-566)° to same trigonometrically ratio of a positive angle lying between 0° and 45° then we get:
a) Cos 26° b) -cos 26° c) Sin 26° d) -sin 26°

15) From the mast head of ship, the angle of depression of a boat is 60°. If the mast head is 150m, then the distance of the boat from the ship is:
a) 86.6 m b) 68.6 m
c) 66.8 m d) none of these

16) A portion of a 30 m long tree is broken by tornado and the top struck up the ground making an angle 30° with ground level. The height of the point where the tree is broken is equal to:
a) 30/√3 m b) 10 m c) 30√3 m d) 60 m

17) Two posts are 35 m and 15 m high and the line joining their tips makes an angle of 45° with horizontal. The distance between these posts is:
a) 5 m b) 10 /√2 m c) 10 m d) 10√2 m

18) The angle of elevation of the top of the tower at a point G on the ground is 30°. On walking 20 m towards the tower the angle of elevation becomes 60°. The height of the tower is equal to:
a) 10 /√3 m b) 20 /√3 m
c) 20 √3 m d) 10√3 m

19) If x= sec θ + tan θ, y= sec θ – tan θ, then the relation between x and y is:
a) $x^2 + y^2 = 0$ b) $x^2 = y^2$
c) $x^2 = y$ d) xy = 1

20) The value of θ for which √3 cos θ + sin θ=1 is:
a) 0 b) π /3
c) π /6 d) π /2

21) If tan θ= 4/3, then the value of √ (1+cos θ)/(1-cos θ) is:
a) 1 b) 2 c) 3 d) 4

22) If the arcs of the same length in two circles subtend angles of 60° and 90° at the center, then the ratio of their radii is:
a) 1/3 b) ½ c) 3/2 d) 2

23) In the third quadrant, the values of sin θ and cos θ are:
a) Positive and negative respectively
b) Negative and positive respectively
c) Both positive
d) Both negative

24) The value of (cot 40° / tan 50°) – ½ (cos 35°/sin 55°) is :
a) 1 b) -1 c) ½ d) -1/2

25) The value of θ(0≤θ≤∏/2) satisfying the equation $sin^2 θ – 2 cos θ + ¼ = 0$ is:
a) π /2 b) π c) π /4 d) π /6

26) If cos θ=4/5 and 0<θ<90°, then the value of (3 cos θ + 2 cosec θ) / (4 sin θ – cot θ) is:
a) -43/2 b) -41/2 c) 43/8 d) -43/6

27) Maximum value of (cos θ - sin θ) is :
a) √2 b) 1 c) ½ d) 1/√2

28) The value of sin 105° is:
a) (√3-1) / 2√2 b) (√3-1) /√2
c) (√3+1) / 2√2 d) (√3+1) √2

29) If tan θ= t, then sin2θ is equal to:
a) $1 / (1+t^2)$ b) $2t / (1+t^2)$
c) $t^2 / (1+t)$ d) $(1 +t^2)/ (1+t)$

30) If tan θ =√2 then the value of θ is:
a) less than π/4
b) Equal to π/4
c) Between π/4 and π/3
d) Greater than π/3

31) If tan θ = 2-√3, then tan(90- θ) is equal to:
a) 2+√3 b) 2-√3
c) 3+√2 d) 3-√2

32) If from point 100 m above the ground the angles of depression of two objects due south on the ground are 60° and 45°, then the distance between the objects is:
a) (50(3-√3) / 3) m
b) (50(3+√3) / 3) m
c) (100(3+√3) / 3) m
d) (100(3-√3) / 3) m

33) If the length of shadow of a vertical pole on the horizontal ground is √3times of its height, then the angle of elevation of sun is:
a) 15° b) 30° c) 45° d) 60°

34) A kite is flown with a thread of 250 m length. If the thread is assumed to be stretched and makes an angle of 60° with the horizontal, then the height of the kite above the ground is (approx):
a) 216.25 m b) 215.25 m
c) 212.25 m d) 210.25 m

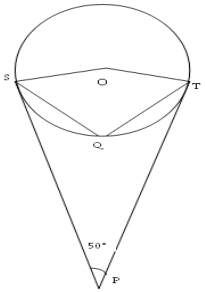
GEOMETRY

1) The semi perimeter of a right angled triangle is 126cm and the shortest median is 53cm. What is the area of a triangle which has the largest median as its longer side?
a) $1560cm^2$ b) $1260cm^2$
c) $1060 cm^2$ d) none of these

2) In an isosceles right angled triangle ABC, ∠B is right angle bisector of; ∠BAC is AN cut at M to the median BO. Point 'o' lies on the hypotenuse. OM is 20 cm, then the value of AB is:
a) 38.95 cm b) 24.18 cm
c) 34.134 cm d) none of these

3) In a right angled triangle ∠B and ∠A are acute angles. If ∠B and ∠A are acute angles. If ∠A - ∠B = k, where A and B are integers, then how many integers values can K take?
a) 80 b) 8u c) 45 d) 89

4) In the given figure 'O' is the centre of the circle SP and TP are the two tangents at S and T respectively, ∠SPT is 50°, the value of ∠SQT is:



a) 125° b) 65° c) 115° d) none of these

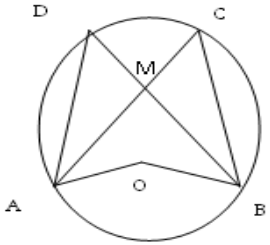
5) A ladder 6.5m long is standing against a wall and the difference between the base of the ladder and the wall is 5.2m. If the top o the ladder now slips by 1.4m, then by how much will the foot of the ladder slip?

a) 1.2m b) 0.8m c) 0.75m d) none

6) In a triangle all the three angles A,B, C are in integers, then the number of values that A,B and C can take is

a) 89 b) 90 c) 178 d) 180

7) In the given figure of circle, 'O' is the centre of the circle ∠ AOB = 130°. What is the value of ∠ DMC?



a) 65° b) 125°
c) 85° d) can't be determined

8) In a right angled triangle ABC, ∠B is right angle. Side AB is half of hypotenuse.AE is parallel to the median BD and CE is parallel to BA. What is the ratio of length of BC to that of EC?

a) √2:1 b) √3:2
c) √5: √3 d) can't be determined.

9) In an equilateral triangle ABC, AO, BO and CO are the angles bisectors meet at the in centre 'O'. D, E and F are the mid points of AO, BO and CO respectively. A circle with centre O passes through D, E and F. Area of the circle is 3π cm². What is the perimeter of the triangles ABC?

a) 12√3 cm b) 18 cm
c) 6√3 cm d) none

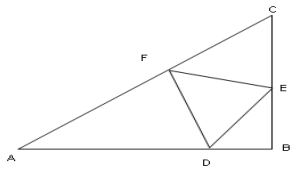
10) Two trains Punjab mail and Lucknow mail starts simultaneously from patiyala and Lakhimpur respectively towards each other with the speed of 40km/hr and 60km/hr respectively on the same track Lakhimpur is 500km due east of Patiyala. A plane starts flying at 200 km/hr at the same time from Patiyala to jalandhar. Jalandhar is 100km due north of Patiyala. After travelling sometime two trains Punjab mail and Lucknow mail collides with each other. The plane moves continuously to and fro between Patiyala to Jalandhar till the collision of the trains. How far would the plane have travelled?

a) 100km b) 1000km
c) 2000km d) can't be determined

11) In the above question (number 10) what is the distance between the place of accident and the plane at the moment of accident of two trains?

a) 200 km b) 250 km
c) 400 km d) can't be determined

12) In the given figure ∠B is right angle. AD: BD = 3:2and CE: BE = 5:2 and AF: FC=1:1.What is the area of ΔABC, if the area of ΔBDE is 20 cm²?

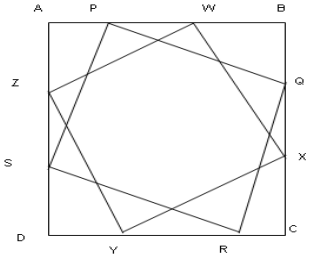


a) 40 cm² b) 35 cm²
c) 52.5 cm² d) none

13) In a triangle ABC with side AB = AC and ∠BAC =20°, D is the point on side AC and BC = AD. Find ∠DBC:

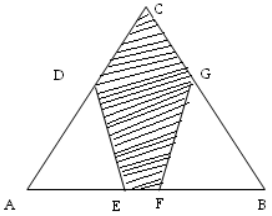
a) 50° b) 45° c) 65° d) 70°

14) In the adjoining figure ABCD, PORS and WXYZ are three squares. Find number of triangles and quadrilaterals in the figure:



a) 24 and 16 b) 28 and 15
c) 27 and 16 d) none

15) In the given figure ABC is a triangle in which CDEFG is pentagon. Triangle ADE and BFG are equilateral triangles each with side 2cm and EF = 2cm. Find the area of the pentagon:

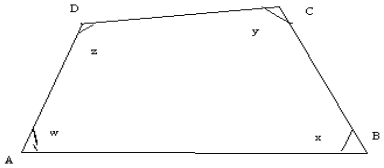


a) 8√3 cm² b) 7√3 cm²
c) 15√3 cm² d) 11.28 cm²

16) PQRS is a quadrilateral which is formed by joining mid–points of a quadrilateral ABCD, such that ∠A=75°, ∠B=95°, ∠C=110°. If ∠PQR =90°, what is the value of ∠PSR?

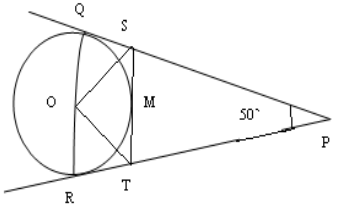
a) 90° b)110° c) 60° d) 75°

17) ABCD is a quadrilateral in which z/y = y/x = x/w = k and k is an integral. Also {w,x}<90 and {y,z}>90, then the difference between the greatest angle and smallest angle (i.e., z-w) is:



a) 168 ° b) 172° c) 128° d) 212°

18) In the adjoining figure 'O' is the center of the circle and PQ, PR and ST are the three tangents. ∠QPR = 50°, then the value of ∠SOT is:

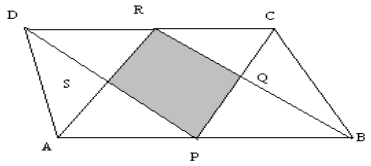


a) 30° b) 75°
c) 65° d) can't be determined

19) The number of points of intersection of the diagonals of a regular hexagon is:

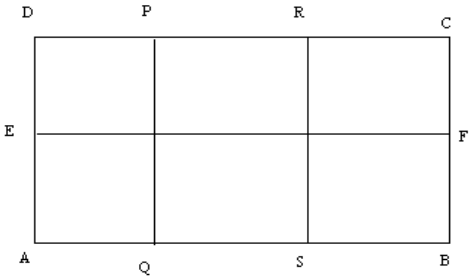
a) 10 b) 15 c) 18 d) 19

20) In the adjoining figure ABCD, P and R are the mid- points of the sides AB and CD. ABCD is a parallelogram. What is the ratio of the shaded to the unshaded region?



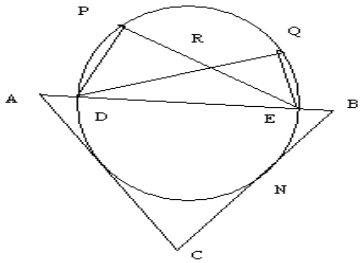
a) ½ b) 1/3 c) ¼ d) none of these

21) In the adjoining figure ABCD is a rectangle including the largest possible rectangle:



a) 16 b) 7 c) 18 d) 24

22) ABC is an isosceles triangle and AC, BC are the tangents at M and N respectively. DE is the diameter of the circle. ∠ADP = ∠BEQ = 100°. What is the value of ∠PRD?

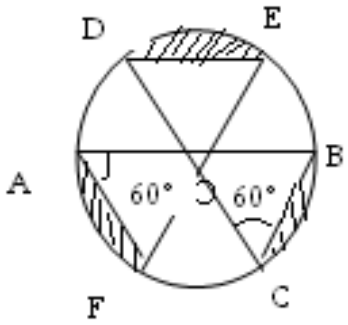


a) 60° b) 50° c) 20° d) can't be determined

23) In the above question if OC is the half of the AB, then the value of ∠ACB is:

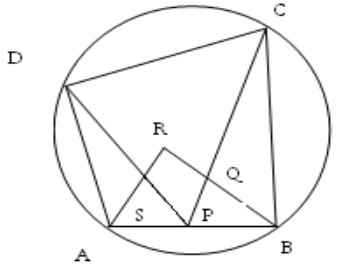
a) 60 degree b) 90 degree
c) 80 degree d) can't be determined

24) In the adjoining figure O is the centre of the circle with radius r^2 AB, CD and EF are the diameters of the circle. ∠OAF = ∠OCB =60 degree. What is the area of the shaded region?



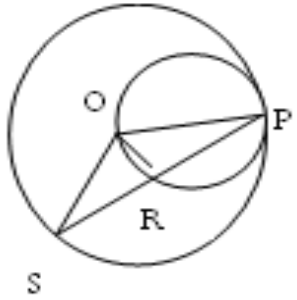
a) $r^2/2\ [\pi - (3\sqrt{3}/2)]$ b) $r^2/2\ [\pi - (3\sqrt{3}/4)]$
c) $r^2/3\ [\pi - (2\sqrt{3}/3)]$ d) Data insufficient

25) ABCD is a cyclic quadrilateral. The angle bisector of ∠A, ∠B, ∠C and ∠D intersect at P, Q, R and S as shown in the figure. These four points form a quadrilateral PQRS. Quadrilateral PQRS is a:



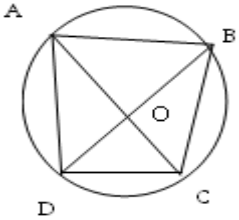
a) Square b) rhombus
c) Rectangle d) cyclic quadrilateral.

26) In the adjoining figure the diameter on the larger circle is 10cm and the smaller circle touches internally the larger circle at P and passes through O, the centre of the larger circle. Chord SP cuts the smaller circle at Rand OR is equal to 4cm. What is the length of the chord SP?



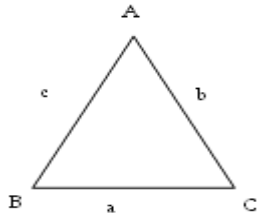
a) 20 cm b) 24 cm c) 6 cm d) $8\sqrt{2}$ cm

27) In the given figure ABCD is a cyclic quadrilateral DO= 8cm and CO =4 cm. AC is the angle bisector of ∠BAD. The length of AD is equal to the length of AB. DB intersects diagonal AC at O, then what is the length of the diagonal AC?



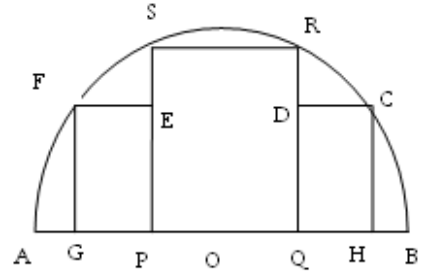
a) 20 cm b) 24 cm
c) 16 cm d) none of these

28) In the given triangle ABC, the length of sides AB and AC is same (i.e., b=c) and 60° < A < 90° deg, then the possible length of BC is:



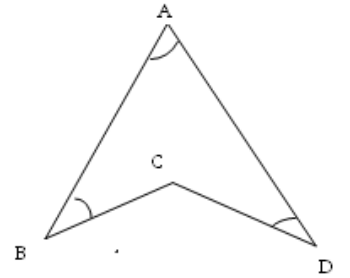
a) b < a< 2b b) c/3 < a< 3a
c) b <a<b√3 d) c< a<c√2

29) In the following figure there is semicircle with center 'O' and diameter AB (=2r). PQRS is a square of maximum possible area. P and Q lie on the diameter AB and R, S lie on the arc of the semicircle, there are two more squares of maximum possible area EFGP and CDQH. What is the sum of lengths RC and FS?



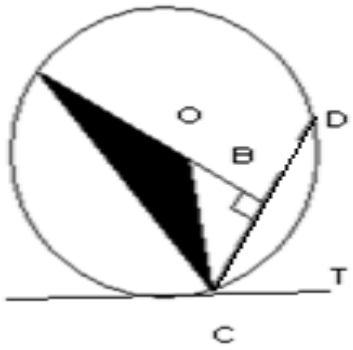
a) √ (2/5) (2r) b) (2√2r) / 5
c) (√2/5) r d) none of these

30) In the adjoining figure, ∠BAD = a, ∠ABC = b, ∠BCD = c , and ∠ADC = d, find the value of ∠ABC interms of a, c and d is:



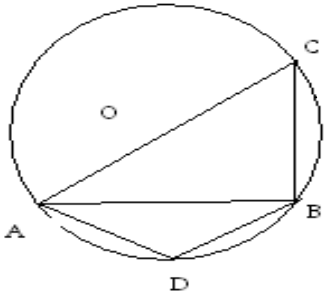
a) c – (a + d) b) a – (c+ d)
c) b – (c + d) d) none

31) In the given diagram CT is tangent at C, making an angle of π/4 with CD. O is the centre of the circle. CD = 10cm. What is the perimeter of the shaded region (ΔAOC) approx.?



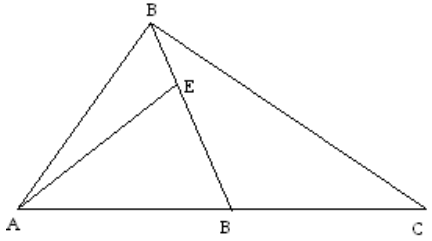
a) 27 cm b) 30 cm c) 25 cm d) 31 cm

32) In the given diagram, O is the centre of the circle and AC is the diameter. ∠ADB is 120°. Radius of the circle is 6cm, what is the area of the triangle ABC?



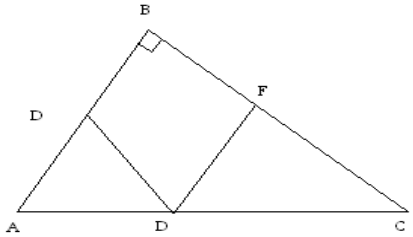
a) 18 √3cm² b) 24√3 cm²
c) 27 cm² d) data is insufficient

33) In the given figure ABC is a triangle in which 3AD = 2BE. What is the ratio of area of ΔABE and area of ΔABC?



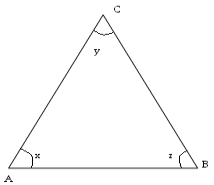
a) 1/12 b) 1/3 c) ½ d) none

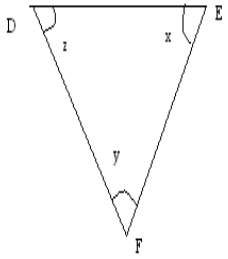
34) In the adjoining figure ABC is a right angled triangle, BDEF is a square, AE = 7.5 cm and AC = 18 cm. What is the area of the triangle ABC?

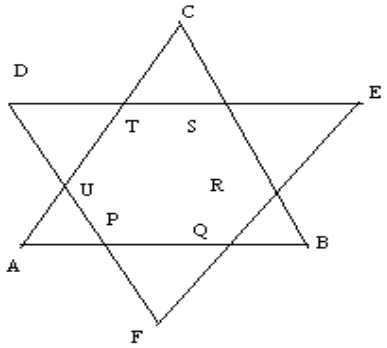


a) 76.621 cm² b) 70.054 cm²
) 83.25 cm² d) 90.90 cm²

35) There are two congruent triangles each with area 198cm². Triangle DEF is placed over triangle ABC in such a way that the centroid of both the triangles coincides with each other and AB||DE as shown in figure, thus forming a star. What is the area of the common region PQRSTU?







a) 99 cm² b) 132 cm²
c) 148 cm2 d) can't be determined

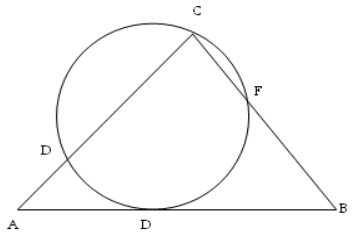
36) What is the sum of all the angles of a nine pointed star (i.e., ∠1 + ∠2 + ∠3 + ……∠8+∠9):
a) 909° b) 900° c) 720° d) 540°

37) A circle is circumscribed by the rhombus which in turn is made up by joining the mid-pints of a rectangle whose sides 12cm and 16 cm respectively. What is the area of circle?
a) 625 π / 26 b) 676 π 25
c) 576 π / 25 d) can't be determined.

38) There are n rectangles each with area 200 cm². If the dimensions each n rectangles are in integers and value of n is:
a) 4 b) 6 c) 12 d) none of these

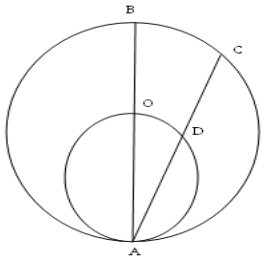
39) There are 8 points on a plane, out of which four points lies on circumference of the same circle and rest 4 points do not lay on a single circumference of a circle and also they are non-collinear. Maximum how many circles can be drawn such that each contains at least three of the given points?
a) 53 b) 32 c) 35 d) 56

40) ABC is an isosceles triangle a circle is such that it passes through vertex C and AB acts as a tangent at D for the same circle. AC and BC intersects the circle at E and F respectively AC = BC = 4cm and AB =6cm. Also D is the mid-point of AB. What is the ratio of EC: (AE+AD)?



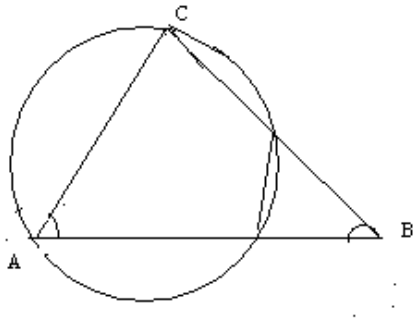
a) 1:2 b) 1:3
c) 2:5 d) none of these

41) A smaller touches internally to a larger circle at A and passes through the center of the larger circle. O is the center of the larger circle and BA, OA are of the diameters of the larger and smaller circles respectively. Chord AC intersects the smaller circle at a point D. If AC=12cm, then AD is:



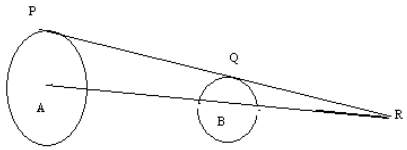
a) 4 cm b) 6 cm
c) 5.6 cm d) data insufficient

42) In the given figure ADEC is a cyclic quadrilateral; CE and AD are extended to meet at B. ∠CAD = 60degree and ∠CBA = 30degree. BD = 6cm and CE =5 √3 cm, what is the ratio of AC: CD?



a) ¾ b) 4/5
c) 2√3/5 d) can't be determined

Direction for the question number 43 and 44: In the following diagram A and B are the centers of the two different circles. PQR is a common tangent. Points A, B and R lie on the straight line.

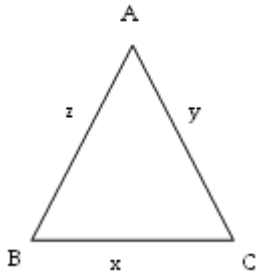


Distance between A and B is 25cn and the distance between P and Q is 24 cm. Diameter of the larger circle is 24 cm.

43) What is the ratio of AB: BR?
a) 7:5 b) 7:6 c) 7:10 d) data insufficient

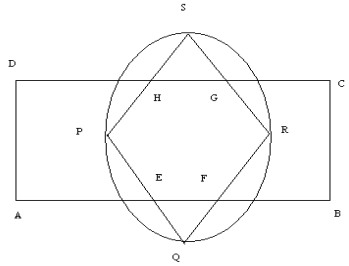
44) What is the ratio of area of ΔAPR and ΔBQR?
a) 169:36 b) 144:25
c) 625:144 d) can't be determined

45) If $x^2+y^2+z^2 = xy + yz + zx$, then the triangles is:



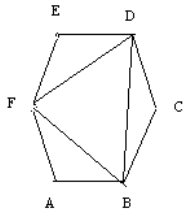
a) Isosceles b) Right angled
c) Equilateral d) Scalene

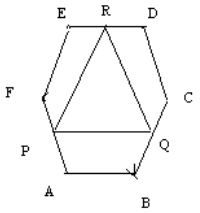
46) In the adjoining figure ABCD is a rectangle in which length is twice of breadth. H and G divide the line AB. A circle PQRS is circumscribed by a square PQRS which passes through the points E, F, G and H. What is the ratio of area of circle to that of rectangle?



a) 3π:7 b) 3:4 c) 25π:72 d) 32π:115

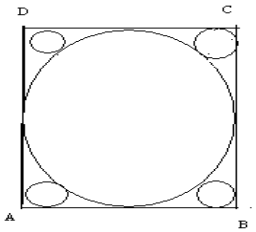
47) In the adjoining figure there are two congruent regular hexagons each with side 6 cm. what is the ratio of area of ΔBDF and ΔPQR, if P,Q,R are the mid – points of side AF, BC and DE?





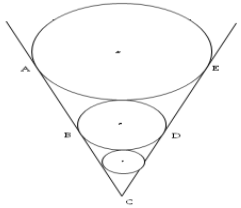
a) 6:5 b) 7:6 c) 4:3 d) 1:1

48) ABCD is a square, in which a circle is inscribed touching all the sides of square. In the for corners of square 4 smaller circles of equal radii is drawn, containing maximum possible area. What is the ratio of the area of larger circle to that of the areas of four smaller circles?



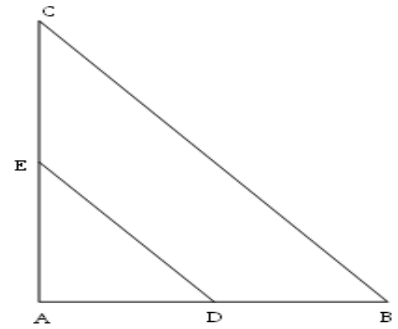
a) 1: (68 -48√2) b) 1:17√2
c) 3: (34-12√2) d) none of these

49) In the adjoining figure ∠ACE is a right angle there are three circles which just touch each other and AC and EC are the tangents to all the three circles to that of radii of the largest circle to that of smallest circle?



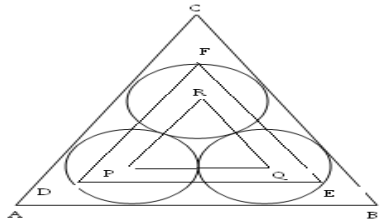
a) 17:12√2 b) 1 : (17 - 12√2)
c) 12: 17√2 d) none of the above

50) In a right angle triangle ABC, ∠ A is right angle DE is parallel to the hypotenuse BC and the length of DE is 65% the length of BC, what is the area of ΔADE, if the area of ABC is 68 cm^2?



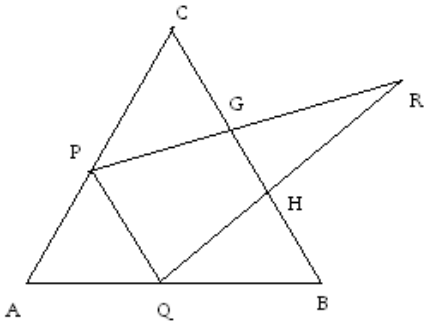
a) 27.83 cm^2 b) 41.6 cm^2
c) 28.73 cm^2 d) none of these

51) In the adjoining figure three congruent circles are touching each other. Triangle ABC circumscribes all the three circles. Triangles PQR are formed by joining the centre of the circle. There is a third triangle DEF. Points A, D, P and B, E, Q and C, F, R lie in the same straight lines respectively.



a) 3√2:2√2:1 b) 2(4+√3): (2+√3): √3
c) 2(1+√3): (2+√3):2 d) 2(1+√3): 2√3: √3

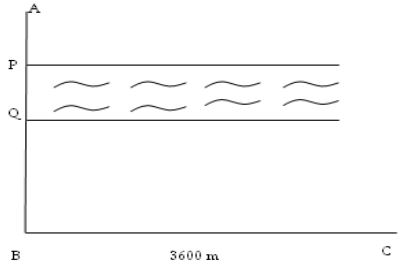
52) In the given figure, P and Q are the mid points of AC and AB. Also, PG = GR and HQ = HR. What is the ratio of area of ΔPQR: area of ΔABC?



a) ½ b) 2/3 c) 3/5 d) none of these

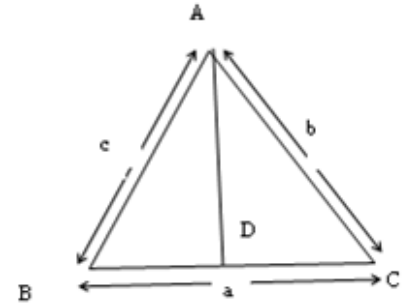
53) A trapezium PQRS inscribes a circle which touches the circle at M, A, N, B, Radius of circle is 10 cm. The length of each non- parallel side is 21 cm. what is the perimeter of trapezium?
a) 82 cm b) 84 cm
c) 85.5 cm d) can't be determined

54)In the given diagram , river PQ is just perpendicular to the national highway just turns at right angle and reaches to C. PA =500 m and BQ =700 m and width of the uniformly wide river (i.e., PQ) is 300m. Also BC =3600m. A bridge has to be constructed across the river perpendicular to its stream in such a way that a person can reach from A to C via bridge covering least possible distance. PQ is the widthness of the river, and then what is the minimum possible required distance from A to C including the length of bridge?



a) 4100 m b) 3900 m
c) 3000√2 m d) none of these

54) In a triangle ABC, AD is the angle bisector of ∠BAC and ∠BAD = 60 ®. What is the length of AD?



a) b+c/bc b) bc/b+c
c) $\sqrt{b^2+c^2}$ d) $(b+c)^2/bc$

ELEMENTS OF ALGEBRA

1) a + b + c = 13 what is the minimum value of (a – 3) (b – 2) (c + 1)?
a) 26 b) 27 c) 30 d) 19

2) If abcd = 81 what is the minimum value of a + b + c + d?
a) 18 b) 9 c) 12 d) 36

3) Which one of the following is correct?
a) $x + 1/x \leq -2$ b) x + 1/x =0
c) $x + 1/x \geq -2$ d) both (a) and (c)

4) If a, b, c are all distinct positive number, then (a + b) (b +c) (c +a)
a) Less than 4
b) less than 4abc
c) Greater than 8abc
d) greater than $(abc)^2$

5) If a, b, c are the distinct positive number then (a +b +c) (ab + bc + ac) is:
a) Greater than 9abc
b) less than 8abc
c) Equal to 10abc
d) Greater than 25abc

6) If x + y= 25 and $x^2 y^3 + y^2 x^3 = 25$, what is the value of xy?
a) 0 b) ± 1 c) 5 d) 4

7) If x and y are both positive, then the minimum value of (x + y)(1/x + 1/y) is:
a) 0 b) 1 c) 2 d) 4

8) If a, b, c and d are four positive number such that a + + c +d = 4, then what is the maximum value of (a +1) (b + 1) (c + 1) (d + 1)?
a) 32 b) 8 c) 16 d) 81

9) If x, y, z are three distinct positive real number such that x + y +z = 1, then the value of(1/x-1) (1/y -1) (1/z -1) is:
a) 16 b) 8 c) 4 d) 1

10) If x, y, z are real number such that x + y + z= 4 and $x^2 + y^2 + z^2 = 6$, then x, y, z lie in
a) [3/2, 2] b) [2/3,2]
c) [0, 2/3] d) none of these

11) If $x = 7 + 4\sqrt{3}$ and xy = 1, then the value of $(1/x^2 + 1/y^2)$ is:
a) 194 b) 57
c) $85\sqrt{3}$ d) $7 + 4\sqrt{3}/ 7 - 4\sqrt{3}$

12) If a, b, c are positive real number that least value of (a + b + c)(1/a + 1/b + 1/c):
a) 1 b) 9
c) 12 d) none of these

13) If a > 0, b > 0 and ab = 1, then the least value if expression (1 + a) (1 + b) is:
a) 2 b) 4
c) 1 d) ¼

14)If a, b, c are all positive and not equal then the value of
$\frac{(a + b + c)(ab + bc + ca)}{abc}$ is:
a) Less than 9 b) greater than 9
c) Less than or equal to 9 d) can't be determined

15)If a, b, c are all positive, then the maximum value of the expression
$\frac{(a^2 + a + 1)(b^2 + b + 1)(c^2 + c + 1)}{abc}$ is:
a) 3 b) 9 c) 27 d) 1

16) If $\leq x \leq 3$ and $2 \leq y \leq 4$, what is the maximum value of (x/y)
a) 2/3 b) 4 c) 3/2 d) 2

17) If a, b, c = 3, $a^2 + b^2 + c^2 = 6$ and 1/a + 1/b + 1/c=1,where a, b, c are all non-zero, then abc is:
a) 1/3 b) 2/3 c) 3/2 d) 1

18) $2^x = 4^y = 8^z$ and xyz = 288. Then value of 1/2x + 1/4y + 1/8z is:
a) 11/12 b) 11/96
c) 29/96 d) none of these

19) If $a^x = b$, $b^y = c$, $c^z = a$, then the value of xyz is…
a) 3 b) 0 c) 1 d) can't be determined

20) Let x,y ε N and 7x + 12y = 220. The number of solutions is
a) 1 b) 2 c) 3 d) infinitely many

21) IF $a^x = (x + y + z)^y$, $a^y = (x + y + z)^z$, $a^z = (x + y + z)^x$ Then,
a) 3(x + y + z) = a b) 2a = x + y + z
c) x + y + z = 0 d) x=y =z=a/3

22) If x/a =y/b =z/c then xy + yz + zx is equal to
a) $(a+ b+ c)^2 / x^2 + y^2 + z^2$
b) $[x^2 (a+ b+ c)^2 – a^2 (x^2 + y^2 + z^2])/ 2 a^2$

c) $(ax + by + cz) / (a+ b+ c)^2$
d) None of these

23) In the farm- house of Bhuwan Kisan, there were total 14 deer and ducks. One day a thief entered secretly in the farm-house and after killing in the deer and duck he took away all stuff except their legs. When Bhuwan noticed it he has found there 38 legs of deer and ducks. The number of deer in the farm house was:
a) 5 b) 8 c) 9 c) 10

24) In an autofair at Pragati Maidan, New Delhi, there are 600 vehicles consisting of only two wheelers and four wheelers. A world renowned tyre agency visits the fair to survey the tyre market which finds that there are total 2000 tyres are fixed in all the 600 vehicles, but without any stepney (or spare tyre). The number of two wheelers in the autofair is:
a) 300 b) 400 c) 180 c) 200

25) In the battle of Mahabharata Veer Arjun destroyed all the 125 raths (horse-carts). Out of which few were driven by 3 horses each and rest were driven by 5 horses each. Thus, he captured 125 damaged raths along with 575 horses. The raths which were driven by 5 horses belonged to the Kaurav and the raths which were driven by 3 horses belonged to the allied army of Kaurav. It is known that no any horse was injured in the battle. The number of raths originally belonged to the Kaurav(not to their army) is:
a) 60 b) 25 c) 75 d) 100

26) In an electric appliances shop there were some fans and coolers containing 3 blades and 4 blades respectively along with motor each. The cost of a fan is Rs. 1200 and that of cooler is Rs. 3000. One day due to short circuit the shop caught the fire. After extinguishing the fire, shopkeeper has estimated that 90 sets of motor bodies and 320 blades were burned and then nothing was left useful in this shop. What is the loss incurred from the coolers alone?
a) Rs.1, 50,000 b) Rs. 12,000
c) Rs. 4800 d) can't be determined

27) In the air talent show in the eve of Independence Day 90 aircraft (only Sukhoi and Mig-21) participated. It is known that for every one hour flight a Sukhoi and a Mig – 21 consume 2 litres and 3 litres of fuel respectively. The price of fuel for Sukhoi is $ 10 per litre and price for the fuel of Mig – 21 is $15 per litre. Thus all the aircrafts accounted $3050 for the fuel in one hour show. The number of Sukhoi planes is:
a) 20 b) 30 c) 40 d)50

Directions for the questions 28 to 30:
In the fruit market adjacent to IIM Lucknow, a fruit vender has total 20kg of fruits containing only mangoes and apples. The vender told to Ritika, an IIM student, that one kg apple contains only 7apples and 1 kg of mangoes contains 10 mangoes and it is known that all mangoes and apples are uniform in size individually. The vender has initially 176, pieces of apples and mangoes, in all. Ritika purchased 55 fruits to distribute equally among the group of 11 students, irrespective of the kind of fruit. i.e., mango or apple and then the vender is left with only 13 kg of fruits.
28) The number of apples remaining with the vendor when Ritika purchased 7kg of fruits, is:
a)21 b) 35 c)80 d)none of these

29) If the selling price of mangoes and apples be Rs. 35per kg and Rs. 40 per kg respectively, then how many rupees Ritika has spent for the 7kg of fruits?
a) Rs. 262.5 b) Rs. 255
c) Rs. 270 d) Rs. 155

30) If the vender have received 16.66% profit in selling of mangoes and 33.33% profit in selling of apples to Ritika, but for the rest of the selling the exchanges the profit percent between mangoes and apples. What is his overall profit percent for the rest of the fruits? (Data can be used from the previous questions if necessary)
a) 29.48% b) 5.92%
c) No any profit d) Can't be determined

31) One day my assistant Rajesh went to a stationary shop to purchase marker pens. He purchased the pens for Rs. 52 and he gave a Rs.100 note to the shopkeeper. The shopkeeper ordered Rajesh to take back Rs.48 in the denominations of only Re.1, Rs.2 and Rs.5. so Rajesh received total 26 coins from the shopkeeper. Minimum number of re.1 coins which Rajesh has with him if he has at least one coin of each denomination offered by the shopkeeper:
a) 4 b) 5 c) 7 d) 10

31) What is the solution of the following simultaneous equations?
$x+ y + z = 6$,
$x + 2y + 3z = 14$,
$x + 3y + z = 10$
a) x= 1,y = 2, z = 4 b) x= 1,y = 2, z = 3
c) x= 2,y = 1, z = 3 d) None of these

THEORY OF EQUATION

1) The value of x satisfying the equation $|x-1|^{\log_3 x^2 - 2\log_x 9} = (x-1)^7$
a) $\sqrt{3}$ b) 3^4 c) 3 d) $\text{Log}_4 3$

2) If the roots of 10 $x^3 - cx^2 - 54x - 27 = 0$ are in HP, then find the value of c:
a) 2 b) 6 c) 9 d) None of these

3) Find the number of pairs for (x,y) from the following equations: $\log_{100} |x+y| = ½$
$\text{Log}_{10} y - \log_{10}|x| = \log_{100} 4$
a) 0 b) 1 c) 2 d) None of these

4) The number of solutions real x, which satisfy the equation $2\log_2\log_2 x + \log_{1/2} \log_2 (2\sqrt{2}\, x) = 1$
a) 1 b) 2 c) 4 d) None of these

5) The solution set for which the equation satisfies $|x^2 + 4x + 3| + 2x + 5 = 0$:
a) $(-1+\sqrt{3}, -1-\sqrt{3})$ b) $[-2, (-1+\sqrt{3})]$
c) $[-4,(-1-\sqrt{3})]$ d) None of these

6) The real numbers x_1, x_2, x_3 satisfying the equation $x^3 - x^2 + \beta x + \gamma = 0$ are in A.P. find the intervals in which β and γ lie, respectively :
a) $(-\infty, 1/3][-1/27,\infty)$ b) $(-\infty,3)$
c) $(-1/3, 1/3)(-1/27,1/27)$ d) None of these

7) For all $x\varepsilon(0,1)$:
a) $E^x<1+x$ b) $\text{Log}_e (1+x) < x$
c) $\text{Sin } x > x$ d) $\log_e x>x$`

8) Let $p\geq 3$ be an integer and α,β be the roots of $x^2 - (p+1)x+1=0$, then the value of $\alpha^n + \beta^n$, where $n\varepsilon N$
a) Is divisible by 'p' b) Is an integer
c) Is a rational number d) both (b) &(c)

9) Let a,b,c be real, if $ax^2 + bx + c=0$ has two real roots α,β, where $\alpha<-1$ and $\beta>1$, then the value of $1+ c/a +|b/a|$ is:
a) Less than zero b) Greater than zero
c) Equal to zero d) Equal to $b^2 - 4ac$

10) If P and Q are the roots of x^2+px+q=0,then:
a) p=1 b) p=1 or 0
c) p=-2 d) p=-2 or 0

11) If p, q, r are positive and are in A. P., then the roots of the quadratic equation x^2+px + qx + r = 0 are real for
a) $|r/p-7|>=4\sqrt{3}$ b) $|p/r-7|>=4\sqrt{3}$

c) All p and r d) no p and r

12) The sum of all the real roots of the equation |x-2|^2+|x-2|-2=0 is:
a) 2 b) 3 c) 4 d) none of these

13) let p and q be the roots of the equation x2-bx+A=0 and let r and s be the roots of the equation x^2-18x+B=0.if p<q<r<s are in arithmetic progression, then A,B respectively equal to:
a) 8, 17 b) 3,7
c)-3,11 d)none of these

14) If the roots of the equation x^2-2ax+a^2+a-3=0 are real and less than 3, then:
a) a<2 b) 2<=a<=3
c) 3<a<=4 d) a>4

15) If α and β (α<β) are the roots if the equation x^2+bx+c=0, where c<0<b them:
a) 0<α<β b) α<0<β<|α|
c) α<β<0 d) α<0<|α|<β

16) If b>a, then the equation (x-a)(x-b)-1 = 0 has:
a) Both roots in [a,b]
b) Both roots (-∞, 0)
c) Both roots in (b, +∞)
d) One root in (-∞, a) and other root in (b, +∞)

17) Let α, β be the roots of $x^2 - x + p = 0$ and γ, δ be the roots of $x^2 - 4x + q = 0$. If α, β, γ, δ are in GP, then the integral values of p and q respectively are:
a) -2,-32 b) -2, 3
c) -6, 3 d) -6,-32

18) If α,β are the roots of the equation $x^2 - p x + q = 0$, then find the quadratic question , the roots of which are $(\alpha^2 - \beta^2)(\alpha^3 - \beta^3)$ and $(\alpha^3 \beta^2 + \alpha^2 \beta^3)$:
a) $px^2 - (5p + 7q) x - (p^6q^6 + 4p^2q^6) = 0$
b) $x^2 - (p^5-5p^3q+5pq^2)x + (p^6q^2-5p^4q^3+4p^2q^4)=0$
c) $x^2-(p^3q - 5p^5 + p^4q) - (p^6q^2 - 5p^2q^6)=0$
d) All of the above

19) Given that α, γ are that roots of the equation $Ax^2 - 4x + 1=0$ and β, δ are the roots of the equation $Bx^2 - 6x + 1 = 0$, then the values of A and B respectively such that α, β, γ and δ are in HP:
a) -5, 9 b) 3/2, 5
c) 3, 8 d) None of these

20) Let α,β be the roots of the equation (x-a)(x-b)=c, c≠0,then the roots of the equation (x-α)(x-β)+C=0 are:
a) a, c b) b, c
c) a, b d) a+c, b+c.

SET THEORY

1) In a city 45 % of the people read English and Hindi newspaper. 15% read only Urdu newspaper and 75 % read Hindi newspaper. If nobody reads all three newspaper and everybody read at least one new paper out of English, Hindi and Urdu newspapers, how many read Urdu newspaper?
a) Max 45% b) Max 55%
c) Min 25% d) Min 30%

Directions for question number 2-5:
In our coaching institute there are total 170 students and they use different vehicles for transportation viz. bike, car and taxi.
a. The ratio of student using all three vehicles to students using at least 2 vehicles is 2:9. The ratio of students using only one vehicle to students using at least 2 vehicles is 8:9.
b. Number of students using car only exceeds the number of students using bike allow by 14.
c. Number of students using taxi only exceed number of student using bike only by 12.
d. Number of students using taxi, bike and car is 90, 93, 97 respectively.

2) Number of students using all the three vehicles is:
a) 18 b) 12 c) 20 d) none of these

3) Number of students using no more the one vehicles is :
a) 76 b) 80 c) 60 d) can't be determined

4) Number of students using exactly two vehicles is:
a) 38 b) 55 c) 70 d) none of these

5) The number of students who are using both bike and car but not taxi is:
a) 23 b) 40 c) 36 d) data insufficient

6) In a survey among B- school students, 68% of those surveyed where in favor of at least in favor of one of the magazines - A, B and C. 38% of those surveyed favored magazine A, 26% favor of magazine B and 36% favored magazine C. If 11% of those surveyed favored all three magazines. What percent of those surveyed favored more than one of the three magines?
a) 25% b) 33% c) 21% d) 26%

Directions of question number 7 and 8:
In a class of 80 students 25 passed in QA and DI, 25 passed in DI and English, 20 passed in QA and English. 10 students passed in all the three subjects.
7) How many students passed only in Q.A.?
a) 20 b) 15 c) 12 d) can't be determined

8) If no student failed in all three subjects who passed in QA only, DI only and English only?
a) 50 b) 30 c) 25 d) can't be determined

Directions for question number 9 and 10:
A survey shows that 41%, 35% and 60 % of the people watch "Maine Pyaar kiya" "Maine Pyaar Kyun Kiya" and "Pyaar to Hona Hi Tha" respectively. 27% people watch exactly two of the three movie and 3% watch none.

9) What percentage of people watches all the three movies?
a) 40 % b) 6% c) 9% d) 12 %

10) If another survey indicates that 16% of the people watch Maine pyaar Kiya and pyaar to Hona hi Tha and 14% watch Maine Pyaar Kyun Kiya and Pyaar to Hona Hi Tha, then what percentage of the student watching only Maine pyaar Kyun kiya?
a) 10% b) 8% c) 12% d) 15 %

11) Find the number of positive integers up to 100 which are not divisible by 2,3and 5?
a) 24 b) 25 c) 26 d) 27

12) A survey was conducted at a coaching institution and it was found that there were 34students who appear in MAT. There were 37 students who appear in cat of which 17 students appeared in MAT. 30 students appeared in XAT of which 13 students appeared in MAT. Of the XAT applicant (i.e. Appeared students) 14 appeared in CAT and these six appeared in MAT. How many students appear in CAT but not in MAT or XAT?
a) 9 b) 10 c) 12 d) None of these

13) A survey among 151 persons is conduced regarding their favouriate channel of Radio-Radio City, radio mirchi, Radio life. It was found that every listener of Radio Mirchi also listen either Radio city or radio life. The number of person listing all the radio channels is the same as the number of person who listen none of the channels. 55 persons listen exactly two channels and 70 person listen only one channel. The

number of people who listen all the three channels?
a) 16 b) 13 c) 9 d) data in sufficient

14) In the group of 132 people 50, 60, 70 people like three different sweets- Barfi, Jalebi, Rasagulla, respectively. The number of people who like all the three sweets is half the number of people who like exactly two sweets. The number of people who like exactly any two out of the three sweets is the same as those who like exactly any other two of the three sweets is the same as those who like exactly any other two of the three sweets. The number of people who like the three sweets:
a) 12 b) 6 c) 8 d) none of these

15) In the previous question (number 14) find the number of people who like Rasagulla or Jalebi but not Barfi.
a) 82 b) 42 c) 48 d) 38

16) In a group of 80 employees, the number of employees who are engineers is twice that of the employees who are MBAs. The number of employees who are not engineers is 32 and that of those who are not MBAs is 56. The number of employees who are both engineers and MBAs is twice that of the employees who only MBAs are. How many employees are neither engineer (B.tech) no's MBAs?
a) 82 b) 42 c) 48 d) 38

Directions for question number 17-19:
There are 60 workers who work for M/s. Nottan Dibbawala Pvt.Ltd. Mumbai, out of which 25 are women. Also:
(a) 28 workers are married
(b) 26 workers are graduate
(c) 20 married workers are graduate of which 9 are men
(d) 15 men are graduate
(e) 15 men are married
17) How many unmarried women are graduate?
a) 2 b) 8 c) 0 d) can't be determined

18) How many unmarried women work in the company?
a) 11 b) 12 c) 9 d) none of these

19) How many graduate men are married?
a) 9 b) 15 c) 13 d) none of these

Directions for question number 20-23: In the year 222 B.C. 100 CAT aspirants appeared in CAT –(Common Admission Test for MBA in some prestigious institutions). They had to show their competency in all the following four areas viz- Maths, Data interpretation (DI), Logical Reasoning (LR) and English.
Number of aspirants who had qualified Maths is 55
Number of aspirants who had qualified LR is 38
Number of aspirants who had qualified Maths and English is 30.
Number of aspirants who had qualified LR and English is 15.
Number of aspirants who had qualified Maths and LR is 20
Number of aspirants who had qualified Maths , LR and English is 5.
Number of aspirants who had qualified DI is 22.
Number of aspirants who had qualified DI and LR IS 5.
Number of aspirants who had qualified DI and Maths is 5.
Number of aspirants who had qualified DI, Maths and LR is 5.
Number of aspirants who had qualified English is 50.
Number of aspirants who had qualified English could not qualify DI section.

20) Number of aspirants who had qualified only in DI section:
a) 17 b)22 c)27 d)none of these

21) Number of aspirants who had qualified in only Maths and LR sections:
a) 20 b) 10 c) 28 d) 38

22) Find the number of aspirants who had qualified in at least two sections out of 4 sections.
a) 45 b) 35 c) 55 d) can't be determined

23) Find the number of aspirants who had qualified none of the sections.
a) 12 b) 18 c) 7 d) 0

24) In the survey among 80 people, 50people like arrange marriage and 70 people like love marriage. What is the minimum and maximum number of people like both the marriages respectively?
a) 40, 45 b) 40,50
c) 30, 40 d) can't be determined

25) In a car agency one day 120 cars were decorated with three different accessories viz., power window, AC and music system. 80 cars were decorated with power windows, 65 cars were decorated with AC and 80 cars were decorated with music systems. What is the minimum and maximum number of cars which were decorated with all of three accessories?
a) 10,61 b) 10,45
c) 25,35 d) none of these

26) In our coaching there were 200 students enrolled for DI, 150 for English and 150 for Maths. Of these 80 students enrolled for both DI and English. 60 students enrolled for Maths and English, while 70 students enrolled for DI and Maths. Some of these students enrolled for all the three subjects. Diwakar teaches those students won are enrolled for DI classes only. Priyanka teaches those students who are enrolled for English only and Varun teaches those students who are enrolled for maths only. Sarvesh is a senior most faculty therefore, he can teach all the three subjects. Students always prefer a specialist for their respective subjects. If Diwakar teaches 80 students then the other three faculty can be arranged in terms of the number of students taught as:
a) Sarvesh> Varun> Priyanka
b) Sarvesh> Priyanka > Varun
c) Varun >Sarvesh> Priyanka
d) None of the above

Directions: Answer the question no. 27 to 29 on the basis of the information given below:
Sanskaram Karoti (SK) is a spiritual organization involved in performing spiritual rites. Currently it has 37 volunteers. They are involved in three jobs: Body massages (BM), yoga and pooja. Each volunteer working at least one of the three jobs mentioned above.
- A maximum number of volunteers are involved in yoga. Among them, the number of volunteers involved in yoga alone is equal to the volunteers having additional involvement in the pooja.
- The number of volunteers involved in pooja alone is double the number of volunteers involved in all the three jobs.
- 17 volunteers are involved in Body Massage (BM).
- The number of volunteers involved in body Massage slone is one less than the number of volunteers involved in pooja alone.
- Ten volunteers involved in the Body Massage are also involved in at least one more job.

27) Based on the information given above, the minimum number of volunteers involved in

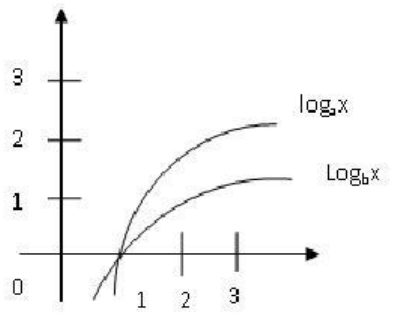
both yoga and Body Massage, but not in the pooja is:
a) 1 b) 3 c) 4 d) 5

28) Which of the following additional information would enable to find the exact number of volunteers involved in various jobs?
a) Twenty volunteers are involved in yoga
b) Four volunteers are involved in all three jobs
c) Twenty three volunteers are involved in exactly one task
d) No need for any additional information

29) After some time, the volunteers who were involved in all the three tasks were asked to withdraw from one task. As a result, one of the volunteers opted out of the Body Massage and one opted out of the pooja, while the remaining ones involved in all the three tasks opted out of the yoga. Which of the following statements, then necessarily follows?
a) The least number of volunteers in now performing Body massage
b) More volunteers are now associate with yoga as compared to pooja
c) More volunteers are now performing Body Massage as compared to pooja
d) None of these

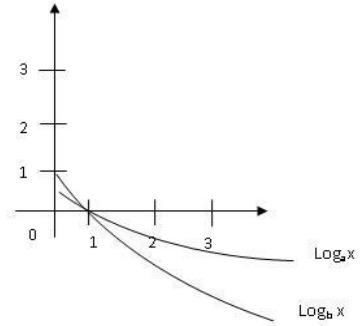
LOGARITHM

1) In the adjoining diagram there are two curvation graphs of $\log_a x$ and $\log_b x$ shown for x>0. If (a,b) > 0 and a≠b≠1, then :



a) a < b b) a > b
c) Can't be determined d) None of the above

2) In the adjoining diagram graphs of $\log_a x$ and $\log_b x$ are shown for x>0 and 0<a<1, then



a) a < b b) a > b
c) Can't be determined d) None of these

3) Find the sum of 'n' terms of the series.
$\text{Log}_2 \frac{x}{y} + \log_4 (\frac{x}{y})^2 + \log_8 (\frac{x}{y})^3 + \log_{16}(\frac{x}{y})^4 + \ldots\ldots\ldots$
a) $\text{Log}_2(\frac{x}{y})^{4n}$ b) $n(\log_2(\frac{x}{y}))$
c) $\log_2(x^{n-1}/y^{n-1})$ d) $\log_2\left(\frac{x}{y}\right)^{n(n+1)}$

4) find the value of $\log m + \log m^2 + \log m^3 + \ldots\ldots + \log m^n$:
a) (n(n+1)/2 b) mn/2
c) (n(n+1)) log m/2 d) n(n+1) log m^2

5) The greatest possible value of n could be if $9^n < 10^8$, given that log 3= 0.4771 and n ϵ N :
a) 7 b) 8 c) 9 d) 10

6) The set of solutions for all x satisfying the equation
$x^{log_3 x^2 + (log_3 x)^2 - 10} = \frac{1}{x^2}$
a) {1, 9} b) {1, 4, 16}
c) {1, 9, 81} d) $\{9, \frac{1}{81}, 1\}$

7) The set of all the solutions of the inequality $\log_{(2-x)}(x-3) \geq 1$ is :
a) x<2 b) x>3
c) (x<2)∪(x>3) d) None of these

8) If $\log_3 30 = \frac{1}{a}$ and $\log_5 30 = \frac{1}{b}$ then the value of 3 $\log_{30}$ 2 is:
a) 3(1+a+b) b) 2(1-a-b)
c) 3(1-a-b) d) 3(1+a-b)

9) The set of all values of x satisfying $x^{\log_x |3-x|^2} = 4$:
a) (√3 , 2) b) (1,5)
c) [1,∞) d) {1,5}

10) The number of solutions of the expression satisfying $4^{x^2+2} - 9.2^{x^2+2} + 8 = 0$ is:
a) 0 b) 1 c) 2 d) None of these

11) The number of solutions satisfying, for X ε R
$x^{[(\log_3 x)^2 - \frac{9}{2}\log_3 x + 5]} = 3\sqrt{3}$
a) 0 b) 1 c) 2 d) 3

12) Find the values of x satisfying $log_{x^2+6x+8} log_{2x^2+2x+3}(x^2 - 2x) = 0$ is :
a) 0 b) -1 c) 2 d) -3

13) For every p being real number the solution set of the inequality
$log_{10}p + (log_{10}10p)^2 + (log_{10}100p)^2 \leq log_{10}(10)^9$
a) p≥10^{-4} b) p>$10^{1/2}$
c) $10^{-4} \leq p \leq 10^{1/2}$ d) None of these

14) The number of real solutions of the equation $2log_2 log_2 x + log_{\frac{1}{2}} log_2(2\sqrt{2}x) = 1$ is:
a) 1 b) 2 c) 3 d) More than 3

15) The number of solutions of the equation $log_{x/2}x^2 + 40log_{4x}\sqrt{x} - 14log_{16x}x^3 = 0$ is:
a) 0 b) 1 c) 2 d) 3

16) Find the solution set of x, for the given inequality $\log_m n > 1$, where m= $\frac{5^2 - x^2}{4^2}$ and n=$\frac{2(12-x)-x^2}{14}$:
a) (-5,4) b) {-3,3}
c) (-3,1) ∪(3,4) d) None of these

17) Find the values of x satisfying the following system of inequalities $\frac{\sqrt{(2-x)(x-8)}}{log_{3/10}\frac{10}{7}[log_2(\frac{5}{2})}} \geq 0$ and $\frac{2^x}{8} - (2^5 - 1) > 0$
a) 6 b) 8 c) 4 d) (2,8)

18) The least value of expression $2\log_{10}x - \log_x(1/100)$ for x>1 is :
a) 2 b) 3 c) 4 d) 5

19) The equation $x^{[(\frac{3}{4})(log_2 x)^2 + log_2 x - (\frac{5}{4})]} = \sqrt{2}$ has:
a) at least one real solution
b) Exactly three real solutions
c) Exactly one irrational solution
d) all of these

20) The values of x for which the given equation satisfy $log_{(2x+3)}(6x^2+23x+21) = 4 - log_{(3x+7)}(4x^2+12x+9)$ are:
a) (-8,5) b) -1/4 only
c) -4,-1/4 d) -1/4,-2

21) Find all real values of x satisfying equation $|x-1|^{log x^2 - 2log_{(x)}9} = (x-1)^7$
a) (2,9) b) (9,81)
c) (2,81) d) none of these

FUNCTIONS AND GRAPH

Directions for questions number 1-10: solve the following questions on the basis of following functions
a) $P_{(n+1)} = P_{(n)} - P_{(n-1)}$, P is term of the sequence and $P_{(0)} = 0$, $P_{(1)}=1$
b) $Q_{(n+1)} = Q_{(n)} + Q_{(n+1)}$; Q is the term of the sequence and $Q_{(0)} = 0$, $Q_{(1)}=1$

1) What is the 10th term of series $Q_{(n+1)}$ starting from n=0 ?
a) 34 b) 89 c) -1 d) 55

2) What is the 12th term of the series $P_{(n+1)}$ starting from n=0?
a) -1 b) 0 c) 1 d) None of these

3) The value of Q cannot be :
a) 144 b) 55 c) 98 d) 34

4) The value of P cannot be:
a) -1 b) 0 c) 1 d) 4

5) Which of the following be positive value of $Q_n + P_{n+1}$?
a) 55 b) 234 c) 146 d) None of these

6) The value of $Q_n + P_n$ cannot be:
a) 2 b) 22 c) 55 d) 88

7) The value of $Q_{[Q(n+1)]}$ can be:
a) 55 b) 13 c) 21 d) 89

8) The value of $Q_n * P_n$ can be :
a) -34 b) 89 c) -233 d) 377

9) The value of $[Q_{(n)}]^{Pn}$ can be:
a) -1 b) 0.2 c) -13 d) 5.5

10) The value of $Q_{(n-1)} + Q_{(n+1)} + L_{(n-1)} + L_{(n+1)}$ cannot be:
a) 30 b) 75 c) 18 d) 122

Directions for question number 11-14:
let S be a sequence of the form [K(1), K(2), …… K(m)]. Each term can be defined by the following four functions:
P[K(x)] = 3Q [K(x)] – 4
Q[K(x)] = 2R [K(x)] + R[K(2x)]
R[K(x)] = S [K(2x)] – S [K(x)]

$$S[K(x)] = \begin{cases} 0 & \text{if } x<0 \\ 3x+4 & \text{if } 0\le x\le 6 \\ 4x+3 & \text{if } x>6 \end{cases}$$

Also if Q[K(x)] = y then PQ [K(x)] = P[K(y)]

11) What is the value of P[K(3)] ?
a) 3 b) 5 c) 32 d) 137

12) What is the value of QRS [K(1)] :
a) 112 b) 224 c) 448 d) None of these

13) What is the value of R[K(5)] – S[K(10)]:
a) 43 b) -19 c) 14 d) None of these

14) What is the value of $\sum_{x=-\infty}^{+\infty} R[K(x)]$
$\sum_{x=1}^{4} R[K(x)]$= R[K(1)] * R[K(2)]*R[K(3)]*R[K(4)]?
a) -1 b) 0 c) 1 d) None of these

Direction for question number 15 to 20: These questions are based on the following information.
A polynomial can be represented in an equivalent sequence from. The polynomial $p_1x^{k1} + p2x^{k2} + p_3x^{k3} + \dots p_n x^{kn}$ where $k_1 > k_2 > k_3 \dots > k_n$ and $a_i \neq 0$ for $1 <= i <= n$ will be represented as the sequence (p1,k1,p2,k2,p3,k3…pn,kn) Also we add, subtract, multiply as we do for corresponding polynomials. The resulting polynomial is again represented as a sequence.

15) (3,4,2,2,5,1)+(2,4,3,3,7,2) equals:
a) (5,4,3,4,9,3,5,1) b) (5,4,5,5,12,3)
c) (5,4,3,3,9,2,5,1) d) None of the these

16) (6,5,7,4,8,3)-(3,5,5,3,7,1) equals
a) (3, 5, 2, 2, 1, 2) b) (3, 5, 7, 4, 3, 3,-7,1)
c) (3, 5, 7, 3, 8, 2) d) None of these

17) (1,1,2,0)*(1,1,2,0)*(1,1,2,0) equals
a) (1, 3, 6, 2, 12, 1, 8. 0) b) (1, 3, 2, 2, 3, 1, 4, 0)
c) (1, 8, 2, 4, 3, 2) d) None of these

18) The expression $\frac{3,3,-10,2,7,1}{3,2,-7,1}$ equals :
a) (1, 1, 1, 0) b) (1, 1, -1, 0)
c) (2, 2, -2, 0) d) None of these

19) Which of the following is incorrect?
a) (1,1,1,0)*(1,2, -1, 1, 1, 0) = (1, 3, 1, 0)
b) (2, 2, 1, 1)*(4, 4, 4, 4)=(16, 6, 10, 5)
c) $\frac{(1,2,4,1,4,0)}{(1,1,2,0)}$ = (1,1,2,0)
d) None of these

20) (4,4,3,3)*(2,2,1,1)+(2,2,1,1)-(3,5,2,4) equals:
a) (8,6,5,5,7,4,2,3,2,1) b) (8,6,7,5,1,4,2,2,1,1)
c) (8,6,7,5,2,4,3,2,1,1) d) None of these

21) 21.What is the value of h(3,2,8,7)%g(4,7,10,8).?
a) 1 b) ½
c) 24 d) None of the these

22) what is the value of h(fg(2,5,7,3),9).?
a) 2 b) 3 c) 5 d) None of the these

23) What is the value of h(h(7,13,5,9),h(4,6,12,14)?
a) 1 b) 1/7 c) 7 d) Not defined.

24) If A=h(3,7,6,5), b=h(16,11,13,3), C=h(9,4,8,7), D=h(19,14,18,7), then which of the following is true.?
I.A>B>C<D
II.D>A>C
III.A<D<B
IV.B=C<D
a) Only I is true.
b) Only II is true.
c) II and III are true.
d) III and IV are true.

25) If a_k*b_k is an integral multiple of c_k*d_k or c_k*d_k is an integral multiple of a_k*b_k , which of the following is indeterminable .?
a) f(g(a1,b1,c1,d1),h(a2,b2,c2,d2))
b) h(h(a1,b1,c1,d1),h(a2,b2,c2,d2))
c) h(h(a1,b1,c1,d1),g(a2,b2,c2,d2))
d) None of these.

Direction for question number 26 – 32: Following questions are based on the given information from the following function f(x)
f(x) = 2bx + f (-x); if x< 0
f(x) = a if x=0
f(x) = b + c – 2cx + f(x – 1); if x>0

26) f(8) equals:
a) a + 8b – 32c b) a + 8(b – 8c)
c) 8(a + b – c) d) None of these

27) f(-19) equals:
a) a – 19b + 361c b) a + 19(b – 19c)
c) a – 19(b + 19c) d) None of these

28) If a = 15, b = 11, c = -3 then f(7) equals:

a) 239 b) 115
c) -147 d) None of these

29) If a = 10, b = - 7, c = 6 then f(- 10) equals:
a) -660 b) -520
c) -250 d) None of these

30) If a = 4, b = - 7, c = -18 then for what value of x,y(x) = 0?
a) 4 or 9 b) ½ or 4/9
b) – 1 or 18 d) none of these

31) If a = 12, b = 10, c = 8 then for what value of x,f(x) <0
a) ¾ b) 1
c) -2 d) None of these

32) 32. if b = -a, c = a, f(f(1)) equals;
a) $a + a^2 + a^3$ b) $a + a^2 - a^3$
c) $a - a^2 + a^3$ d) None of these

Direction for question number 33-37:
A function $f(z_1, z_2, z_3,\ldots z_n) = f(z_1, z_n) + f(z_2, z_3,..z_{n-1}) + (z_1 + z_2 +\ldots z_n)$: for n>0
f(y, z) = f(z, 0) + f(0, y)
f(y, 0) = y + f(y – 1,0)
f(0, y) = y - f(0, y – 1)
f(0, 0)=1

33) Find the value of f(1,2,3,4...n), whera n is a perfect cube less than 50 and n is greater than 25:
a) 1665 b) 1089 c) 729 d) Not defined

34) Find the value of f(0,1,0,1):
a) 2 b) 4 c) 8 d) None of these

35) Find the value of f(8,8,8,2,2,2):
a) 22 b) 88 c) 77 d) 66

36) Find the value of f(1,1,3,1,1,3):
a) 17 b) 28 c) 21 d) none of these

37) 37. f(9,2,k,0,9,4) = 124, then the value of k is:
a) 0 b) 5 c) 9 d) none of these

Direction for question number 33-37:
A function defined as follows
$f(a_1, a_2, a_3,\ldots a_n) = a_1 2^{n-1} + a_2 2^{n-2} + a_3 2^{n-3} + \ldots a_n 2^0$
The above function is repeated until the value of function reduces to a single digit number
38) f(128) equals:
a) 1 b) 2 c) 4 d) 8

39) What is the values of f[f(888222) + f(113113)]:
a) 6 b) 7 c) 8 d) 9

40) f(9235) + f(9450) equals:
a) 5 b) 3 c) 2 d) none of these

SEQUENCE, SERIES AND PROGRESSIONS

A bacterium gives birth to two new bacteria in each second and the life span of each bacterium is 5 seconds. The process of the reproduction is continuous until the death of the bacteria. Initially there is one newly born bacteria at time t=0, then find the total number of live bacteria just after 10 seconds :
a) 3^10/2 b) 3^5(3^5-1)
c) 3^10-2^10 d) 3^10-2^5

1) If S_n be defined as the sum of n terms of the series S. Such that $S=2^{66} – 2^{65} – 2^{64}$….Find S_{20}:
a) 400 b) 2^{47} c) 2^{20} d) None of these

2) If U_m be defined as the sum of m terms of the series V, where $V = S_m + S_{m+1} + S_{m+2}+\ldots$ Find U_{34}:
a) $2^{33} – 1$ b) $2^{33} + 1$
c) $2^{34} – 1$ d) None of these

3) Let $a_1, a_2, a_3,\ldots a_n$ be an A.P. and S_1, S_2 and S_3 be the sum of first n, 2n and 3n terms respectively then $S_3 - S_2 - S_1$ is equal to, if a is first term and d is common difference:
a) 3a – 2n – d b) a(n+2d)
c) 3a + 2^{nd} d) $2n^2d$

4) Consider the sets T_n = {n, n+3, n+5, n+7, n+9} Where n = 1, 2, 3… 99. How many of these sets contain 5 or any integral multiple thereof (i.e., any one of the numbers 5, 10, 15, 20, 25…)?
a) 81 b) 79 c) 80 d) None of these
5) If (x) is the least integer greater than or equal to x, then find the value of the following series:
{√1} +{√2} +{√3}+{√4}+…+{√99}+{√100}
a) 715 b) 55 c) 157 d) 835

6) If [x] is the greatest integer less than or equal to x, then find the value of the following series
[√1] +[√2]+ [√3]+ [√4]+…+ [√323]
a) 3237 b) 2373 c) 3723 d) None of these

Directions for question number 8-14: King Dashratha of Ayodhya on his birthday decided to offer 100 coins of gold among his 4 sons and 3 wives. The 4 sons and 3 wives. The denomination of each coin is Re.1. He put all the 100 coins in 7 bags in such a way that by taking a proper combination of various bags any integral sum (i.e., Rs. 1, 2, 3, 4… 100) can be obtained and it is known that the only whole sum of any bag can be taken.

7) What is the maximum amount received by any one of the recipient?
a) Rs. 79 b) Rs. 96 c) Rs. 37 d) None of these

8) If all the coins, of these who have odd number of coins, are combined then minimum how many people are required to combine their coins to make the same amount having even number of coins:
a) 2 b) 3 c) 4 d) can't be determined

9) If the two least amounts are combined with highest one then minimum how many persons combined their coins to get the same amount:
a) 2 b) 3 c) 4 d) 5

10) If the king wanted to distribute the amount equally among them, then how many people would have received more amounts (number of coins) than that of previously retaining two coins with himself:
a) 6 b) 3 c) 4 d) None of these

11) If the king also included hanuman another 8^{th} candidate, on this occasion and distributed 200 coins in similar fashion so that the combustion of two or more person's coin could yield any internal sum from 1 to 200, then what was the maximum amount (in Rs.) that anybody had received ?
a) 128 b) 73 c) 37 d) 64

12) In the previous problem (number 12), if the people who had obtained the coins equal to odd powers of 2 (i.e. 2^1, 2^3, 2^5….etc) cannot combine their money with any other. Then maximum how many different sums can be made?
a) 5! b) 28 c) 31 d) 158

13) In the problem number 12 if we assume hanuman as a special guest who received the maximum amount but he distributed his sum in the same proportion as others had received previously leaving the person who had received initially the second highest amount. The number of coins that hanuman was left with:
a) 10 b) 13 c) 11 d) 9

14) The sum of an infinite geometric progression (G.P) is 2 and the sum of the G.P made from

cubes of the terms of this infinite series 24.the values a and r respectively (where a is) the first term and r denotes common ratio of series) :
a) -2,3 b) 3,-1/2
c) 0,1/2 d) Can't be determined

15) The sum of first ten terms of an A.P is 155 and the sum of first two terms of a G.P is 9. The first term of the A.P is equal to the common ratio of G.P and the first term of the G.P is equal to common difference of the A.P which can be the A.P as per the given conditions?
a) 2,4,6,8,10 b) 25/2, 79/6, 83/6
c) 2,5,8,11.. d) Both (b) and (c)

16) The sum of an infinite geometric series is 162 and the sum of its first n terms is 160. The inverse of its common ratio is an integer, then how many values of common ratio (r) are possible?
a) 1 b) 2 c) 4 d) 5

17) In the previous question how many values of n are possible?
a) 1 b) 2 c) 3 d) 4

PERMUTATION AND COMBINATION

1) Maximum number of points of intersection of 6 circles is?
a) 30 b) 28 c) 15 d) none

2) Maximum number of points of intersection of 6 straight lines?
a) 30 b) 28 c) 15 d) none

3) Maximum number of points into which 3 circles and 3 lines intersect?
a) 21 b) 27 c) 9 d) 3!

4) 8 identical coins are arranged in a row .the total number of ways in which the number of heads are equal to number of tails is?
a) 35 b) 15 c) 140 d) 70

5) Two straight lines intersect at point O. Points $A_1,A_2,A_3,A_4,A_5,\ldots\ldots,A_m$ are taken on one line and points $B_1,B_2,B_3,\ldots\ldots.B_n$ on the other. If the point O is not included, the number of triangles that can be drawn using these points as vertices , is:
a) $nc_2 + mc_2$ b) $2nc_2$
c) $m+n\ C_2$ d) none of these.

6) How many different nine digit numbers can be formed from the number 22 33 55 888 by rearranging its digits so that the odd digits occupy even positions?
a) 60 b) 75 c) 88 d) 77

7) The straight lines I_1, I_2, I_3 are parallel and lie in the same plane. A total number of m points on I_1 , n points on I_2, k points on I_3 are used to produce the triangles, the maximum number of triangles formed with vertices at these points are :
a) $m\ C_3 * nC_3 * kC_3$
b) $(m+ n+ k)\ C_3 - (mC_3+nC_3+kC_3)$
c) $(m+ n+ k)\ C_3$
d) None of the above.

8) Given that n is the odd, the number of ways in which three numbers in AP can be selected from 1, 2, 3, 4,……..,n is :
a) $(n-1)^2/4$ b) n^2 c) n^3 d) $(n-2)^2$

9) Eight straight Lines are drawn in the plane such that no two lines are parallel and no three lines are concurrent. The number of parts into which these lines divide the plane is :
a) 73 b) 37 c) 17 d) 72

10) The number of divisors of the form 4n + 2 (n>=0) of the integer 240 is :
a) 6 b) 4 c) 3 d) 12

11) The number of rectangles excluding squares from a rectangle of size of 12×8 is :
a) 1234 b) 625 c) 2460 d) 256

12) Two lines intersect at O. Points $A_1,A_2,\ldots\ldots\ldots A_n$ are taken on one of them and $B_1,B_2,B_3,\ldots\ldots.,B_n$ on the other. The number of triangles that can be formed with these (2n+1) points is :
a) n b) n^2 c) n^3 d) n^4.

13) The number of ways in which 9 identical balls are place in three identical boxes?
a) 12 b) 6 c) 9 d) 9!/3!

14) The number of ways in which 30 coins of 1 rupee each can be given to six persons so that none of them receives less than 4 coins?
a) 246 b) 462 c) 30! /6! d) None

15) Find the number of circles can be drawn out of 10 points of which 7 points are collinear is?
a) 35 b) 85 c) 70 d) 124

16) The number of natural numbers of two or more than two digits in which digits from left to right are in increasing order is?
a) 205 b) 520 c) 502 d) none.

17) In how many ways a cricketer can make a century with fours and sixes only?
a) 6 b) 9 c) 8 d) 10

18) The number of permutations of the letters of the word LUMINARY such that neither the pattern LURY AND MINA occurs?
a) 46800 b) 24600 c) 40086 d) none

19) 10 students are to be seated in two rows equally for the MOCK CAT in a room. There are two sets of papers. Code A and Code B. Each of the two rows can have only one set of paper but different that from the other row. In how many these students can be arranged?
a) 2775600 b) 1200560
c) 125600 d) 7257600

20) Aman Verma and Mini Matur jointly host a TV program in which one day n guests attended the show. There each guest shakes hands with every other guests and each guest has to shake hand with each of the hosts. If there happens to be total of 65 shake hands, Find the number of guests attended the show?
a) 13 b) 14 c) 10 d) 9

21) The number of ways in which an examiner can assign 50 marks to 10 questions giving not less than 3 marks to any question is :
a) 29C9 b) 47C3 c) 52C2 d) 40C10

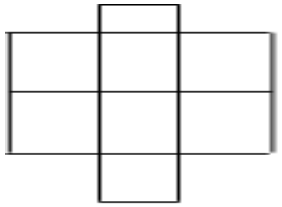
22) For $x \varepsilon R$,let [x] denote the largest integer less than or equal to x , then the value of :
E=[1/3]+[1/3+1/100]+[1/3+2/100]+.....+[1/3+99/100] is :
a) 22 b) 66 c) 33 d) none

23) The number of positive integers from 1 to 10^6 (both inclusive) which are neither perfect squares, nor cubes, nor perfect fourth powers is :
a) 918990 b) 998911 c) 998910 d) none

24))Kumar's family consist of grandfather ,'m' sons and daughters and 2n grand children .They are to be seated in a row for dinner .The grandchildren wish to occupy the n seats at each end and the grandfather refuses to have a grandchild on either side of him. In how many ways can the Kumar's family can be made to sit?
a) (2n!)(m-1)! b) 2n!)(m!)(m-1)

c) (2m!)(n!) d) None

25) Six P's has to be placed in the squares of the diagram given below, such that each column contains at least one P. In how many ways it can be done?



a) 26 b) 13 c) 8 d) 24

26) A box contains two red, three green and four blue balls, In how many ways can three balls be drawn from the box if at least one green ball is to be included in the draw?
a) 23 b) 64 c) 46 d) none

27) Ajay has 7 relatives, 3 men and 4 women. His wife kajol also has 7 relatives, 3 women and 4 men. In how many ways can they invite 3 men and 3 women so that 3 of them are ajay relatives and 3 his wife kajol's?
a) 485 b) 458 c) 365 d) none

28) Serena and Venus were only two women participating in a chess tournament .Every participant played two games with every other participant .The number of games that men played between themselves proved to be exceed by 66, compared to the number of games the men played with women .How many participants were there?
a) 156 b)610 c)13 d)108

29) In the previous questions (no.28) how many games were played?
a) 208 b) 156 c) 316 d) none of these

30) Six Burfis and six rasagulla are to be distributed among ten girls so that each girl receives at least one piece of sweet out of rasagulla and Burfis. Find the number of ways in which the sweets can be distributed?
a) 26250 b) 22560 c) 22330 d) none of these

31) Mr. John has x children by his first wife and Ms. Bashu has x+1 children by her first husband. They marry and have children of their own. The whole family has ten children. Assuming that two children of the same parents do not fight, find the maximum number of fights that can take place among children.
a) 33 b) 22 c) 111 d) none of these

32) Find the number of natural numbers which are smaller than 2.10^8 and are divisible by 3 which can be written by means of the digits 0, 1 and 2.
a) 7272 b) 4373 c) 3437 d) none of these.

33) Find the number of whole numbers formed on the screen of calculator which can be recognized as numbers with (unique) correct digits when they are read inverted. The greatest number that can be formed on the screen of a calculator is 999999:
a) 98970 b) 89912 c) 110050 d) 100843

34) Find the number of distinct ways of putting five distinct rings on four fingers of the left hand.(Ignore the difference of size of rings and the fingers)
a) 1250 b) 6720 c) 5260 d) none of these

35) If n distinct things are arranged in a circle, find the number of ways of selecting three of these things so that no two of them are next to each other.
a) n (n - 2) (n - 3) b) 1/6 n (n – 4)(n– 5)
c) 1/3 (n^2 + 3n – 5) d) none of these.

36) The number of different selections of 5 letters from 1a,2B's,3 C's ,4 D's and 5 E's is :
a) 71 b) 41 c) 117 d) none

37) In the entrance test of Wharton Business school ,The maximum marks for each of the three papers is n and that for the fourth paper is 2n.Find the number of ways in which the candidate can get 3n marks .
a) 1/6(n+1)(n+2) b) 1/6(n+1)(5n^2+10n+6)
c) 1/2(n^2+3n-6) d) None of these

38) An examination consist of 4 papers .Each paper has a maximum of n marks .Find the number of ways in which a students can get 2n marks in the examination ?
a) 1/3(n^2 -5n +4) b) 1/3(n+1) (2n^2+4n+3)
c) 1/6(n+1)(n+4) d) None of these

PROBABILITY

1) What is the probability that four S's come consecutively in the word MISSISSIPPI?
a) 4/165 b) 4/135 c) 24/165 d) none of these

2) Each coefficient in the equation $ax^2 + bx + c=0$ is determined by throwing ordinary six faced die. Find the probability that the equation will have real roots.
a) 34/161 b) 43/216 c) 25/36 d) None of these.

3) A and B throw alternately a pair of dice. A wins if he throw 6 before B throws 7 and B wins if he throws 7 and B wins if he throws 7 before A throws 6. Find their respective chance of winning. If A begins.
a) 13/16, 31/16 b) 30/61, 31/61
c) 31/61, 41/61 d) 38/61, 23/61

4) A consignment of 15 wristwatches contains 4 defectives. The wristwatches are selected at random, one by one and examined. The ones examined are not put back. What is the probability that ninth one examined is the last defective?
a) 11/195 b) 17/195 c) 8/195 d) 16/195

5) In a test, an examine either guesses or copies or knows the answer to a multiple choice question with four choices. The probability that he makes a guess is 1/3 and the probability that he copies the answer is 1/6. The probability that his answer is correct, given that he copied it, is 1/8. Find the probability that he knew the answer to the question, given that he correctly answered it.
a) 17/39 b) 13/29 c) 24/29 d) 24/39

6) Given that the sum of two non-negative quantities is 200, the probability that their product is not less than ¾ times their greatest product value is:
a) 99/200 b) 101/200
c) 87/100 d) None of these.

7) A pack of cards consists of 9 cards numbered 1 to 9. Three cards are drawn at random with replacement. Then the probability of getting 1 even and 2 off numbered card is :
a) 3/143 b) 100/243 c) 50/343 d) 7/72

8) Three numbers are to be selected a random without replacement from the set of numbers {1,2,….n}. the conditional probability that the third number lies between the first two, if the first number is known to be smaller than the second is:
a) 1/3 b) 2/3 c) 5/6 d) 7/12

9) Two numbers b and c are chosen at random with replacement from the numbers 1,2,3,4,5,6,7,8 and 9 the probability that x^2 +bx+c>0 for all x E R is :
a) 23/81 b) 7/9 c) 32/81 d) 65/729

10) The probabilities that a student passes in Mathematics, Physics and Chemistry are m, p and c, respectively. Of these subjects the student has 75% chance of passing in at least one, a 50% chance of passing in at least two and a 40% chance of passing in exactly, two, which of the following relations are true.
a) p+m+c = 27/20 b) p+m+c =13/20
c) pmc =1/10 d) both a and c.

11) A student appears for tests A,B and C. the student is successful if he passes either in tests A and B or tests A and C. The probabilities of the student passing in tests A, B, C are p, q and ½ respectively. If probability that the student is successful is ½ then,
a) p=1,q=0 b) p=0,q=1
c) p/q=1 d) infinitely many solutions

12) If (1+4p)/p, (1-p)/4, (1-2p)/2 are probabilities of three mutually exclusive events then
a) p=1/2 b) p=3/4 c) p=1/3 d) none of these.

13) A letter Is taken out at random from ASSISTANT and another is taken out from STATISTICS. the probability that they are the same letters is :
a) 37/87 b) 47/87 c) 17/29 d) none of these

14) Two numbers a and b are chosen at random from the set of first 30 natural numbers. The probability that $a^2 - b^2$ is divisible by 3 is:
a) 37/87 b) 47/87 c) 17/29 d) None of these.

15) A man takes a step forward with probability 0.4 and backward with probability 0.6. the probability that at the end of eleven steps he is one steps he is one step away from the starting point is:
a) $11C_6(0.1)11$ b) $11C_6(0.24)5$
c) $11C_6(0.2)11$ d) None of these

16) Three of the six vertices of a regular hexagon are chosen at random. The probability that the triangle with these three vertices is equilateral equals:
a) 1/6 b) 1/3 c) 1/10 d) None of these

17) A man can take a step forward, backward, left or right with equal probability. Find the probability that after nine steps he will be just one step away from his initial position.
a) $3696/(7^4)$ b) $3696/(4^7)$
c) $(4^4)/10$ d) None of these.

18) Urn contains six red and four black balls and urn B has four red and six black balls. One ball is drawn at random from urn A and placed in urn B. then one ball is transferred at random from urn B to urn A. If one ball is now drawn at random from urn A, find the probability that it is red.
a) 32/65 b) 32/55 c) 23/55 d) 56/65

19) The digits 1, 2, 3…9 are written in random order to form a nine digit number. Find the probability that this number is divisible by 11.
a) 11/63 b) 11/81 c) 11/126 d) none of these

CO-ORDINATE GEOMETRY

1) Find the equation of the line with slope 2/3 and intercept on the y-axis is 5:
a) y= 2/3x+5 b) y= 3/2x+5
c) y= 3x+6 d) none of these

2) Find the slope and the intercept on the y-axis of the line $\sqrt{3}x + 3y = 6$:
a) $1/\sqrt{2}$ b) 1/5 c) $2/\sqrt{3}$ d) $-1/\sqrt{3}$

3) Find the equation of the line passing through the point (2,-3) and having its slope 5/4:
a) 4x-5y=20 b) 3x-2y =5
c) 5x-4y =22 d) none of these

4) Find the equation of the line which cuts off intercepts 2 and 3 from the axes:
a) 9x-7y=6 b) 3x+2y=6
c) 4x+3y =7 d) none of these

5) Find the intercepts made by the line 3x+4y-12=0 on the axes:
a) 2 and 3 b) 4 and 3
c) 3 and 5 d) none of these

6) Find the equation of the line through the points (-1,-2) and (-5,2):
a) 2x+y=3 b) 3x-2y+7=0
c) x+y+3=0 d) none of these

7) Find the equation of the straight line passing through the points (-1,4) and having a gradient of 2.5:
a) 2x-5y+13=0 b) 5x-9y=13
c) 13x-15y+17=0 d)5x-2y+13=0

8) Find the equation of the straight line which makes equal intercepts on the axes passes through the points (3,-5):
a) x-y=2 b) x+y+2=0
c) y-x+2=0 d) none of these

9) Find the equation of the straight line making intercepts on the axes equal in magnitude but opposite in sign and passing through the point(-5,-8):
a) x-y=7 b) 2x+y=3
c) x-y=3 d) none of these

10) Find the equation of the line passing through the point (-4,-5) and perpendicular to the line joining the points (1,2) and (5,6):
a) x+y+17 =0 b) 3x+2y+11=0
c) x+y+9=0 d) x-y+20=0

11) A straight line intersects the x-axis at A and the y-axis at B. AB is divided internally at c(8,10) in the ratio 5:4. Find the equation of AB:
a)x+y =18 b)x+y+2=0
c)x+y-2=0 d) none of these

12) Find the equation of the straight line which passes through the point (3,4) and has intercepts on the axes such that their sum is 14:
a) 4x+3y=24 b) x+y=7
c) 3x+7y=43 d) both (a) and (b)

13) A straight line passes through the points (a,0) and (b,0).The length of the line segment contained between the axis is 13 and the product of the intercepts on the axes is 60. Find the equation of the straight line:
a) 5x+12y=60 b) 7x-12y=50
c) 5x+12y+60 =0 d) both (a) and (c)

14) A firm produces 50 units of a good for Rs. 320 and 80 units for Rs. 380. Supposing that the cost curve is a straight line, estimate the cost of producing 110 units:
a)Rs. 330 b)Rs. 1665 c)Rs. 440 d)Rs. 365

15) Find the equation of the line on which length of the perpendicular from the origin is 5 and the angle which this perpendicular makes with the x-axis is 60° :
a) $x\sqrt{3}+2y+8=0$ b) $x+\sqrt{2}y-7=0$
c)$x+\sqrt{3}y=10$ d) none of(a),(b),(c)

16) Find the equation of the line which passes through the points(3,-4) and makes an angle of 60° with the positive direction of x-axis:
a)$x\sqrt{2}+y\sqrt{3}=0$ b) $\sqrt{3}x-y=4+3\sqrt{3}$
c)$x\sqrt{3}+y=3\sqrt{2}+5$ d) none of(a),(b),(c)

17) Find the equation of the line joining the points of intersection of 2x+y=4 with x-y+1=0 and 2x-y-1=0 with x+y-8=0:

a) 2x+3y+6=0 b) 3x+2y+12=0
c) 3x-2y+1=0 d) none of (a),(b),(c)

18) Find the equation of one of the two lines which passes through the point (4,5) which make an acute angle 45° with the line 2x-y+7=0:
a) x-2y=0 b) 7x+5y-3=0
c) 3x+y+8=0 d) x-3y+11=0

19) Find the equation of straight line which passes through the point (5,-6) which is parallel to the line 8x+7y+5=0:
a) 3x-5y+8=0 b) 7x+8y+5=0
c) 7x-8y+2=0 d) 8x+7y+2=0

20) Find the equation of the straight line which passes through the point of intersection of the straight lines x + y = 8 and 3x – 2y + 1 =0 and is parallel to the straight line joining the points (3,4) and (5,6):
a) x – y + 2 = 0 b)x + y – 2 =0
c)3x – 4y + 8=0 d) none of these

21) Find the length of the perpendicular from the point (3 , -2) to the straight line 12x – 5y + 6 =0:
a) 5 b) 4 c) 6 d)8

22) Find the distance between two parallel lines 5x + 12y – 30 =0 and 5x + 12y -4= 0
a) 3 b) 7 c) 5/2 d) 2

23) Find the equation of the line through the point of intersection of 2x – 3y + 1 = 0 and x + y – 2 = 0 which is parallel to the y – axis:
a) x =1 b) 8x = 7 c) x + 3 = 0 d) x= 6

24) Find the equation of the line which passes through the point of intersection of the lines x + 2y – 3 =0 and 4x – y +7 = 0 and is parallel to the line y – x + 10 = 0.
a) 2x + 2y + 5 = 0 b) 3x -3y = 10
c) 3x + 2y – 8 = 0 d) none of these

25) Find the equation of the line which passes through the point of intersection of the lines 2x – y + 5 = 0 and 5x + 3y – 4 =0 and is perpendicular to the line x – 3y + 21 =0
a) 2x + y + 8 = 0 b) 3x + 4y – 7 =0
c) 3x + y = 0 d) none of these

26) Find the equation of the line through the intersection of the lines 3x + 4y = 7 and x – y + 2 = 0 having slope 3.
a) 4x – 3y + 7 = 0 b) 21x – 7y + 16 = 0
c) 8x + y + 8 = 0 d) none of these

27) Find the equation of the straight line which passes through the point of intersection of the straight lines
3x – 4y + 7 = 0 and 5x + y – 1 = 0 and cuts off equal intercepts from the axis.
a) 32x + 32y + 11 = 0 b) 23x + 23y = 11
c) 9x + 18y +5 = 0 d) None of these

28) A straight line x/a – y/b = 1 passes through the points (8 , 6) and cuts off a triangle of a area 12 units from the axes of the co-ordinates. Find the equation of the straight line.
a) 3x – 2y = 12 b) 4x – 3y = 12
c) 3x – 8y + 24 = 0 d) both a and c

29) Find the equations of the bisectors of the angle between the straight line 3x + 4y + 2 = 0 and 5x – 12y – 6 = 0.
a) 8x + y +7 = 0 b) 16x – 12y -1 = 0
c) x + 8y + 4 = 0 d) both b and c

30) Find the area of the triangle formed by the lines whose equations are 2y – x =5 , y + 2x = 7 and y – x = 1
a) 3/10 b) 10 c) 6 d) 2/5

31) Find the coordinates of the orthocenter of the triangle whose vertices are (1, 2), (2, 3) and (4, 3).
a) (2, 5) b) (3, 4) c) (1, 6) d) none of these

32) Two vertices of a triangle ABC are B (5, -1) and C (-2, 3). If the orthocenter of the triangle is the origin, find the vertex:
a) (7/2, 13/2) b) (3/2, 11/2)
c) (-4, -7) d) none of these

33) The area of a triangle is 5. Two of its vertices are (2, 1) and (3, -2). The third vertex lies on y=x+3.
Find the third vertex:
a) (2/7 , 13/5) b) (7/2 , 13/2)
c) (9/2, 13/2) d) (7/2, 13/2) or (-3/2, 3/2)

34) A straight line L is perpendicular to the line 5x- y = 1. The area of a triangle formed by the line L and coordinate axes is 5. Find the equation of the line:
a) x + 5y = ± 5√2 b) x – 3y = 0
c) 2x + y = 0 d) x + 4y = 5√2

35) (1, 2) and (3, 8) are a pair of a opposite vertices of a square. find the diagonals of the square passing through (1,2):
a) x- 2y = 1 b) 2x + 7y = 0
c) 3x + 2y + 7 =0 d) 3x – y = 1

REASONING APTITUDE

MATHEMATICAL OPERATIONS

In each of the following question (1- 4) if the given interchanges are made in signs and number, which one of the four equations would be correct.

1. Give interchanges, sign '-' and '%' and number 4 and 8 (on the LHS)
1) 4-8/12=-23/4 2) 4/8-2=8
3) 8/2-4=-15/4 4) None of the above

2. Given interchanges: 3 and 2, / and -
1) 1+3*4-2/1=5 2) 1+2-3*8/4=9
3) 3-1*4+2/1=11 4) None of the above

3. Given Interchanges: 0.4 and 0.04
1) 1+2-0.04*0.4=1 2) 0.4+0.042*2=1.76
3) 0.04*0.4-1=0.18 4) None of the above

4. Given Interchanges:* and +,10,1
1) 5*1+10-2=5 2) 8+8-10*1=75
3) 4-6*10+1=6 4) 3+4-12*1/10=10
5) None of the Above

Find out the two signs to be interchanged for making the following equation to be correct for question (5-6):

5. 5+3-5*5/1=15
1) * and - 2) * and + 3) / and –
4) + and - 5) None of the Above

6. 4+2-5*7/12=-12
1) / and - 2) / and + 3) * and +
4) * and - 5) None of the Above

7. Inter proper arithmetical signs between the figures in the following question
12_4_2_1=24
1) -, /,* 2) *, /,*
3) +,*, / 4) None of the above

8. If a implies +, b implies -, c implies * and d implies /, insert proper letter between the figures in the following equation
40_20_30_6=55
1) a, b, c 2) b, c, d 3) a, b, d
4) d, b, a 5) None of the Above

9. If +implies -, - implies /,* implies /, and / implies+, then insert the proper sign between the figure in the given equation
12_8_4_2_1=15
1) /,*,-, + 2) /,-, +,* 3) +,-,*, /
4) -, +, /,* 5) None of the Above

10. If a=+,b=-,c=*,d=/ then Insert the proper notations between the figures in the following sum
10_8_6_4_2=6
1) b, a, d, c 2) a, b, c, d
3) b, d, c, a 4) None of the above

11. If a means + , b means -, c means * and d means, Calculate the value of 6a7b8c8d2
1) -17 2) 12
3) -19 4) None of the above

12. If a means + , b means -, c means * and d means , Calculate the value of (8c7)c(7a5)b(6d3)d(3b2)
1) 650 2) 375
3) 670 4) None of the above

13. If a means + , b means -, c means * and d means ,what is the value of 9a10b11c15d
1) 1 2) 2
3)3 4) None of the above

14. Read it carefully and choose the best answer.
If, a+b implies a-b
a-b implies a-b
a*b implies a*b
a/b implies a/b
Find the value of (4+3-5*1/4)*(5+2-3*1/4)
1) -7/3 2) -8/3
3)9/7 4) None of the above

15. If it is given that, N @ P,P # O, O @ M and N % M, then
1) @ N 2) # N
3) $ N 4) None of the above

16. If '+' means '-' , '-' means '*' , '*' means '/' and '/' means '+' then which of the following will be the value of the expression.?
32+8*2-3/4
1) 12 2) 20 3) 24 4) None of the Above

17. If a means + , b means -, c means * and d means / , Calculate the value of 2a3b4c5d1
1) 15 2) 0 3) -15 4) -12
5) None of the Above

18. Which of the following changes would make the given expression correct?
4+4*4-4/4=4
1) + and - 2) - and / 3) + and /
4) Both b and c 5) None of the Above

19. If the given interchanges are made in signs and numbers, which one of the four equations would be correct
If 2 & 6 % 7 = 33, 4 & 6 % 8 = 54, then what will be the value of 6 % 8 & 9
1) 99 2) 92 3) 95
4) 102 5) None of the Above

20. If 2 * 3 = 12, 3 * 4 = 20 and 4 * 5 = 30, then 2 * 6 is
1) 18 2) 12 3) 21 4) None of the above

DIRECTION TEST

Directions for questions 1 to 30: Select the correct alternative from the given choices.

1. Deepak starts walking straight towards east. After walking 75 meters, he turns to the left and walks 25 meters straight. Again he turns to the left, walks a distance of 40 meters straight, again he turns to the left and walks a distance of 25 meters. How far is he from the starting point?
1) 25 2) 35 3) 135 4) 50 5) 45

2. Study the following information carefully to answer these Questions. All the streets of city are either perpendicular or parallel to one another. The streets are all straight. Streets N, O, P, Q and R are parallel to One another. Streets S, T, U, V, W, X and Y are parallel to one another.
1. Street N is 1 km east of street O.
2.Street O is 1/2 km west of street P.
3.Street Q is 1 km west of street R.
4.Street Sis 1/2 km south of street T.
5.Street U is 1 km North of street V.
6.Street W is 1/2 km North of street X.
7.Street W is 1 km South of street Y.
Which of the following is necessarily true (given the basic clues)?
1) R and O intersect
2) Q is 2km west of O
3) Q is 2km west of O
4) Y is 1.5km north of X
5) None

3. In the following questions, select the right answer from the given options to depict the correct direction/distance. A train runs 120 km in West direction, 30 km in South direction and then 80 km in east direction before reaching the station.
In which direction is the station from the train's starting point?
1) Southwest 2) North
3) Northwest 4) Southeast 5) None

4. Amar starts crossing the plot diagonally. After walking half the distance, he turns right (900), walks some distance and turns left.
Which direction is A facing now?
1) Northeast 2) Northwest
3) North 4) Southeast 5) none

5. Read the situation given below to answer the question. J, K, L, M, N, O, P, Q and R are nine

huts. L is 2km east of K. J is 1 km north of K and Q is 2km south of j. P is 1 km west of Q while M is 3km east of P and O is 2 km north of p. R is situated just in middle of K and L while N is just in middle of Q and M. Distance between K and R is.?
1) 1.41km 2) 3km 3) 2km 4) 1km 5) none

6. A watch in Hackle Finn's house reads 4.30. If the minute hand points towards the west, in which direction does the hour hand points?
1) Northeast 2) Southwest
3) Northwest 4) North 5) None

7. If northwest becomes south southwest becomes east and all the other directions change in the similar manner, then what will be the direction for north?
1) Southeast 2) Northeast
3) North 4) None of the above

8. If Northwest becomes south and southwest becomes east and all the other directions change in the same manner, then what will be the direction for north?
1) South West 2) northeast
3) North 4) none of the above

9. I walk 1 km to my east then I turn to the south and walk for 5 km. Next, I turn east and walk 2 km. After this I turn to the north and walk for 9 km. How far am I from my starting point?
1)5 km 2) 4 km
3) 6 km 4) can't be determined

10. Read the situation given below to answer the question. J, K, L, M, N, O, P, Q and R are nine huts. L is 2km east of K.
J is 1 km north of K and Q is 2km south of j. P is 1 km west of Q while M is 3km east of P and O is 2 km north of p.
R is situated just in middle of K and L while N is just in middle of Q and M.
Distance between K and L is ?
1) 2 Km 2) 1 KM 3) 5 KM
4) 1.5 KM 5) none of these

11. Study the following information carefully to answer this Question.
All the streets of city are either perpendicular or parallel to one another. The streets are all straight. Streets N, O, P, Q and R are parallel to One another. Streets S, T, U, V, W, X and Y are parallel to one another.
1. Street N is 1 km east of street O.
2.Street O is 1/2 km west of street P.
3.Street Q is 1 km west of street R.
4.Street Sis 1/2 km south of street T.
5.Street U is 1 km North of street V.
6.Street W is 1/2 km North of street X.
7.Street W is 1 km South of street Y.
If street R is between O and P,
then distance between N and Q is.?
1) Q is 1.75 km west of N
2) P is less then 1km from Q
3) R is less then 1km from N
4) Q is less than 1 km from O
5) None

12. I am facing north. I turn 90degree in the clockwise direction and then 135degree in the same direction and then 270degree anti-clockwise. Which direction am I facing now?
1) Southwest 2) south 3) west
4) Northwest 5) None

13. Hanuman, while looking for the Sajeevani booty travels 3km to the west, turns left and goes 3km, turns right and goes 1km, again turns right and goes 3km. How far is he from the starting point?
1) 7KM 2) 6 KM 3) 5 KM
4) 4KM 5) 12KM

14. Husain runs 100 m south from his house, turns left and runs 250km, again turns left 400 m, then turns right and runs 50 m to reach to the stadium. In which direction is the stadium from his house?
1) Southwest 2) Northeast 3) East
4) North 5) None

15. In the following questions, select the right answer from the given options to depict the correct direction/distance. Richa drives 8 km to the South, turns left and drives 5 km. Again, she turns left and drives 8 km. How far is she from her starting point?
1) 3 2) 5 3) 8 4) 13 5) 7

16. All the streets of city are either perpendicular or parallel to one another. The streets are all straight. Streets N, O, P, Q and R are parallel to One another. Streets S, T, U, V, W, X and Y are parallel to one another.
1. Street N is 1 km east of street O.
2.Street O is 1/2 km west of street P.
3.Street Q is 1 km west of street R.
4.Street Sis 1/2 km south of street T.
5.Street U is 1 km North of street V.
6.Street W is 1/2 km North of street X.
7.Street W is 1 km South of street Y.
If W is parallel to U and W is 1/2 km south of v and 1km north of T, then which two streets would be 1 and 1/2 km apart.?
1) U and V 2) V and S
3) V and T 4) W and V 5) none

17. Study the following information carefully to answer this Question.
All the streets of city are either perpendicular or parallel to one another. The streets are all straight. Streets N, O, P, Q and R are parallel to One another. Streets S, T, U, V, W, X and Y are parallel to one another.
1. Street N is 1 km east of street O.
2.Street O is 1/2 km west of street P.
3.Street Q is 1 km west of street R.
4.Street Sis 1/2 km south of street T.
5.Street U is 1 km North of street V.
6.Street W is 1/2 km North of street X.
7.Street W is 1 km South of street Y.
If street R is between O and P, then distance between N and Q is.?
1) 1/2km 2) 1km 3) 1.5km
4) 1.5-2km 5) none

18. A man walks 5 meters straight and then 10 meters to the right. After this he continuously turns left and every time walk 10, 5 and 10 meters respectively. How far is he now from his starting point?
1) 5 √ 3 2) 3 √5
3) 5 √2 4) 10 meters

19. Study the following information carefully to answer these Questions.
All the streets of city are either perpendicular or parallel to one another. The streets are all straight. Streets N, O, P, Q and R are parallel to One another. Streets S, T, U, V, W, X and Y are parallel to one another.
1. Street N is 1 km east of street O.
2.Street O is 1/2 km west of street P.
3.Street Q is 1 km west of street R.
4.Street Sis 1/2 km south of street T.
5.Street U is 1 km North of street V.
6.Street W is 1/2 km North of street X.
7.Street W is 1 km South of street Y.
Which of the following possible would make two streets coincide?
1) X is 1/2 km north of U
2) P is 1km West of Q
3) Q is 1/2 km east of N
4) R is 1/2 km east of O
5) none

20. Sophia was facing east. She walked 20 meters. Turning left she moved 15 meters and then turning right moved 25 meters. Finally,

she turned right and moved 15 meters more. How far is she from her starting point?
1) 25 2) 35 3) 5 4) 45 5) none

21. In the following questions, select the right answer from the given options to depict the correct direction/distance. Manu goes 40 km north, turns right and goes 80 km, turns right again and goes 30 km. In the end he turns right again and goes 80 km. How far is he from his starting point if he goes straight ahead another 50 km and turns left to go his last 10 km?
1) 20 2) 10 3) 50 4) 40 5) 60

22. A policeman goes 20km east and then turning to the south he goes 30 km and then again turns to his left and goes 10 km. How far is he from his starting point?
1) 30 km 2) 20 km 3) 10 km 4) 40 km

23. If ram is in the west of Sham and Kareem is in the north of Sham, in what direction is Kareem with respect to ram?
1) Northeast 2) Southwest
3) Northwest 4) Southeast 5) none

24. Justin leaves his house and walks 12km towards North. He turns right and walks another 12km.He turns right again, walks 12km more and turns left to walks 5km. How far is he from his home and in which direction?
1) 7km 2) 10km 3) 17km
4) 20km 5) 12km

25. Read the situation given below to answer the question.
J, K, L, M, N, O, P, Q and R are nine huts. L is 2km east of K. J is 1 km north of K and Q is 2km south of j. P is 1 km west of Q while M is 3km east of P and O is 2 km north of p. R is situated just in middle of K and L while N is just in middle of Q and M. Distance between P and Q is?
1) 4km 2) 2km 3) 1km 4) 3km 5) none

26. Alok's house is in what direction with respect to his school?
1) Northwest 2) Southwest
3) South 4) cannot be determined

27. I am facing south. I turn right and walk 20 m. then I turn right again and walk 10 m. then I turn left and walk 10 m and then turning right walk 20 m. then I turn right again and walk 60 m. in which direction am I from the starting point.
1) Southwest 2) Northeast
3) Northwest 4) Southeast 5) North

28. If Southeast becomes east and northwest becomes west and all the other directions are changed in the same direction, then what will be the direction for north?
1) Northwest 2) Southeast
3) Southwest 4) Northeast 5) none

29. A rat runs 20' towards East and turns to right, runs 10' and turns to right, runs 9' and again turns to left, runs 5' and then turns to left, runs 12' and finally turns to left and runs 6' Now, which directions is the rat facing?
1) South 2) West 3) North
4) East 5) southeast

30. In the following questions, select the right answer from the given options to depict the correct direction/distance.
Ravi drives 12 km towards West. He turns south and drives 3 km. He again turns east and drives 8 km. How far is he from his starting point?
1) 3 2) 5 3) 7 4) 11 5) 13

LR – RANKING

Answer the following questions based on the statements given below:
(a) There are three houses on each side of the road.
(b) These six houses are labeled as p, q, r, s, t and u.
(c) The houses are of different colors, namely, red colored house.
(d) The houses are of different heights.
(e) T, the tallest house, is exactly opposite to the red colored house.
(f) The shortest house is exactly opposite to the green colored house.
(g) U, the orange colored house, is located between p and s.
(h) R, the yellow colored house, is exactly opposite to p.
(i) q, the green colored house, is exactly opposite to u.
(j) p, the white colored house, is taller than r, but shorter than s and q.

1. What is the color of the tallest house?
1) Red 2) blue 3) Green
4) Yellow 5) None of these.

2. What is the color of the house diagonally opposite to the yellow colored house?
1) White 2) blue 3) Green
4) Red 5) None of these.

2. What is the color of the house diagonally opposite to the Yellow colored house?
1) White 2) Blue 3) Green
4) Red 5) None of these

Solve the following question based on the information provide:
i. Students A, B, C, D, E, and F participated in a self-evolution test of Quant's and Data (D.I)
ii. Total marls of A in quant's was just above C and in D.I just above F was just above C in D.I but he scored less than D in Quant's
iii. Got more marks than D and E in D.I but did not perform as well in Quant's as in D.I compared to D and E
iv. One is in between C and D in Quant's and C and A in D.I

4. Got the highest make in D.I
1) A 2) B
3) C 4) Data Inadequate

5. Which of the following students has scored the least?
1) Only D 2) Only E
3) Only D or E 4) None of these

6. Was just below D in Quant's
1) B 2) E 3) C 4) Data inadequate

7. Of the following given statement is not necessary to answer the questions
1) (II) 2) (III) 3) (IV) 4) All are necessary

Solve the following question based on the information provide
In a bike racing competition, ten selected bikers from a city were to compete in various stunts. The structure of the competition requires all bikes to compete in five events before the elimination round begin
so as to choose the top five bikers who will participate from that city at the national level. The rank attained by each biker in the five events from first ti tenth is

Names	Et A	Et B	Et C	Et D	Et E
Alex	2	5	8	5	
Ben	8	1	7	1	
Charlie	5	6	1	4	9
Devon	1	10	2	10	3
Ethan	9	4	9	2	7
Frank	6	7	6	6	8
Garry	3	2	3	7	4
Harry	10	8	5	3	10
Ian	7	9	10	8	5
John	4	3	4	9	6

It is also stated that:

i. biker with the first rank in most event gets to eliminate the biker with the last in most of the event
ii. first rank holder of event E is not be eliminated
iii. biker whose highest rank and the lowest rank difference is the second highest all biker is not to be eliminated
iv. . Biker who does not rank in the top five position in any of the event get
v. biker with the same rank in most of the events gets to eliminate that event E with an immediately lower rank than his same rank in all event
vi. biker who got the second highest rank in the event D gets eliminate the biker who same rank in event B
vii. biker who gets the first rank in two or more events will not be eliminated
viii. The bikes who got the lowest rank in event B and the one who got the ninth in w v w n t D ,the one who got a higher rank in the event E gets to eliminate the
ix. biker whose sum of all the rank in the event is the highest and does not get by other condition will one be eliminated
It is also known that if more than 5people are getting eliminated by one rule or the other, then it is allowed. However if less than 5 people are getting eliminated, then there is a tossup between the remaining ones and the results are determined by the toss of a coin.

8. Who among the following is a biker who does not get a chance to eliminate another biker
1) Ben 2) Charlie 3) Devon 4) Frank

9. Who among the following is a biker who does not rank in the top 4 position in any of the five events but does not get eliminated?
1) Ethan 2) Frank 3) Harry 4) Ian

10. If a new condition is included in the problem stating that,' any biker who gets second rank in any event will not be eliminates,' then who among the following will not get eliminated
1) Garry 2) Harry 3) Ian 4) john
11. Which of the following condition if not included in the problem do not change that final solution?
1) II 2) IV 3) VI 4) VIII

12. It is found that the result of event D is wrong and the last two ranks have been mistakenly interchanged then who among the following bikers cannot be definitely eliminated in the elimination round
1) Ethan & Devon 2) Garry & John
3) Harry & Devon 4) John & Devon

Answer the following questions based on the statements given below:
(a) There are three houses on each side of the road.
(b) These six houses are labeled as P, Q, R, S, T and U.
(c) The houses are of different colors namely Red, Blue, Green, Orange, Yellow and White.
(d) The houses are of different heights.
(e) T, the tallest house, is exactly opposite to the Red colored house.
(f) The shortest house is exactly opposite to the green colored house.
(g) U, the orange colored house, is located between P and S.
(h) R, the yellow colored house, is exactly opposite to P.
(i) Q, the green colored house, is exactly opposite to U.
(j) P, the white colored house, is taller than R, but shorter than S and Q.

13. Which is the second tallest house?
1) P 2) S 3) cannot be determined

Answer the following question based on the information given below:
In a sport, six teams (A, B, C, D, E and f) are competing against each other. Matches are scheduled in two stages. Each team plays three matches in stage-1 and two matches in stage-2.No team plays against the same team more than once in the event. No ties are permitted in any of the two matches. The observation after the completion of stage-1 and stage-2 are as given below

STAGE-1
One team won all the three matches
Two teams lost all the matches
D lost to A but won against C and F
E lost to B but won against C and F
B lost at least one match
F did not play against the top team of stages-1

STAGE-2
The leader of stage-1 lost the next two matches
Of the two teams at the bottom after stage-1, one team won both matches, while the other lost both matches
One more team lost both matches in stage-2

14. The only teams that won both the matches in stage-2 are (are):
1) B 2) E&F 3)A,E&F
4) B, E, F 5) B&F

15. The Teams that won exactly two matches in the event are :
1) A, D, F 2) D, E 3) E, F
4) D, E, F 5) D, F

16. The team with the most wins in the event is (are):
1) A 2) A, C 3) B, E

17. The two teams are defeated of the leader of stage -1 are:
1) F, D 2) E, F 3) B, D 4) E, D 5) F, D
Answer the question on the basis of the information given below:
A string of three English letters is formed as per the following rule
(h) The first letter is any vowel
(i) The second letter is M,N or P
(j) If the second letter is M, then the third letter is any vowel which is different from the first letter.
(k) If the second letter is N, then the third letter is E or U.
(l) If the second letter is P, then the third letter is same as the first letter.

18. How many strings of letter can be possibly formed using the above rule.
1) 40 2) 45 3) 30 4) 25

19. How many strings of letters can possibly be formed using the above rule such that third letter of the string is E
1) 8 2) 9 3) 10 4) 11

An intelligence agency forms a code of two distinct digits selected from 0, 1, 2.....9 such that the first digit of the code is non zero. The code, hand-written on a slip, can however potential create confusion upside down, for example, the code 91 may appear as 16.

20. How many codes are there for which no confusion can arise?
1) 80 2) 78 3) 71 4) 69

BLOOD RELATIONS

Directions for questions 1 to 30: Select the correct alternative from the given choices.
1. a*b means a is the brother of b
a@b means a is the daughter of b
a$b means a is the sister of b

Which of the following shows the relationship p is the paternal uncle of n
1) n$o@p 2) n@o$p
3) n@o*p 4) None of these

2. Pointing towards a boy, Aruna said to Pushpa: The mother of his father is
the wife of your grandfather (Mother's father)? How is Pushpa related to that boy?
1) Sister 2) Niece 3) Cousin sister 4) Wife

3. If a+b means a is daughter of b,
a-b means a is husband of b,
a*b means a is brother of b,
If h +i*j +k*l+m*n, then what is the
present generation of of h. assume that the old generation in this group is the first generation?
1) 2nd 2) 3rd 3) 4th 4) None of these

4. A woman presents a man as the son of the brother of her mother. How is
the man related to the woman?
1) Nephew 2) Son 3) Cousin 4) Uncle

5. a*b means a is the brother of b
a@b means a is the daughter of b
a$b means a is the sister of b
From the following statement, what is the relationship between n and s
n$o@p*q$r*s
1) Grandmother 2) Grandfather
3) Aunt 4) Can't be determine

6. A woman pointing towards a man said, "He is my mother's mother's only
son". How is the woman related to the man?
1) Mother 2) Cousin 3) Niece 4) Aunt

7. Pointing to a man, a lady said, "Her husband is the only son of my mother". How is the lady related to the man?
1) Wife 2) daughter
3) Father-in-law 4) cousin

8. Anwar's father is the only son of Mahesh's father. How is Mahesh related to Anwar?
1) Father 2) Brother
3) Cant be determined 4) None

9. If a+b means a is sister of b,
a-b means a is brother of b,
a*b means a is daughter of b,
a/b means a is mother of b.
The relationship p + q- r*s/t shows that
1) p, q, r, s are children of t
2) p, q, r, t are children of s
3) p, q, r are children of t and s
4) p, q, r, s are siblings

10. P,Q,R,S,T went on a picnic P is the son of Q is not the father of P. R is the son of S, who is the brother of P. T is the wife of S.
How many males are present in this group?
1) 1 2) 2 3) 3 4) 4

11. Genuflecting (bending) in front of a portrait, Raman said, "She is the only
daughter of the mother of my brother's sister". How is that person related
to Raman?
1) Uncle 2) Father 3) Mother 4) None of these

12. A's mother's son's only sister is B. How is A related to C, if B is the mother of C's daughter?
1) Brother 2) Brother in law
3) Uncle 4) Nephew

13. Pointing to a man, Manisha said, "He is the youngest son of my father-in-law's only son". How is Manisha related to this youngest son's father?
1) Daughter 2) Sister
3) Wife 4) Can't be determined

14. If A is mother of B
B is brother of C
C is brother of D
D is sister of E
Then which of the following statement is not necessarily true?
1) D is sister of C
2) B and C are brothers
3) A, B, C are male and D is a female
4) D and E are sisters

15. If a+b means a is sister of b,
a-b means a is brother of b,
a*b means a is daughter of b,
a/b means a is mother of b.
Which of the following relationship shows that l and n are wife and husband?
1) l/m*n 2) l-m*n
3) l+m*n 4) none of these

16. If a+b means a is daughter of b,
a-b means a is husband of b,
a*b means a is brother of b,
From the statement p-q+r*s ,how is q related to s?
1) Niece 2) Sister 3) Mother 4) None of these

17. a*b means a is the brother of b
a@b means a is the daughter of b
a$b means ba is the sister of b
If a $ b $ c @ d @ e*f*g, then how many males and females are there respectively
1) 4,3 2) 3,4 3) 5,2 4) Can't be determine

18. If a+b means a is sister of b,
a-b means a is brother of b,
a*b means a is daughter of b,
a/b means a is mother of b.
How many females does this relationship shows?
1) 2 2) 3 3) 4 4) Can't be determined

19. A man has two wives A and B. A is Sunny's step mother. How is Sunny related to B?
1) Step – Daughter 2) Sister-in-law
3) Son 4) Can't be determined

20.If a+b means a is daughter of b,
a-b means a is husband of b,
a*b means a is brother of b,
What does the relation p*q-r shows?
1) p is son-in-law of r 2) p is brother of r
3) r is wife of p 4) None of these

21. Pointing towards a lady in a Polaroid, Victor said, "She is the daughter of
the father of my brother". How is the lady in photograph related to Victor
1) Daughter 2) Wife
3) Mother 4) None of these

22. Rahul has two mothers. Shalini is the step-daughter of seema and step-sister of Rahul. How is seema related to Rahul?
1) Step-mother 2) Mother
3) Cant be determined 4) None of these

23. Arvind said, "This girl is the sister of the grandson of my mother". How the girl is related you Arvind?
1) Daughter 2) Niece
3) Sister 4) can't be determined.

24. Pointing to a lady on the stage, Devika said, "She is the sister of the son of the wife of my husband". How is the lady related to Devika?
1) Sister-in-law 2) Sister
3) daughter 4) cousin

25. A family consists of a husband and a wife, their three sons and two daughters, three wives of three sons. How many females are in the family?
1) 5 2) 6 3) 7 4) None of these

26. If a+b means a is daughter of b,
a-b means a is husband of b,
a*b means a is brother of b,
which of the following statements does not

hold?
1) a+b*c 2) a-b*c 3) a+b+ c 4) a+b-c

27. Directions for question
Use the relations defined below and answer the following question
A+B means a is the mother of B
A-B means a is the sister of B
A*B means a is the father of B
A/B means a is the son of B
A=B means a is the brother of B
A ≠ B means a is the daughter of B
Which of the following means P is the aunt of Q?
1) P-R/Q 2) P+R*Q
3) P-R+Q 4) P*R=Q

28.P,Q,R,S,T went on a picnic P is the son of Q is not the father of P. R
is the son of S, who is the brother of P. T is the wife of S. How is P related to S?
1) Nephew 2) Brother
3) Father 4) None of these

29. Arun told Man, “Yesterday I met the son of my wife's father in law”. How is Arun related to that man?
1) Brother 2) father
3) Son-in-law 4) Niece

30.If a+b means a is daughter of b,
a-b means a is husband of b,
a*b means a is brother of b,
From the statement a*b*c*d which of the following statement in not necessarily true?
1) b is the brother of a
2) c is the brother of a
3) d is the brother of c
4) a, b, c are male

STATEMENT AND ASSUMPTIONS

In each question below is given a statement followed by two assumptions numbered I and II. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.
Give answer
(A) If only assumption I is implicit
(B) If only assumption II is implicit
(C) If either I or II is implicit
(D) If neither I nor II is implicit
(E) If both I and II are implicit.

1. Statement:
A warning in a train compartment - "To stop train, pull chain. Penalty for improper use Rs. 500."
Assumptions:
I. Some people misuse the alarm chain.
II. On certain occasions, people may want to stop a running train.

2. Statement:
"You are hereby appointed as a programmer with a probation period of one year and your performance will be reviewed at the end of the period for confirmation." - A line in an appointment letter.
Assumptions:
I. The performance of an individual generally is not known at the time of appointment offer.
II. Generally an individual tries to prove his worth in the probation period.

3. Statement:
Cases of food poisoning due to consumption of liquor are increasing in rural areas.
Assumptions:
I. Percentage of people consuming liquor is more in rural areas.
II. There are many unauthorized spurious liquor shops in the rural areas.

4. Statement:
The first step in treating addicts is to re-establish their lost ties, for which a continuous personal attention should be paid to the addicts under treatment.
Assumptions:
I. Addicts under treatment respond better when shown personal interest.
II. Addiction and strained relationships are intimately connected.

5. Statement:
The concession in rail fares for the journey to hill stations has been cancelled because it is not needed for people who can spend their holidays there.
Assumptions:
I. Railways should give concession only to needy persons.
II. Railways should not encourage people to spend their holidays at hill stations.

6. Statement:
Like a mad man, I decided to follow him.
Assumptions:
I. I am not a mad man.
II. I am a mad man.

7. Statement:
If it is easy to become an engineer, I don't want to be an engineer.
Assumptions:
I. An individual aspires to be professional.
II. One desires to achieve a thing which is hard earned.

8. Statement:
The State government has decided to appoint four thousand primary school teachers during the next financial year.
Assumptions:
I. There are enough schools in the state to accommodate four thousand additional primary school teachers.
II. The eligible candidates may not be interested to apply as the government may not finally appoint such a large number of primary school teachers.

9. Statement:
The coffee powder of company X is quite better in taste than the much advertised coffee of company Y. Assumptions:
1. If your product is not good, your spend more on advertisement.
2. Some people are tempted to buy a product by the advertisement.

10. Statement:
"If you trouble me, I will slap you." - A mother warns her child.
Assumptions:
I. With the warning, the child may stop troubling her.
II. All children are basically naughty.

11. Statement:
The X-Airlines has decided to increase the passenger fare by 15 percent with immediate effect.
Assumptions:
I. The demand for seats of X-Airlines may remain unchanged even after the hike of fare.
II. Other airline companies may also hike the passenger fares.

12. Statement:
Of all the radio sets manufactured in India, the 'X' brand has the largest sale.
Assumptions:
I. The sale of all the radio sets manufactured in

India is known.
II. The manufacturing of no other radio set in India is as large as 'X' brand radio.

13. Statement:
Lack of stimulation in the first four or five years of life can have adverse consequences.
Assumptions:
I. A great part of the development of observed intelligence occurs in the earliest years of life
II. 50 percent of the measurable intelligence at age of 17 is already predictable by the age of four.

14. Statement:
A's advice to B - "Go to Jammu via Amritsar - the shortest route". Assumptions:
1. B wishes to go to Jammu.
2. A gives advice to everybody.

15. Statement:
Unemployment allowance should be given to all unemployed Indian youth above 18 years of age.
.
Assumptions:
I. There are unemployed youth in India who needs monetary support. .
II. The government has sufficient funds to provide allowance to all unemployed youth.

16. Statement:
The campaign of 'Keep your city clean' started by the Civil Council did not evoke any response from the citizens.
Assumptions:
1. People do not desire to keep their city clean.
2. The Civil Council has failed in its campaign.

17. Statement:
The district administration has issued a circular to all the farmers under its jurisdiction advising them for not using pesticides indiscriminately as it may pollute the ground water.
Assumptions:
1. People may stop using ground water if the farmers continue to use pesticides indiscriminately.
2. Farmers may refrain from using pesticides indiscriminately.

18. Statement:
All existing inequalities can be reduced, if not utterly eradicated, by action of governments or by revolutionary change of government.
Assumptions:
1. Inequality is a man-made phenomenon.
2. No person would voluntarily part with what he possesses.

19. Statement:
Please note that the company will provide accommodation to only outside candidates if selected.' - A condition in an advertisement.
Assumptions:
I. The local candidates would be having some other arrangement for their stay.
II. The company plans to select only local candidates.

20. Statement:
"The bridge was built at the cost of Rs. 128 cores and even civil bus service is not utilizing it, what a pity to see it grossly underutilized." - A citizen's view on a new flyover linking east and west sides of a suburb.
Assumptions:
I. The building of such bridges does not serve any public objective.
II. There has to be some accountability and utility of money spent on public projects.

STATEMENT AND CONCLUSION

In each question below is given a statement followed by two conclusions numbered I and II. You have to assume everything in the statement to be true, then consider the two conclusions together and decide which of them logically follows beyond a reasonable doubt from the information given in the statement.
Give answer:
(A) If only conclusion I follows
(B) If only conclusion II follows
(C) If either I or II follows
(D) If neither I nor II follows and
(E) If both I and II follow.

1. Statements:
Domestic demand has been increasing faster than the production of indigenous crude oil.
Conclusions:
I. Crude oil must be imported.
II. Domestic demand should be reduced.
2. Statements:
Use "Kraft" colors. They add color to our life. - An advertisement.
Conclusions:
I. Catchy slogans do not attract people.
II. People like dark colors.

3. Statements:
He stressed the need to stop the present examination system and its replacement by other methods which would measure the real merit of the students.
Conclusions:
I. Examinations should be abolished.
II. The present examination system does not measure the real merit of the students.

4. Statements:
Quality has a price tag. India is allocating lots of funds to education.
Conclusions:
I. Quality of education in India would improve soon.
II. Funding alone can enhance quality of education.

5. Statements:
The national norm is 100 beds per thousand populations but in this state, 150 beds per thousand are available in the hospitals.
Conclusions:
I. Our national norm is appropriate.
II. The state's health system is taking adequate care in this regard.

6. Statements:
People who speak too much against dowry are those who had taken it themselves. Conclusions:
I. It is easier said than done.
II. People have double standards.

7. Statements:
Our securities investments carry market risk. Consult your investment advisor or agent before investing. Conclusions:
I. One should not invest in securities.
II. The investment advisor calculates the market risk with certainty.

8. Statements:
Vegetable prices are soaring in the market.
Conclusions:
I. Vegetables are becoming a rare commodity.
II. People cannot eat vegetables.

9. Statements:
The percentage of the national income shared by the top 10 per cent of households in India is 35.
Conclusions:
I. When an economy grows fast, concentration of wealth in certain pockets of population takes place.
II. The national income is unevenly distributed in India.

10. Statements:
To cultivate interest in reading, the school has made it compulsory from June this year for each student to read two books per week and submit a weekly report on the books.
Conclusions:
I. Interest in reading can be created by force.
II. Some students will eventually develop interest in reading.

11. Statements:
Company X has marketed the product. Go ahead; purchase it if price and quality are your considerations.
Conclusions:
I. The product must be good in quality.
II. The price of the product must be reasonable.

12. Statements:
The serious accident in which a person was run down by a car yesterday had again focused attention on the most unsatisfactory state of roads.
Conclusions:
I. The accident that occurred was fatal.
II. Several accidents have so far taken place because of unsatisfactory state of roads.

13. Statements:
Applications of applicants who do no fulfill eligibility criteria and/or who do not submit applications before last date will be summarily rejected and will not be called for the written test. Conclusions:
I. Those who are called for the written test are those who fulfill eligibility criteria and have submitted their applications before last date.
II. Written test will be held only after scrutiny of applications.

14. Statements:
Recent trends also indicate that the number of child migrants in large cities is increasing. These children leave their families to join the ranks of urban poor doing odd jobs in markets, workshops, hotels or in service sectors.
Conclusions:
I. Migration to big cities should be checked.
II. The plight of poor children should be thoroughly studied.
15. Statements:
All the organized persons find time for rest. Suita, in spite of her very busy schedule, finds time for rest. Conclusions:
I. Suita is an organized person.
II. Suita is an industrious person.
16. Statements:
Until our country achieves economic equality, political freedom and democracy would be meaningless.
Conclusions:
I. Political freedom and democracy go hand in hand.
II. Economic equality leads to real political freedom and democracy.

17. Statements:
Fashion is a form of ugliness so intolerable that we have to alter it every six months.
Conclusions:
I. Fashion designers do not understand the public mind very well.
II. The public by and large is highly susceptible to novelty.

18. Statements:
A Corporate General Manager asked four managers to either submit their resignations by the next day or face termination orders from service. Three of them had submitted their resignations by that evening.
Conclusions:
I. The next day, the remaining manager would also resign.
II. The General Manager would terminate his services the next day.

19. Statements:
The eligibility for admission to the course is minimum second class Master's degree. However, the candidates who have appeared for the final year examination of Master's degree can also apply. Conclusions:
I. All candidates who have yet to get their Master's degree will be there in the list of selected candidates.
II. All candidates having obtained second class Master's degree will be there in the list of selected candidates.
20. Statements:
Jade plant has thick leaves and it requires little water.
Conclusions:
I. All plants with thick leaves require little water.
II. Jade plants may be grown in places where water is not in abundance.

SEQUENCE AND SERIES

Directions for questions 1 to 30 : Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

1. 3,8,15,24,35,48?
1)53 2)63 3)80 4) none

2. 125, 80, 45, 20,?
1)5 2)8 3)10 4)12

3. 31,32,30,-32,-89,-174
1)22 2)30 3)-32 4)-89

4. 4. 4, -8, 16, -32, 64, (....)
1)128 2)-128 3)192 4)-192

5. F2, __, D8, C16, B32, ...
What number should fill the blank?
1) A16 2) G4 3) E4 4) E3

6. 300,296,287,271,?,210
1)246 2)250 3)244 4)none

7. 120, 99, 80, 63, 48, ?
1)35 2)38 3)39 4)40

8. What is the sum of infinite terms of the given series?
4+4^ (1/2) +4^ (1/4) +
1)12 2)16 3)64 4) none

9. 11, 13, 17, 19, 23, 29, 31, 37, 41?
1)43 2)47 3)53 4)51
10. 544, 509, 474, 439?
1)404 2)414 3)420 4)445

11. V, VIII, XI, XIV, __, XX
1) IX 2) XXIII 3) XV 4) XVII

12. 1, 4, 27?
1)256 2)3125 3)2425 4) none

13. 15, 31, 63, 127, 255,?
1)513 2)511 3)517 4)523

14. 1, 4, 16, 64 , ?
1)1024 2)16384 3)4096 4) none

15. 8, 7, 11, 12, 14, 17, 17, 22?
1)27 2)20 3)22 4)24

16. 15, ?, 27, 27, 39, 39
1)51 2)39 3)23 4)15

17. 12,15,19,?,30,37
1)35 2)34 3)37 4)24

18. ZYXWTSRQNMLK?
1)I 2)G 3)H 4)J

19. 625,125,?,5,1
1)1/5 2)1 3) 5 4) none

20. 3, 10, 101?
1)10101 2)10201 3)10202 4)11012

21. 10, 100, 200, 310,?
1)400 2)410 3)420 4)430

22. (1, 1), (2, 16), (3, 81), (?)
1) (4, 16) 2) (4, 64) 3) (4,256) 4) none

23. 5, 36, 253?
1) 1749 2) 1750 3) 1772 4) 1771

24. 83, 82, 80, 77,?
1)74 2)73 3)75 4)76

25. 3, 7, 6, 5, 9, 3, 12, 1, 15,?
1)18 2)13 3)-1 4)3

26. ABE, BCF, CDG, DEH, EFI ,?
1) FGK 2) FGJ 3) FGL 4) none

27. 1,4,3,9,5,16,7,25,9,36,11?
1)64 2)49 3)48 4)55

28. 1,3,2,5,3,7,4,9,5,11,6,?
1)10 2)11 3)13 4)9

29. BZ, HT, NN, ?, ZB
1) LF 2) SX 3) TH 4) TI

30. 64, 125, 216, 343, 512,?
1)8 2)729 3)27 4)999

QUANTITATIVE REASONING

Read the following passage for answering questions:
In a class of 540 students, for every 9 girls there are 11 boys. The weight of students varies from 40 to 50kg. There are as many 44 kg girls as there are 46kg boys and as many 40kg boys as 50 kg girls. The number of 50 kg boys is 35 more than that of 44 kg girls while there are as many 44 kg boys as 46 kg girls. The ratio of 40 kg boys and girls is 4:3 while that of 50 kg girls and boys is 1:3.

1. How many students weigh 50 kg?
1) 96 2) 42 3) 201 4) None of the above

Study the information below and answer questions based on it:
Recently, Ghosh Babur spent his winter vacation on Kya k ya Island. During the vacation, he visited the local casino where he came across a new card game. Two players, using a normal deck of 52 playing cards, play this game. One player is called the "Dealer" And the other is called the "Player" First, the player picks a card at random from the deck. This is called the base card. The amount in rupees equal to the face value of the base card is called the base amount. The face values of ace, king, queen and jack are ten. For other cards the face value is the number on the card.
Once the "player" Picks a card from the deck, the "dealer" pays him the base amount. Then they "dealer" Picks a card from the deck and this card is called the top card. If the top card is of the same suit as the base card, the "player" pays twice the base amount to the "dealer". If the top card is of the same color as the base card (but not the same suit), then they "Player" pays the base amount to the "dealer".
If the top card happens to be of a different color than the base card, the "dealer" pays the base amount to the "player". Ghost Babul played the game four times. First time he picked eight of clubs and the "dealer" picked queen of clubs. Second time, he picked ten of hearts and the "dealer" picked two of spades. Next time, Ghost Babul picked six of diamonds and the "dealer" picked ace of hearts. Lastly, he picked eight of spades and the "dealer" picked jack of spades. Answer the following questions based on these four games.

2. If Ghosh Babul stopped playing the game when his gain would be maximized, the gain in Rs. would have been:.?
1) 12 2) 20 3) 16

3. The initial money Ghosh Babul had (before the beginning of the game sessions) was Rs. X. At no point did he have to borrow any money. What is the minimum possible value of X?
1) 16 2) 8 3) 100 4) 24

Study the information below and answer questions based on it.
Elle is 3 times older than Zaheer. Zaheer is as old as Waheeda. Yogesh is elder than Zaheer.

4. Which one of the following statements can be inferred from the info above?
1) Yogesh is elder than Waheeda
2) Elle is older than Waheeda
3) Elle's age may be less than that of Waheeda
4) None of the above

5. Which of the following information will be sufficient to estimate Elle's Age?
1) Zaheer is 10 yrs old
2) Yogesh and Waheeda are both older than Zaheer by the same no of yrs.
3) Both of the above
4) None of the above

Four friends Ashok, Bashir, Chirag and Deepak are out shopping.Ashok have less money than three times the amount that Bashir has. Chirag has more money than Bashir. Deepak has an amount equal to the difference of amounts with Bashir and Chirag.Ashok has three times the money with Deepak. They each have to buy at least one shirt, or one shawl, or one sweater, or one jacket that are priced Rs.200, Rs.400, Rs.600 and Rs.1000 a piece ,respectively. Chirag borrows Rs.300 from Ashok and buys a jacket. Bashir buys a sweater after borrowing Rs.100 from Ashok and is left with no money. Ashok buys three shirts.

6. What is the costliest item that Deepak could buy with his own money?
1) A shirt 2) A shawl
3) A sweater 4) A jacket

Study the information below and answer questions based on it.
I have a total of Rs. 1000/-. Item A costs Rs. 110, item B Rs. 90, item C Rs. 70, item D Rs. 40 and item E Rs. 45. For every item D that I purchase, I must also buy only two items of B. For every item A, I must buy one item of C.
For every item E, I must also buy two of item D and one of item B. For every item that i purchased i earn 1000 points and for every rupee not spent I earn a penalty of 1500 points. My objective is to maximize the points earned.

7. What is the number of items that I must purchase to maximize my points?
1) 13 2) 14 3) 15 4) 16

Study the information below and answer questions based on it.
On her walk through the park, Hamas collected 50 colored leaves, all either maple or oak. She sorted them by category when she got home, and found the following: The number of red oak leaves with spots is even and positive. The number of red oak leaves without any spot equals the number of red maple leaves without spots.
All non-red oak leaves have spots, and there are five times as many of them as there are red spotted oak leaves. There are no spotted maple

leaves that are not red. There are exactly 6 red spotted maple leaves. There are exactly 22 maple leaves that are neither spotted nor red.

8. How many oak leaves did she collect?
1) 22 2) 17 3) 25 d) 18

Study the information below and answer questions based on it.
Eighty kilogram of store material is to be transported to a location 10 km away. Any number of couriers can be used to transport the material. The material can be packed in any number of units of 10, 20, or 40 kg.
Courier charges are Rs. 10 per hour. Couriers travel at the speed of 10 km/hr if
They are not carrying any load, at 5 km/hr if carrying 10 kg, at 2 km/hr if carrying 20 kg and at1 km/hr if carrying 40 kg. A courier cannot carry more than 40 kg of load.

9. The minimum cost at which 80 kg of store material can be transported to its destination will be
1) RS.180 2) Rs.160
3) Rs.140 4) Rs.120

Study the information below and answer questions based on it.
My bag can carry not more than ten books. I must carry at least one book each of Management, Mathematics, Physics and Fiction. For every Management book, I must carry two or more Fiction books, and for every Mathematics book, I must carry two or more Physics books. I earn 4, 3, 2 and 1 points for each Management, Mathematics, Physics and Fiction book respectively, I carry in my bag.

10. The maximum points that I can earn is
1) 21 2) 20 3) 22 4) 23

Study the information below and answer questions based on it.
Three travelers are sitting around a fire, and are about to earn a meal. One of them has five small loaves of bread; the Second has three small loaves of bread. The third has no food, but has eight coins.
He offers to pay for some bread. They agree to share the eighty loaves equally among the three travelers, and the third travelled will pay eight coins for his share of the eight loaves.
All loaves were of the same size. The second traveler (who had three loaves) suggests that he be paid three coins, and that the first traveler be paid five coins. Thebe first traveler be paid five coins. The first traveler says that he should get more than five coins.

11. How much the first travelers should get?
1) 5 2) 7 3) None of the above

Answer the questions on the basis of the information given below.
Five women decided to go shopping to M.G. Road, Bangalore. They arrived at the designated meeting place in the following order:
1. Archana, 2. Chellamma, 3. Dhenuka, 4. Helen and 5. Shahnaz. Each woman spent at least Rs.1000.Below are some additional facts about how much they spent during their shopping spree.
i. The woman who spent Rs. 2234 arrived before the lady who spent Rs. 1193.
ii. One woman spent Rs. 1340 and she was not Dhenuka.
iii. One woman spent Rs. 1378 more than Chellamma.
iv. One woman spent Rs. 2517 and she was not Archana.
v. Helen spent more than Dhenuka.
vi. Shahnaz spent the largest amount and Chellamma the smallest.

12. The woman who spent Rs. 1193 is
1) Archana 2) Chellamma
3) Dhenuka 4) Helen

13. What was the amount spent by Helen?
1) Rs. 1193 2) Rs. 1340
3) Rs. 2234 4) Rs. 251

14. Which of the following amounts was spent by one of them?
1) Rs. 1139 2) Rs. 1378
3) Rs. 2571 4) Rs. 2718

Answer the questions on the basis of the information given below.
Coach John sat with the score cards of Indian players from the 3 games in a one-day cricket tournament where the same set of players played for India and all the major batsmen got out. John summarized the batting performance through three diagrams, one for each game. Each diagram communicates the number of runs scored by the three top scores from India, where K, R, S, V, and Y represent Kaif, Rahul, Saurav, Virender, and Yuvraj respectively.
The % in each diagram denotes the percentage of total score that was scored by the top three Indians corers in that game. No two players score the same number of runs in the same game. John also calculated two batting indices for each player based on his scores in the tournaments; the R-index of a batsman is the difference between his highest and lowest scores in the 3 games while the M-index is the middle number, if his scores are arranged in a non-increasing order.
Pakistan 90%Y(40)V(130) K(28)South Africa 70%K(51)S(75) R(49)Australia80%R(55)Y(87) S(50)
Batting performance of five Indian Batsmen in three games of One-day international cricket Tournament.

15. For how many Indian players is it possible to calculate the exact M-index?
1) 0 2) 1
3) More than 2 4) None of the above

16. Among the players mentioned, who can have the lowest R-index from the tournament?
1) Only Kaif, Rahul or Yuvraj
2) Only Kaif or Rahul
3) Only Kaif or Yuvraj
4) Only Kaif

17. How many players among those listed definitely scored less than Yuvraj in the tournament?
1) 0 2) 1 3) More than 2

18. Which of the players had the best M-index from the tournament?
1) Rahul 2) Saurav 3) Virender 4) Yuvraj

Answer the questions on the basis of the information given below.
The following data pertains to the profiles of 100 students who have appeared for the "Selection Process" of a B-School, ISW College in the year 2009.
1. Each student has written exactly one of the two tests LAT or BAT, and every one of them has at least one of the two features? Good Academic Record (GAR) or Extra Curricular Activities (ECA).
2. No student who has written LAT has both GAR and ECA.
3. Sixty percent (60%) of the students who have appeared for the Selection Process have written LAT, of which 40% have Work Experience.
4. Fifty percent (50%) of the students who have appeared for the Selection Process have Work Experience, of which 30 students have GAR.
5. The number of students who have written BAT and also have both Work experience and GAR is 20.
6. The number of students who have written

LAT and also have GAR is 25.
7. The number of students who have ECA but have no Work Experience is 35.

19. Out of all the students who have appeared for the Selection Process of ISW College, how many have written BAT and have Work Experience and GAR, but no ECA?
1) 10 2) 15
3) 20 4) None of the above

20. Out of all the students who have appeared for the Selection Process of ISW College, what is the maximum possible number of students who have GAR and who have also written BAT but have no Work Experience?
1) 10 2) 12
3) 14 4) None of the above

STATEMENT - COURSES OF ACTION

In each question given below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true. Then decide which of the two suggested courses of action logically follows for pursuing
Give answers as
(a) I only I follow
(b) If only II follows
(c) If both I and II follow
(d) If neither I nor II follows
1. Statement: The flood relief sanctioned for the purpose never reached the intended beneficiaries.
Courses of action:
I. Those who are responsible should be checked and suspended
II. The government of India should resign taking moral responsibility for the same

2. Statement: It has been observed that commercial banks refrain from giving loans to people from poor backgrounds because they cannot provide assets for security
Courses of action:
I. The finance ministry must look into the matter immediately
II. The finance minister should initiate an enquiry into the matter

3. Statement: The sale of a particular product has gone down considerably causing great concern to the company
Courses of Action:
I. The company should make a proper study of rival products in the market
II. The price of the product should be reduced and quality improved

4. Statement: The Asian Development Bank has approved a $285 million loan to finance a project to construct coal ports by Para dip and Madras Port Trusts
Courses of Action:
I. India should use financial assistance from other international financial organizations to develop such ports in other places.
II. India should not seek such financial assistance from the international financial agencies

5. Statement: Doordharshan is concerned about the quality of its programmers particularly in view of stiff competition it is facing from STAR and other satellite TV channels and is contemplating various measures to attract talent for its programmers
Courses of Action
I. In an effort to attract talent, the Doordharshan has decided to revise its fee structure for the artists
II. The fee structure should not be revised until other electronic media also revise it

6. Statement:
The Minister said that the teachers are still not familiarized with the need, importance and meaning of population education in the higher education system. They are not even clearly aware about their role and responsibilities in the population education program me
Courses of Action:
I. Population education program me should be included in the college curriculum.
II. Orientation program me should be conducted for teachers on population education.

7. Statement:
There has been an unprecedented increase in the number of successful candidates in this year's School Leaving Certificate Examination
Courses of Action:
I. The government should make arrangements to increase number of seats of intermediate courses in existing colleges.
II. The government should take active steps to open new colleges to accommodate all these successful candidates.

8. Statement:
The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased
Courses of Action:
I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality.
II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

9. Statement:
The Government has decided not to provide financial support to voluntary organizations from next Five Year Plan and has communicated that all such organizations should raise funds to meet their financial needs.
Courses of Action:
I. Voluntary organizations should collaborate with foreign agencies.
II. They should explore other sources of financial support.

10. Statement:
Orissa and Andhra Pradesh have agreed in principle to set up a joint control board for better control, management and productivity of several inter-state multipurpose projects
Courses of Action:
I. Other neighboring states should set up such control boards
II. The proposed control board should not be allowed to function as such joint boards are always ineffective.

11. Statement:
The Indian electronic component industry venturing into the West European markets faces tough competition from the Japanese.
Courses of Action:
I. India should search for other international markets for its products.
II. India should improve the quality of the electronic components to compete with the Japanese in capturing these markets

12. Statement:
The Central Bureau of Investigation receives the complaint of an officer taking bribe to do the duty he is supposed to
Courses of Action:
I. CBI should try to catch the officer red-handed and then take a strict action against him.
II. CBI should wait for some more complaints about the officer to be sure about the matter.

13. Statement:
The Asian Development Bank has approved a

$285 million loan to finance a project to construct coal ports by Para dip and Madras Port Trusts.
Courses of Action:
I. India should use financial assistance from other international financial organizations to develop such ports in other places.
II. India should not seek such financial assistance from the international financial agencies.

14. Statement:
On an average, about twenty people are run over by trains and die every day while crossing the railway tracks through the level crossing.
Courses of Action:
I. The railway authorities should be instructed to close all the level crossings.
II. Those who are found crossing the tracks, when the gates are closed, should be fined heavily.

15. Statement:
Majority of the students in many schools do not pass in the final examination.
Courses of Action:
I. These schools should be closed down as these have become unproductive.
II. The teachers of these schools should immediately be retrenched

16. Statement:
In a recent bulletin the Meteorological Department India has forecasted servers drought in the next cropping season which may causes failure of crops
Courses of action:
I. forecast should be widely published in media
II. Drought relief team should be ready for relief work
III. Should be advised to go for drought resistant variety
1) (I) and (II) follow 2) (II) follow
3) (II) and (III) follows
4) None of the above
17. Statement:
The presence of Mafiosi in the education system of UP has increased Courses of action:
I. Should be a special taskforce constituted to clean the system of ills
II .UP government should resign immediately.

18. Statement:
In a recent survey by the National Health mission it was showed that fruits and vegetables which contain certain vitamins have s higher effect on human health than capsules marketed by private companies that contain the same vitamins Courses of action:
I. Vitamin capsules marketed by private companies should banned with immediate effect
II. Should prefer fruit and vegetables to capsules marketed by companies

19. Statement:
has been reported that water level is declining rapidly in India
Courses of action:
I. Should be a public campaign to educate people about the need to and eliminate the wastage of water
II .technologies should be researched and utilized to store rain

20. Statement:
Reliance Telecommunication is playing dirty tricks with its competitor Idiom
Courses of action:
I. Idiom should also do the same
II. Idiom should decreases the tariff rate of photo calls

LR – ARRANGEMENTS

Study the information given below to answer these questions.
(i) Alex, Betsy, Chloe, Dennis, Edward, Fiona, Giles and Herbert are gamblers sitting around a round table facing the center
(ii) Donnish is the neighbor of Alex but not of Herbert
(iii) Betsy is the neighbor of Fiona and 4th to the left of Dennis
(iv) Edward is the neighbor of Herbert and 3rd to the right of Fiona.

1. Which of the following pairs fourth to one another
1) Chloe- Edward 2) Fiona- Herbert
3) Dennis-Chloe 3) Dennis- Betsy

2. If Chloe and Giles interchare their positions, which of the
following of the following will indicate Alex's position
1) To the immediate right of Giles
2) 4th to the right of Chloe
3) 2nd to the left of Giles
4) To the immediate left of Chloe

3. Which of the following is correct
1) Dennis is to the immediate left of Giles
2) Alex is between Chloe and Dennis
3) Fiona is 3rd to the right of Dennis
4) Edward is between Herbert and Betsy

4. Which of the following pairs has the 1st person sitting to the immediate right of the second
1) Betsy- Herbert 2) Fiona- Betsy
3) Edward- Giles 4) Alex- Dennis

Study the information given below to answer these questions.
Seven sports awardees A, B, C, D, E, F and G are to be hononured at a special luncheon. The player will be seated on the dais in row.
A and G have to catch the flight for their One Day International Cricket match and so must be seated at the extreme right.
B, the Rajiv Gandhi Khel Ratna recipient must be in the center.
C and d are bitter rivals and therefore must be seated as far apart as possible.

5. which of the following cannot be seated at either and
1) C 2) D 3) F 4) Cannot be determine

6. Which of the following pairs cannot occupy the seats on either side of B
1) F & D 2) E & G
3) D & E 4) None of these

Answer questions based on the information given below:
k, l, m, n, p, q, r, s, u and w are the only ten members in a department. There is a proposal to form a team from
within the members of the department, subject to the following conditions:
a. A team must include exactly one among P, R and S.
b. A team must include either M or q, but not both.
c. if the team includes K, then it must also include the other two
l and n cannot be members of the same team.
l and u cannot be members of the same team.
The size of the team is defined as the number of members in the team.

7. Who cannot be as member of a team of size 3?
1) l 2) m 3) n 4) p 5) q

8. In how many ways a team can be constituted so that the team includes n?
1) 2 2)3 3)4 4) 5 5)6

Study the information given below to answer these questions.
Six friends-Alok, Bheem, Chandar, Devadas, Earl and Ferguson are sitting on a bench facing in the same direction.
Chandar is sitting between Alok and Earl;
Devadas is not at the end.
Bheem is sitting to the immediate right of Earl.
Ferguson is not at the right end.

9. Who is to the immediate right of Ferguson
1) Devdas 2) Alok
3) Either Devdas or Alok
10. 4) Cannot be determined

11. Who is fourth from the left end,
1) Alok 2) Chandar
3) Bheem 4) cannot be determined

12. Which of the following is sitting to one side of Devdas
1) Ferguson-Earl 2) Ferguson-Bheem
3) Ferguson-Chandar 4) None of these

13. How many persons are there to the left of Chandar
1) One 2) Two 3) Three 4) Four

14. Who is at the left and
1) Ferguson 2) Alok
3) Bheem 4) Cannot be determined

Direction: These questions are based on the information that follows
In a row of soldiers facing North,
(i) Lambert is 8th to the right of Khurusheva;
(ii) Mickey is 16th from the left end;
(iii) Lambert is 16th to the right of Jackson, who is 27th from right and of the row;
(iv) Khurusheva is nearer than Mickey to the right end of the row;
(v) there are 5 boys between Mickey and Khurusheva

15. How far away is Khurusheva from right end of the row
1) 30th 2) 10th 3) 19th 4) 18th

16. how far away is Jackson from the right end of the row
1) Data inadequate 2) 24th 3) 25th 4) 27th

17. How many soldiers is there between Jackson and Mickey
1) one 2) Two 3) Three 4) Data inadequate

18. How many soldiers are there in row
1) 50 2) 40 3) 36 4) Data inadequate

Direction 18 - 20: Study the information given below to answer these questions.
(i) Arnolds fitness schedule consists of cycling, rowing, gymnasium, jogging
and boxing from Monday to Saturday; each workout is on one day, one day being a rest day.
(ii) Gymnasium workout is done neither on the first nor on the last day but is done earlier than rowing
(iii) Jogging is done on she immediate next day of the rowing day
(iv) Cycling is done on the immediate previous day of the rest day
(v) Boxing was done on the following day the rest day

19. Cycling and jogging days have a gap of how many days between them
1) Nil 2) Two 3) Three 4) Four

20. On which day is boxing done
1) Thursday 2) Friday
3) Monday 4) Wednesday

21. Which of the following is a wrong statement
1) Gymnasium workout is done on the immediate previous day of rowing.
2) Jogging is done three days after the day on which boxing was done.
3) There is a gap of three days between the days on which cycling and rowing are done.
4) There is a two days gap between the rest day and the day on which gymnasium workout is done.

CODING AND DECODING

1. In a certain code language, if the word SPLENDOR is coded as UFNJPHQJ, then how is the word DISASTER coded in that language?
1) FRUBUNGJ 2) HRUNDPJL
3) FRUBNPLH 4) HRDLJNLJ

2. In a certain code language, if the word BARRICADE is coded as AABCDEIRR, then how is the word INDIVIDUAL coded in that language?
1) ADDIIILNUV 2) ADDIIINLUV
3) AIIIUDDLNV 4) ADDINIILUV

3. In a certain code language, if the word PLATINUM is coded as AIUPLTNM, then how is the word ADVENTURE coded in that language?
1) AEEUDNRTV 2) ADEENRTUV
3) AEUEDNTVR 4) AEUEDVNTR

4. In a certain code language, if the word SYMPHONY is coded as HBNKSLMB, then how is the word PICKLE coded in that language?
1) KRXSNR 2) KRWPLV
3) KIXPOV 4) KRXPOV

5. In a certain code language, if the word CERTIFY is coded as BURGIVX, then how is the word ADJACENT coded in that language?
1) ZWQZXVMG 2) GMVXZQWZ
3) RMVWYJWH 4) GMXVWRVZ

6. In a certain code language, if the word SEARCH is coded as IDSBFT, then how is the word FURNISH coded in that language?
1) ITKNSVG 2) ITJORWG
3) ITJOSVG 4) ITHNRVG

7. In a certain code language, if the word STRUCTURE is coded as TVUYHZBZN, then how is the word REMEDY coded in that language?
1) SGPIJE 2) SGPEJD
3) SGPIHE 4) SGPIIE

8. In a certain code language, if the word GROUND is coded as HPRQSX, then what is coded as NOURISH?
1) OMXNNMO 2) MQRVDYA
3) MQRTFXA 4) OMVNMNO

9. In a certain code language, if INFER = 25 and JERSEY=28, then CHOICE=?
1) 34 2) 39 3) 41 4) 47

10. In a certain code language, if BUG=90 and ALMS=180, then CADET=?
1) 153 2) 165 3) 175 4) 148

11. In a certain code language, if the word MINUTE is coded as NMWKSO, then what is code for the word REIGN?
1) SIPVM 2) SLRVM
3) SIRTN 4) SIRWM

12. In a certain code language, if the word MYSTERY is coded as ZLFGREL, then how is the word PURSUE coded in that language?
1) KFIHFV 2) CHFEIR
3) CHEFHR 4) CHEGIR

13. In a certain code language, if the word IMPORT is coded as KPUVCG, then what is coded as MISCHIEF?
1) KFNVWVNM 2) OLXYJSWY
3) OLXIRVWY 4) WVWNM

14. In a certain code language, if IMPEND= 61 and DISH=40, then FRUIT=?
1) 86 2) 68 3) 74 4) 76

15. In a certain code language, if the word MIRAGE is coded as ZRJBNJ,, then how is the word INTRUDE coded in that language?
1) RBPHNJL 2) RDPIPAJ
3) RBNJPHJ 4) RBJLPHJ

16. In a certain code language, if FRAME=48 and HURDLE=74, then FIGMENT=?
1) 74 2) 89 3) 91 4) 81

17. In a certain code language, if the word ADVANTAGE, is coded as EFWEPVEHI, then how is the word ADVENTURE coded in that language?
1) EAQMODEUF 2) FAQMODEUI
3) FAQMODEVI 4) FAQMJDEVI

18. In a certain code language, if the word MAJESTY is coded as NZKDTSZ, then which is coded as HKJLQRF in that language?
1) GLORIFY 2) GLISTEN
3) GLOWING 4) GLIMPSE

19. In a certain code language, if CABINET= 70 and BEAUTY=60, then PRODUCTION=?
1) 90 2) 100 3) 110 4) 120

20. In a certain code language the following lines are written as
"lop eop aop fop" means "Traders are above laws"
"fop cop bop gop" means "Developers were above profitable"
"aop bop uop qop" means "Developers stopped following traders"
"cop jop eop uop" means "Following maps were laws"
"gop gop cop eop" would correctly mean
1) Profitable laws were stopped
2) Developers stopped following laws
3) Traders were above profitable
4) None of these

ASSERTION AND REASON

For the Assertion (A) and Reason(R) below choose the correct alternative from the following.
(a) Both A and R is true and R is the correct explanation of A.
(b) Both A and R is true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

1. Assertion:
Manmohan Singh is widely recognized as the chief architect of liberalization in India.
Reason:
Manmohan Singh was the finance minister who first started opening up the Indian economy in 1991.

2. Assertion:
Amartya Sen. was awarded the Nobel Prize for Economics.
Reason:
Amartya Sen. has made an invaluable Contribution in the field of developmental economics.

3. Assertion:
The Y2K problem had the entire computer industry in a fix towards the end of the 20th century.
Reason:
The Y2K problem emerged due to the fact that the date field in computers had only two digits.

4. Assertion:
As the pressure increases, the volume decreases if the temperature is constant.
Reason:
When temperature is constant, pressure and volume are inversely proportional to each other

5. Assertion:
India won the inaugural 20-20 world cup cricket tournament.
Reason:
A young team played fearless and brilliant cricket to win the inaugural T20 world cup

6. Assertion:
Bats can fly in the night
Reason:
Bats emit ultrasonic.

7. Assertion:
India is a sovereign country.
Reason:
Its parliament is based in Delhi.

8. Assertion:
Carbon monoxide when inhaled causes death.
Reason:
Carbon monoxide combines with hemoglobin.

9. Assertion:
Iron is a good conductor of electricity.
Reason:
If you touch an iron rod which is exposed to electric current, you will get an electric shock.

10. Assertion:
India's president is appointed on a five year term.
Reason:
Prathibha Patil was appointed as first Indian women President in 2007.

11. Assertion:
Harshad Mehta was responsible for a major bull run in the Indian Stock market.
Reason:
Harshad Mehta was known as the Big bull

12. Assertion:
Carbon forms the largest number of compounds.
Reason:
Carbon has the catenation property.

13. Assertion:
Median is used as a measure of scale value in method of equal appearing intervals.
Reason: I
n normal distribution mean, median and mode are identical

14. Assertion:
India is a country of diverse cultures, customs and languages.
Reason:
What we now call India is the modern version of Bharat.

15. Assertion:
During inflation, there is increase in money supply and rise in price level.
Reason:
The rise in prices is due to shortage in supply of essential consumer goods.

16. Assertion:
Clothes are not washed properly in hard water.
Reason:
Hard water contains many minerals.

17. Assertion:

In medical parlance with respect to blood groups, a person with a blood group of 'O' is called Universal Donor.
Reason:
A person with the 'AB' blood group can accept blood of all types, i.e., A, B, AB and O.

18. Assertion:
Clothes are not washed properly in hard water.
Reason:
Hard water contains many minerals.

19. Assertion:
During inflation, there is increase in money supply and rise in price level.
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TEAM FORMATIONS

A, B, C, D, E, F and G are traveling in three different vehicles. There are at least two passengers in each vehicle - Maruti, santro, Opel, and only one of them is a male. There are two engineers, two doctors and three teachers among them.
I. C is a lady doctor and she does not travel with the pair of sister A and F.
II.B, a male engineer, travels with only G,a teacher in a Maruti.
III. D is a male doctor.
IV. Two persons belonging to the same profession do not travel in the same vehicle.
V. A is not an engineer and travels in a Santro.

1. Which of the following represents the three teachers?
1) GEF 2) GEA 3) GBF 4) Data inadequate

2. Which of the following is not correct?
1) E-Male-Teacher 2) B-Male-Engineer
3) A-Female-Teacher 4) All are Correct
5) None

3. How many lady members are there among them?
1) Three 2) Four 3) Three or Four
4) Data inadequate

I.A guest house has 6 rooms A, B , C,D,E and F Among these A and C can accommodate two persons each ; the can accommodate only one each.
II.Eight guest P, Q, R, S, T, U, W and X are females while the rest those are males. The two genders can't be put together in the same room. No man is willing to stay in room C or f.
III. P wants to be alone but does not want to stay in rooms B or D. S need s partner but is not ready to stay with U or W.X does not want to share her room
.
4. In which of the following rooms will U say?
1) B 2) D 3) A 4) B or D 5) None

5. X will stay in which of the following rooms?
1) C 2) F 3) B
4) Data inadequate 5) none

A group of three or four has to be selected from seven persons. Among the seven there are two women _ Fiza. And kavita and five men-Ram, shyam, David, peter and Rahim. Ram would not like to be in the group if shyam is also selected .shyam and Rahim want to be selected together in the group.
Kavita would like to be in the group only if David is also there. David, if selected, would not like peter into the group. Ram would like to be in the group only if peter is also there.david insists that fiza be selected in case he is there in the group.

6. Which of the following is a feasible group of three?
1) David, Ram, Rahim
2) Peter, Shyam, Rahim
3) Kavita, David, Shyam
4) Fiza, David, Shyam
5) None

7. Which of the following statement is true?
1) Kavita and Ram can be part of a group of four.
2) A group of four can have two women.
3) A group of four can have all four men.
4) None of the above

8. Which of the following is a feasible group of four?
1) Ram, peter, Fiza, Rahim
2) Shyam, Rahim, Kavita, David
3) Shyam, Ranhim, Fiza, David
4) Fiza, David, Ram, Peter.
5) None

Read the Following information carefully and answer the question given below.
Amir, Bikram, Charlic, David, Emraan, Fahim and Gaurav are seven students in a class. They are sitting on three benches-- Mahogany, Oak and Maple in such a way that there are at least two of them on each bench.Charlie, fahim, aboy student, and sits only with bikram. Amir sits with his best friend on bench Mahogany.gaurav sits on bench maple. Emraan is the brother of Charlie.

9. Which of the following is a group of girls?
1) Bikram, Amir and Charlie
2) Bikram, fahim and Charlie
3) Charlie, David and fahim
4) Bikram, Charlie and David.

10. How many girl students are there?
1) 3 2) 4 3) 3 or 4 4) None of the above

I.M, N, P, Q, S and T are six member of a group in which there are three female members. Females work in three departments-Accounts, Administration and personnel, and sit on three different floors- I st , II nd, IIIrd . Persons working in the same department are not on the same floor. Two persons work on each floor.
II. No two females work in the same department but same floor. N and S work in the same department but not in Personnel's works in Administration. S and M are on the I st and IIIrd floor respectively and work in the same department Q, a female, does not work on the II nd floor, P, a male, Works on Its floor.
11. Which of the following group of persons are females?
1) SQT 2) QMT 3) QPT
4) Data inadequate 5) none

12. Which of the following pair work on the Ii and floor?
1) PT 2) SM 3) QN 4) NT 5) None

13. T works in which Department.
1) Accounts 2) Administration
3) Personnel 4) Accounts or personnel
5) None

Ten students-A,B,C,D,E,F,G,H,I and J are chosen to represent their college in four spots-tennis, badminton, table tennis and snooker.
The badminton team has one student less than the tennis team.
A, B and C are not tennis players, individually or as a group. D, E and F are not in the table tennis

team, individually or as a group's is a table tennis player. None of the student is a snooker player. If A and G are the only badminton players,

14. How many students must be in the table tennis team?
1) 2 2) 3 3) 5 4) 6

15. Which of the following students could be tennis player?
1) D and H 2) F and E
3) E and G 4) G and H

16. Which of the following students could be table tennis player?
1) J, B & G 2) J, C & F
3) J, D, E & F 4) J, B, C & D

17. Who of the following must be a player?
1) A 2) B 3) D 4) G

The material presented below is an informational document. Read it carefully and choose the best answer.
It is clear from most sources that the Indians, at the time of early settler contact, had their villages on both sides of the Upper Delaware River. We are lucky to have a great deal of archaeological evidence from local Indian sites due to the hurried excavations during 1967 and 1968. The reason for the hurried excavations was that a plan was afoot to inundate the entire area in the creation of a huge dam project. Many of the dig sites and discoveries during this period can be attributed to the efforts of environmentalists, archaeologists, scientists, and just plain folks. Had the dam actually been constructed, the entire natural history museum, and a large part of the Native American heritage of Eastern Pennsylvania, would have been lost forever.

18. This excerpt from a local history of Eastern Pennsylvania is about
1) the abandonment of a dam project.
2) The disintegration of the Native American population
3) The building of dams and other water projects.
4) The preservation of a historic site.
5) None of the Above

Read the Following information carefully and answer the question given below.
Geetika, Deep, Niharika, Shwetabh, Akansha, Aishwarya and Aparajita are travelling in three vehicles. There are at least two passengers in each vehicle -Maruti, Santro and Octavia and only one of them is a male. There are two Engineers, Two Doctors and three teachers among them.
I. Niharika is a lady doctor and she does not travel with the pair of sister, geetika and Aishwarya.
II.Deep, a male engineer, travels with only Aparajita, a teacher in a Maruti.
III. Shwetabh is a male doctor. IV. Two persons belonging to the same profession do not travel in the same vehicle.
V. Geetika is not an Engineer and travels in vehicle Sandra.

19. Which of the following represents the three teacher?
1) Aparajita, Akansha and Aishwarya
2) Aparajita, Akansha and Geetha
3) Data inadequate
4) none of the above

20. What is Aishwaya's profession?
1) Engineer 2) Teacher
3) Doctor 4) Data inadequate

PUZZLE TEST

1) Directions for Question: Refer to the following information to answer the questions that follow.

A, B, C, D, E, F and G are 7 girls having different amount of money from among Rs 10, 20, 40, 60, 80, 120 and 200 with them. They had 3 chocolates, 2 toffees and 2 lollipops each having anyone of them.
1. B and F do not have chocolates and they have Rs 200 and Rs 80 respectively.
2. C has Rs 60 with her and G has an amount which is neither Rs 40 nor Rs 120.
3. A has Rs 10 and does not have a toffee.
4. The girl having Rs 40 with her is the only one other than A to have the same type of item.
5. E and the girl having Rs 20 with her have the same kind of item.

1. G has how much amount with her?
1) Rs 20 2) Rs 10 3) Rs 60 4) none of these

2. Which of the following combination is correct?
1) C chocolate Rs 60 2) G toffee Rs 20
3) D chocolate Rs 40 4) none of these

3. Which of the girls have chocolates with them?
1) F, C, G 2) C, G, E
3) C, G, D 4) G, D, E

4. Which girl has Rs 40 with her?
1) E 2) A 3) D 4) none of these

2) Direction for questions: Refer to the following information to answer the questions that follow.
Four families decided to attend the marriage ceremony of one their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage. Given below is some information about the families, and who reached when to attend the marriage.
1. The family with two kids came just before the family with no kids.
2. Shanthi who does not have any kids reached just before Sridevi? Family.
3. Sunil and his wife reached last with their only kid.
4. Anil is not the husband of Joya.
5. Anil and Raj are fathers.
6. Sridevis and Anitas daughters go to the same school.
7. Joy a came before Shanthi and met Anita when she reached the venue.
8. Raman stays the farthest from the venue.
9. Raj said his son could not come because of his exams.

1. Whose family is known to have more than one kid for certain?
1) Ramans 2) Rajs 3) Anils 4) Sunils

2. Name the correct pair of Husband and Wife?
1) Raj and Shanthi 2) Sunil and Sridevi
3) Anil and Sridevi 4) Raj and Anita

3. Of the following pairs, whose daughters go to the same school?
1) Anil and Raman 2) Sunil and Raman
3) Sunil and Anil 4) Raj and Anil

4. Which woman arrived third?
1) Shanthi 2) Sridevi 3) Anita 4) Joya
3) Directions for Question: Refer to the following information to answer the questions that follow.
Seven real life celebrities Amitabh Bachhan, S R Tendulkar, Saina Nehwal, Ratan Tata, Arundhati Roy, AR Rehman and Vishwanath Anand visited a charity function conducted by UNESCO on days from Monday till Thursday (at least 1 but not more than 2 on a single day).

1. Each of them belongs to a different profession among Acting, Chess, Music, Literature, Badminton, Business and Cricket.
2. Ratan Tata visits on Wednesday with the businessman.
3. The musician does not visit on Thursday and neither with Roy nor with Anand.
4. Cricketer AR Rehman visits alone on Monday.
5. Tendulkar visits on Tuesday and he is not a musician.
6. Nehwal visits on Tuesday too and Anand is not into business.
7. The musician and actor visit together.
8. The author visits on Wednesday.
9. Amitabh is neither into chess nor is he a businessman.

1. On which day do Chess and Badminton players visit?
1) Thursday 2) Monday
3) Wednesday 4) Tuesday

2. What is Ratan Tata Profession?
1) Literature 2) Business
3) Badminton 4) Chess

3. On which day does Arundhati Roy visits?
1) Thursday 2) Wednesday
3) Tuesday 4) Monday

4. What is the profession of Amitabh?
1) Acting 2) Badminton
3) Literature 4) Music

4) Directions for Question: Refer to the following information to answer the questions that follow. Bhavya, Charu, Deepak, Priyanka, Rahul, Suraj, Tarun and Vanya are 8 students from the same college. They went for an internship into particular fields namely A, B, C, D and E and 3 of them worked in dual fields with none of the three having the same set of fields.
1. Deepak interned in dual fields of A and E and earned the least.
2. Bhavya worked in C, earned more than Rahul, Charu and Tarun and had the third highest earning.
3. Vanya interned in B and earned less than only Priyanka, who worked in a dual field.
4. Charu earned more than Tarun but less than Rahul.
5. Tarun worked in A and earned more than Suraj, who interned in a dual field of B and E.
6. 2 students had D as their field of work.
7. All 8 had different earnings.
8. C and D were not a part of the dual field internships.

1. Who among them earned more than only Deepak?
1) Only Charu 2) only Vanya
3) Only Rahul 4) none of these

2. Who among them earned more than Rahul?
1) Tarun, Vanya 2) Bhavya, Tarun
3) Vanya, Charu 4) Bhavya, vanya

3. Priyanka interned in which dual fields?
1) B, E 2) A, B
3) A, E 4) none of these

4. Which of the following fields was the most opted for? (it may be single or a part of dual)
1) B 2) A 3) E 4) none of these

5) Directions for Question: Refer to the following information to answer the questions that follow.
In a zoo 7 different types of animals, tiger, elephant, gorilla, ostrich, bear, rhino and peacock, are displayed during a week, each animal on each day. Each of the animals has a caretaker P, Q, R, S, T, U and V in any order.
1. Elephant is looked after by V and is displayed on Thursday.
2. Ostrich is not displayed on Sunday and is taken care of by Q.
3. Bear and Peacock are displayed on Saturday and Tuesday respectively.
4. Rhino is looked after by U whereas the animal displayed on Monday is looked after by R.
5. Gorilla is not looked after by T and is being displayed on Wednesday.
6. The animal which is taken care of by P is displayed neither on Tuesday nor on Wednesday.

1. Which animal is being looked after by S?
1) Gorilla 2) Peacock
3) Tiger 4) Bear

2. Rhino is displayed in the zoo on which day?
1) Friday 2) Saturday
3) Wednesday 4) Sunday

3. Tiger is displayed on which day?
1) Tuesday 2) Wednesday
3) Friday 4) Monday

4. Who is the caretaker of peacock?
1) P 2) T 3) S 4) none of these

DATA SUFFICIENCY

Directions:
Mark(1) as your answer, if statement I alone as well as statement II alone is sufficient to answer the question asked;
Mark (2) as your answer, if both statements I and II are required to answer the question asked;
Mark (3) as your answer, if any one of the two statements I or II is sufficient to answer the question is asked;
Mark (4) as your answer, if the question cannot be answered even by using both statements together;

1. Line AB is 1000 cm and C is midpoint of AB. What is the length of CD?
I. AD is 700 cm length.
II. BD is of length 600 cm.

2. What is the ratio of the discounted price of a shirt in a market's shop, to the list price?
I. The price after discount is Rs. 32 less than the list price
II. The discounted price is 16 per cent less than the list price.

3. There are the two squares A and B of different sides. What is the perimeter of the square A?
I. Side of square B is 15.6 cm.
II. Diagonal of square A is three times that of square B.

4. How many students scored more than the average marks of the class in a test?
I. The average marks of the class were 70.
II. 18 students scored above the arithmetic mean of the class.

5. If there are 2230 words on each page in an English novel, how many pages can Rita read in an hour?
I. There are 23 ten-words on each page and there is nothing else printed on each page.
II. Rita can read ten words per minute.

6. If m is an integer, does m when divided by 7 give an even quotient?
I. 4m when divided by 7 gives an even quotient.
II. 5m when divided by 14 gives as a quotient.

7. Mr.Pankaj tossed a fair coin x times. What fraction of the tosses came up tail?
I. x=20.
II. The number of tosses that came up with head was 6.

8. If Ram does not stop along his journey anywhere, what speed does Ram average on his 6 hour tour?
I. Ram travels for a total journey of 300 km.
II. He travelled half the distance at 50 km per hour and half the distance at 100 km per hour.

9. What is the value of (a+b) / (a-b)?
I. a/b = 5. II. a = 2, (a-b)^2 = 36.

10. What is the value of (a^4-b^4) / (a-b)?
I. a+b = 8. II. a = 5.

11. What is the value of $(a^2-b^2)/(a^2+c^2)$?
i. a+b = 5. ii. c-b = 3.

12. If x is a positive integer less than 20 and x+6 is a prime number, what is the value of x?
I. x+5 when divided by 9 gives an even quotient as the answer
II. X+4 is a prime number.

13. An aquarium shaped cuboids provides 60 cm^2 of water surface area per fish. How many fishes are there in aquarium?
I. The dimensions of an aquarium are 50, 60, 70 cms.
II. The aquarium is filled to a depth of 45 cms.

14. Harish has total of 140 toys of which some are plastic-made, while the other are metal-made. How many plastic-made toys does he have?
I. If he gets 15 more plastic toys, he will have 81 plastic-made toys.
II. He has three times as many plastic toys as metal toys.

15. The dimensions of a room are 20, 30, 40 feet. What is the floor area of the room?
I. Length of room >30.
II. Total area of four walls is 3600 square feet.

16. What is the value of x if x=4a/7b and b≠0?
I. a^3 = 15b^2. II. b = 4a.

17. Of the members of a sports club, what per cent are those members who play football?
I. Ratio between tennis and football players is 4:5.
II. There are only three sports in the club out of which hockey comprises 28 per cent of the total players.

18. If a and b are both positive, what Ii the value of $b\sqrt{a}$?
I. ab = 25. II. $b^2a = 80$.

19. If each of a, b, c is positive and 22a=43b + 52c, then what is the value of b/c?
I. b+4a = 120. II. c+4a = 120.

20. At the beginning of last year, a tractor dealer had 450 tractors in his stock, and the dealer had paid Rs. 6 lakhs per tractor. During the same year, the dealer had only one purchase of tractor. What is the total amount spent by the dealer on the tractors he had in stock at the end of the last year?
I. During the first 6 months of the last year, the dealer sold 100 tractors.
II. Last year the total income from the sale of tractors was Rs. 100,000,000.

21. A right angle triangle has sides of length p and 3q and hypotenuse of length 2p + 3q. What is the perimeter?
I. p = 5 cm. II. 2p = 3q.

22. If A and B both are positive numbers, what per cent of B is A?
I. 2A-3B = 0. II. 16A^2 = 36B^2

23. What is the floor area of Rashi's bedroom. Which is not covered by particular rectangular rug?
I. The floor area of Rashi bedroom is 1200 square feet.
II. After the rug is placed in her room, there will be a 24-inch strip of exposed floor between the rug and the wall along all the sides of the rug.

24. There are 3 distinct prime numbers, whose sum is 100.Find the prime numbers.
I. Smallest of the three prime number is 2
II. Difference between the two large prime numbers is 88.

25. A customer purchased a shirt and a pant during the festival sale. Which item did he buy at a greater rupees discount?
I. He bought the shirt at a 60 per cent discount.
II. The customer purchased the pant at 40 per cent discount on the listed price of Rs. 500.

26. Te length of two sides of a triangle is 5 and 8 cm respectively. What is the length of the greatest median?
I. Third side of the Δ is 5 cm.
II. Perimeter of the Δ is 19 cm.

27. A container has a mixture of water and alcohol. Find the quantity of alcohol in the mixture.
I. The ratio of water to alcohol is 3 : 5.
II. When 5 liter of water is poured into the container, ratio becomes 1:1.

28. In a square, a circle each is inscribed and circumscribed. What is the difference between the areas of two circles?
I. Radius of the circle is a root of equation x^2 - 5x + 6 = 0.
II. Area of inner circle is 16π.

29 .If x is a positive integer, is x prime?
I. x^5 has exactly six distinct natural factors
II. X^2 – 10x + 21 = 0.

30. Line AB is of length 8 cm and point C divides line AB. What is the length of AC?
I. Length of BC is 5 cm.
II. Point C divides line AB externally.

CONDITIONAL SYLLOGISMS

Directions from 1 to 20: Read the following statements and mark the option which follows the logical order.

1. (A) If triangles have angles equal to 180 degrees, then squares have angles equal to 360 degrees.
(B)Triangles have angles equal to 180 degrees.
(C)Therefore, Squares have angles equal to 360 degrees.
1) BCA 2) CAB 3) ABC 4) None

2. (A) If virtue is knowledge, then virtue is teachable.
(B)Hence virtue is not knowledge.
(C)Virtue is not teachable.
1) BCA 2) ACB 3) ABC 4) None

3. (A)If mathematics is wisdom, then children can be wise.
(B)Children are always wise.
(C)Mathematics is wisdom.
1) BCA 2) CAB 3) ABC 4) None

4. (A) If some logician is emotional, and then some logician is not logical.
(B)Every logician is logical.
(C)Therefore, no logician is emotional.
1) BCA 2) ACB 3) ABC 4) None

5. (A) When cats have nine lives, then they have immaterial souls.

(B)So, all Cats have nine lives.
(C) All Cats have immaterial souls.
1) BCA 2) ACB 3) ABC 4) None

6. (A) If a lion is an animal, and then it has sensation.
(B)Lions are animals.
(C)Some lions are not animals.
(D)Lions have sensation.
1) ABC 2) ACB 3) ACD 4) None

7. (A) If a square was a circle; it would be a plane figure.
(B)Therefore, square is not a plane figure.
(C)The square is not a circle.
(D)The square is a circle
1) ACD 2) ACB 3) ABD 4) None

8. (A) If Johnnie eats cake every day and then he is placing himself at risk for diabetes.
(B)Johnnie is placing himself at risk for diabetes.
(C)Johnnie does not eat cake every day.
(D)Johnnie is not placing himself at risk for diabetes.
1) ACB 2) ABD 3) ACD 4) None

9. (A) Kelly did not finish his homework
(B)Kelly will not go to class
(C)Kelly will go to class
(D)If Kelly does not finish his homework, he will not go to class
1) ACB 2) DAB 3) ACD 4) None

10. (A) The Saints did not win the Super bowl
(B)If the Saints win the Super Bowl, there will be a party in New Orleans that night
(C)There was no party in New Orleans that night
(D)There was a party in New Orleans that night
1) BAD 2) BCD 3) BAC 4) None

11. (A) If I wear my rain jacket, it will be easy for my friends to find me
(B)If it rains today, I will wear my rain jacket
(C)If I wear my rain jacket, it will not be easy for my friends to find me
(D)If it rains today, it will be easy for my friends to find me
(E)If it rains today, I will not wear my rain jacket
1) BAE 2) BCE 3) BAD 4) None

12. (A) All M is P
(B)All P are S
(C)Some S is not T
(D)All M are S
(E)Some S is T
1) AEB 2) CEB 3) ABD 4) None

13. (A) All living beings are mammals
(B)No snakes are mammals
(C)All dogs are mammals
(D)No dogs are mammals
(E) No snakes are living beings
1) ABC 2) ABE 3) ACD 4) None

14. (A) Some Dogs are snakes
(B)Some Books are pen
(C)Some pens are Books
(D)Some Books are not pen
(E) Some Tables are not
1) ABC 2) ABE 3) BCD 4) None

15. (A) Some windows are stones
(B)Some windows are rings
(C)No window is stone
(D)Some windows are not rings
(E) No dogs are mammals
1) ABC 2) ABD 3) BCD 4) None

16. (A) Some buses are not tires
(B)Some wheels are not clocks
(C)Some wheels are not pens
(D)Some buses are not clocks
(E) Some lions are not animals
1) ABC 2) ABD 3) BCD 4) None

17. A) Surthi eats Apple
(B) Manager also eats Apple
(C) Surthi also a Manager
(D) Tea Rate is Rs. 5
(E) Office is near College.
1) EDB 2) ABD 3) CDA 4) None

18. A. No boat is a water bicycle
B. Some water bicycles are cars
C. No boat is a car
D. Some vans are water bicycles
E .All vans are cars
1) EDB 2) ABD 3) CDA 4) None

19. A. Some pencils are books
B. All pens are pencils
C. No book is a pen
D. some books are pens
E. All sharpeners are pens
1) CEA 2) ABD 3) EDC 4) None

20. A. Some jungles are tables
B. Some trees are jungles
C. Some flowers are tables
D. All jungles are flowers
E. Some tables are trees
1) CDE 2) DEA 3) ABE 4) None

DATA INTERPRETATION ON TABLE CHARTS

Direction for question 1-4: In a target shooting competition, the target has ten circles. The innermost circle is called the bull's eye (and has 10 points associated with it), the next circle has 9 points, the third 8, and so on till the outermost which has I point. No points are awarded for shooting outside the ten circles.

Each round of shooting consists of two shots. The following rules apply for awarding bonus points.

1. In case of a shot hitting the bull's eye, the shooter is awarded as many points as he scores in the next 2 shots. If less than two shots are left in the day, the bonus points will only be for the shots left.

These bonus points are called primary bonus point.

2. In case, the total in a given rounds is> 10, the shooter is awarded as many bonus points as the first shot in the next round. In case there is no round left no bonus points are awarded. These are called secondary bonus points.

3. The total for the competition is the sum of points of all rounds of shooting plus the primary bonus points plus the secondary bonus points. The shooter with highest total score wins gold medal. Three shooter Rathore, Russell, and Bindra took part in the competition for Olympic Gold. Details to their scores are provided below.

Read the data and information provided below carefully and try to answer the questions.

Round	*Rathore*	*Russell*	*Bindra*
First	10/?	8/3	8/5
Second	?/3	?/10	9/?
Third	9/1	6/4	7/2
Fourth	10/?	3/10	6/5
Fifth	4/5	?/6	4/?
Sixth	10/0	4/7	3/3
Seventh	2/8	2/8	9/2

None of the three missing scores of A was less than 4.

	Primary bonus points	*Secondary Bonus points*
Rathore	23	>13
Russell	< 22	22
Bindra	15	>20

The following additional was available

- Russell gets 4 secondary bonus points in the fifth round
- Neither of the two missing scores for Russell is zero
- Rathore hit a 5 in the second of the fourth round.

None of three missing scores Rathore was less than 4.

1. The difference between the shooters (in total points) who came first and last was
   1. 2 points 2. 3 points 3. 5 points 4.Indetermine
2. What is the value of the total number of bonus points scored by Russell?
   1.43 2.42 3. 41 4.Indetermine
3. The highest total of missing values was for
   1. Rathore 2. Russell 3.Bindra 4. Indeterminate
4. Who won the Competition?
   1. Rathore 2. Russell 3.Bindra 4. Indeterminate

Directions for the questions 5 –8: Prof. Qazi takes a Maths test once a week. There are five students in his class whose names start with the letter A via: Arun, Amit, Ankur, Amritesh, and Arjit. Unfortunately, he forgets to record some of the scores of these students. All scores are out of 200. Find the missing number in the given Table and answer the questions that follow.

Besides we also know that Prof. Qazi grades his students according to their average score as under:

Grade	Score
A	60%
B	56–60%
C	50-55%
D	Below 50%

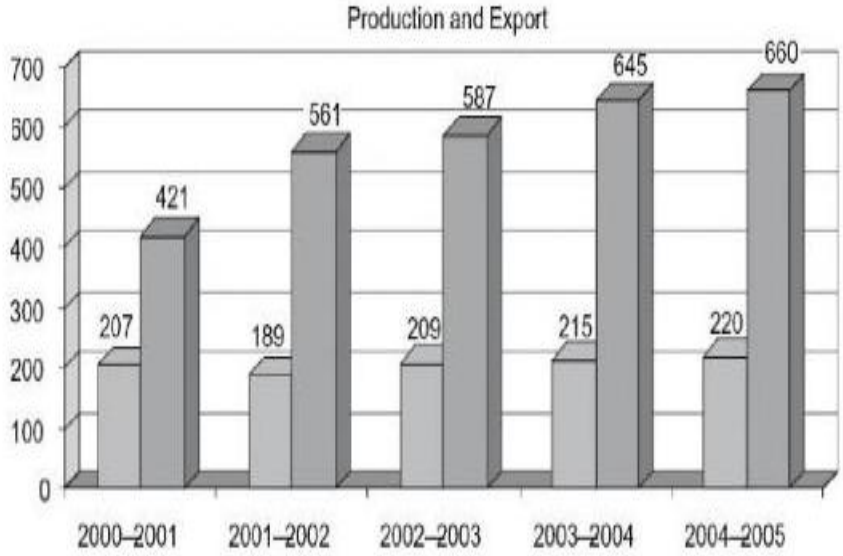
	1	2	3	4	5	6	7	8	9
Arun	92	110	174	66	148	76	80		190
Amit	96	120		102	170	92	74	38	170
Ankur	76	140	180		200	96	76	40	194
Amritesh	76		186	98	186	100	92	40	200
Arjit	84	132	168	88	168		76	40	196

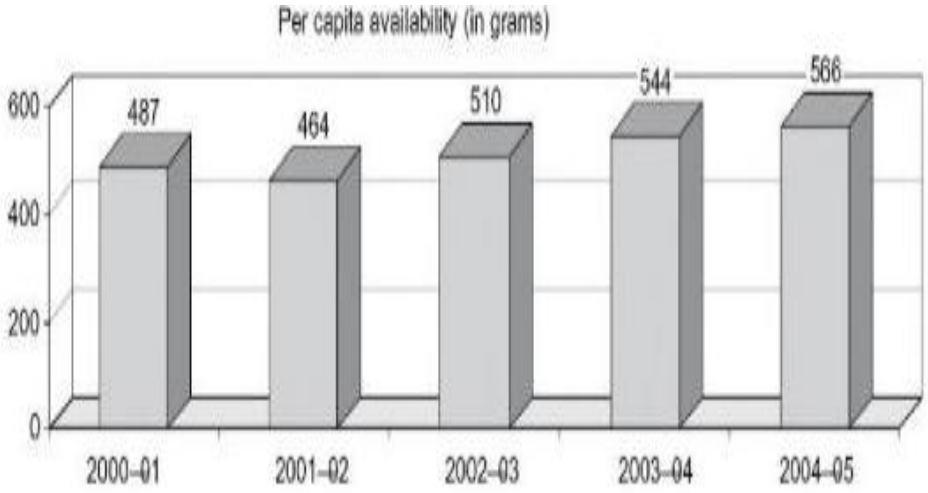
i. Amit's missing score is equal to the average score of the topper.(who is not Ankur)
ii. The total of all the scores is 5252
iii. Ankur got 70% in test 2. Amritesh got 1%less.
iv. The missing score on test 8 is 54 and on test 6 it is 110.

5. Who is the topper amongst these students?
   1) Arun 2.Amit 3. Arjit 4.Amritesh 5. Ankur
6. If an A grade gets 4 points and a B grade gets 3 points, a C gets 2 and a D gets 1 point, What is the grade point average of the class (approximately)?
   1) 2.6 2) 1.5 3) 1.2 4) 1.3 5) 1.4
7. The least difference between any two missing scores is
   1) 28 2) 24 3) 20 4) 44 5) none of these
8. Who is ranked in the middle amongst these students?
   1) Arun 2) Amit 3) Ankur 4) Amritesh 5) Arjit

DATA INTERPRETATION ON BAR CHARTS

Directions for Question 1-4: Refer to the graphs given below and answer the question that follows:
Note: Productivity of wheat in India= Total wheat production / area under wheat production





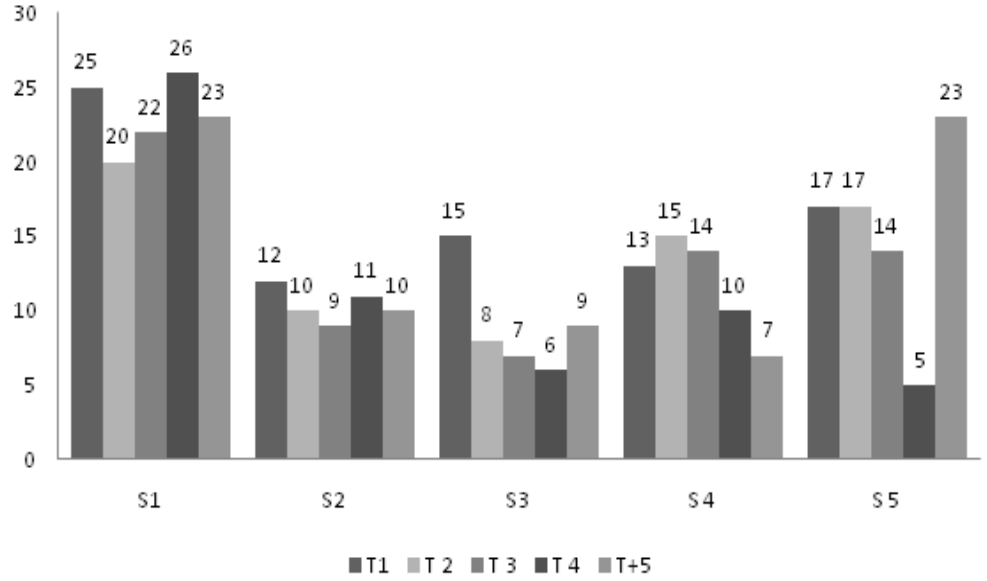
1. The production of India in 2003-2004 was:
1) 750 million 2) 770 million 3) 790 million 4) 800 million 5) 820 million

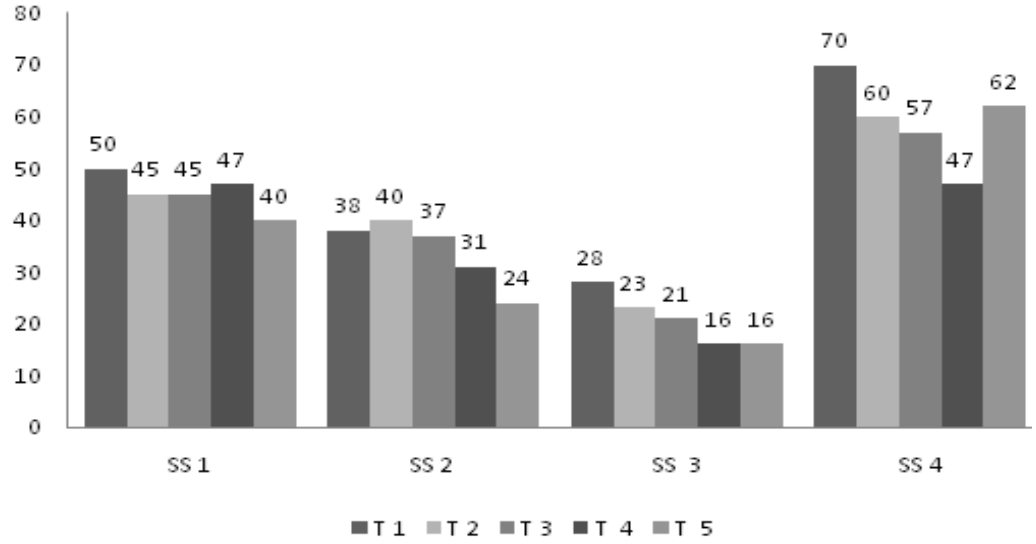
2. Say the area under production was reduced by 10% in 2004-2005 as compared to that of 2003-2004 then the rate of increase/decrease in the productivity of wheat in 2004-05 was:
1) 13% decrease 2) 14% decrease 3) 13.2% increase 4) 12.6% decrease 5) 13.6% increase

3. The ratio of the average wheat that is exported to that of the wheat produced from 2000-01 to 2004-05 is:
1) 0.30 2) 0.32 3) 0.36 4) 0.38 5) None of the above

4. The average of per capita availability of wheat in the given period was:
1) 514 gm 2) 469 gm 3) 501 gm 4) 536 gm 5) cannot be determined

Refer to the data given below figures to answer the questions that follows:
Bar chart 1 gives the number of Transponder (T) in each Satellite (S) of the INSAT 2C geostationary satellite. Bar chart 2 given below gives the number of Transponder in a Sister Satellite (SS). Each Sister Satellite is made up of a combination off satellite such that the number of satellite used for each sister satellite is not more than five. Each sister satellite can contain more than one satellite of the same type





5. For a particular Transponder, if Sister Satellite 1 and Sister Satellite 2 are used then how many Satellites are used in the Transponder?

1) 1 2) 2 3) 3 4) 4 5) cannot be determined

6. What type of satellite is used in Sister Satellite 3?

1) S3 and S5 2) S3 and S4 3) S2 and S5 4) S1 and S2 5) cannot be Determine

7. In transporter consisting of SS3 and SS4, what is the total number of T2 used?

1) 79 2) 80 3) 81 4) 82 5) 83

8. If a particular system 62 T4s and less than 80 T5s. which of these can be the possible combination of satellite used?

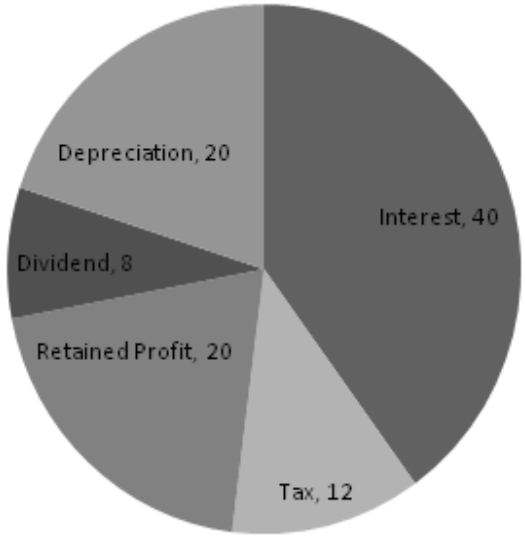
1) S2, S3 and S5 2) S1, S2, and S5 3) S2, S3, and S4 4) S1, S2, and S4 5) S1, S2, and S3

DATA INTERPRETATION ON PIE CHARTS

Directions for questions 1 – 5:

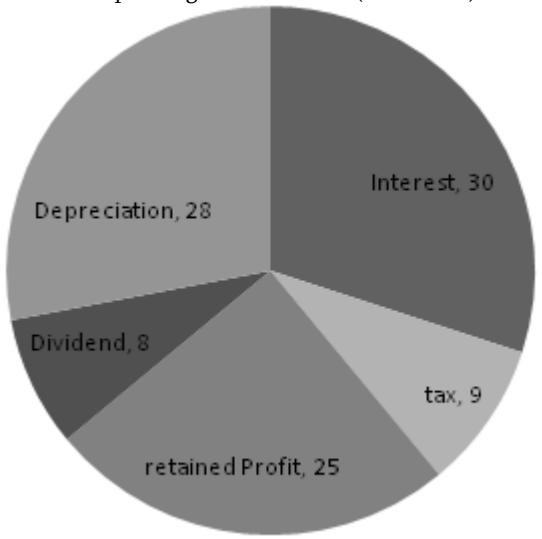
Study the figure (a) and (b) and answer the questions following that.

Operating Profit ₹ 320lakh in 2002-03



(a) Data Pertaining to Select Industrial Firm

Operating Profit 2001-02 (₹ 260lakh)



(b) Data Pertaining to Select Industrial Firm

1. The interest in 2002 – 03 increased over that in 2001 – 02:

1) 68% 2) 58% 3) 44% 4) 64%

2. The interest burden in 2002 – 03 was higher than that in 2001 – 02 by:

1) Rs. 50lakh 2) Rs. 25lakh 3) Rs. 80lakh 4) none of these

3. If on an average, 10 percent rate of interest was charged on borrowed funds, then the total borrowed funds used by this company in the given two years amounted to :

1) Rs. 1220lakh 2) 2060lakh 3) 880lakh 4) none of these

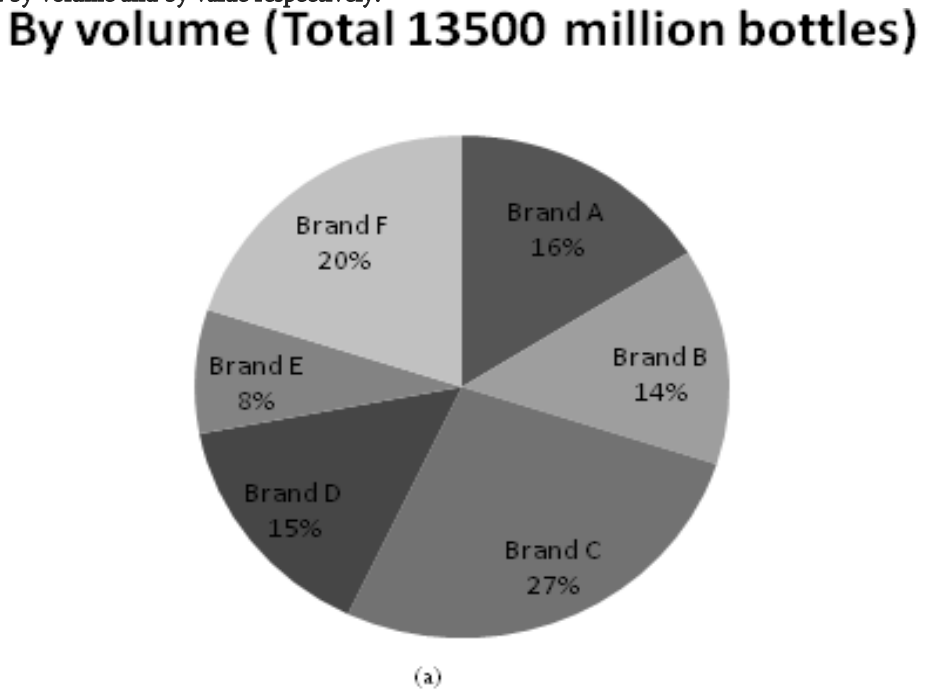
4. The dividend in 2002 – 03, as compared to that in 2001 – 02 was:

1) Higher by 23% 2) higher by 12lakh 3) higher by 32% 4) none of these

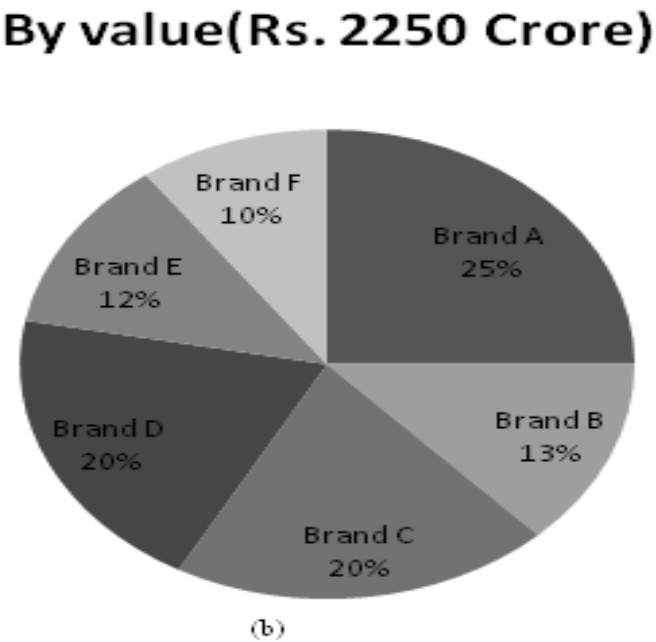
5. The equity base of these companies remained unchanged. Then the total dividend earning by the share holders in 2001 – 02 is:

1) 104lakh 2) 10.4lakh 3) 20.8lakh 4) none of these

Directions for questions 6 – 9: Refer to the pie charts below and answer the questions that follow: The pie charts (a) and (b) represent the sale of cold drinks in the year 2007 for the company ABC Ltd by volume and by value respectively.



(a)



(b)

6. The costliest brand of cold drinks in 2007 for the company ABC Ltd. Was priced at :

1) ₹2.6 2) ₹2.7 3) ₹2.8 4) ₹2.9 5) ₹3.0

7. Find the ratio of prices of the cheapest brand to the costliest brand for the company in 2007

1) 13:4 2) 4:13 3) 2:15 4) 15:2 5) none of these

8. If the manufacturing cost of a Cold Drink of Brand C was 93 paisa per bottle then what was the total profit of the company for the brand C?

1) ₹ 97.47crore 2) ₹ 100crore 3) ₹ 104.8crore 4) ₹ 109.35crore 5) ₹ 113.47crore

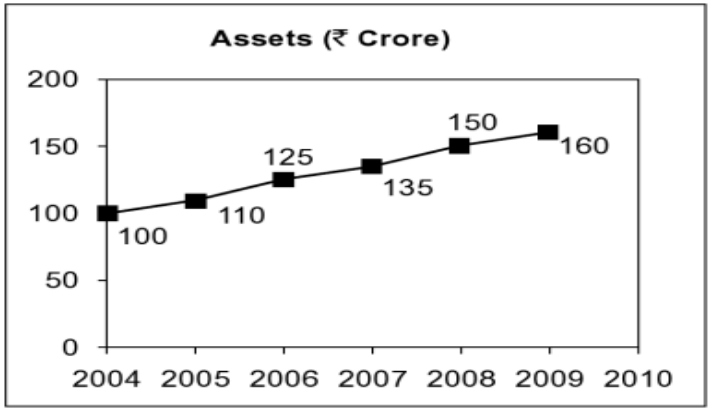
9. Say the consumers of brand E change over to brand A and D in the ratio of 2:3 respectively because Brand E suffered A loss and withdrew from the market then what will be the new percentage share of Brand A in value sales ?

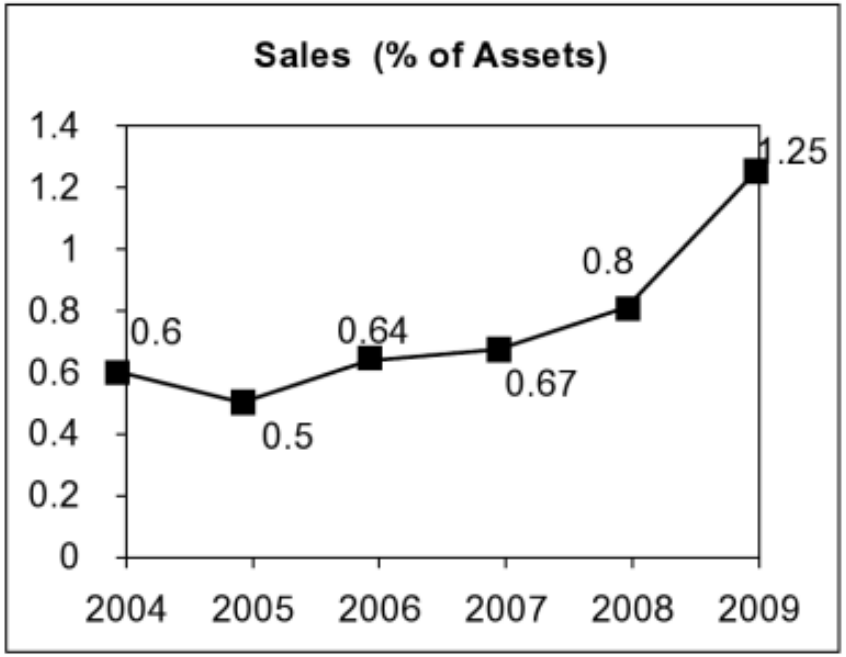
1) 28% 2) 29% 3) 30% 4) 31% 5) 32%

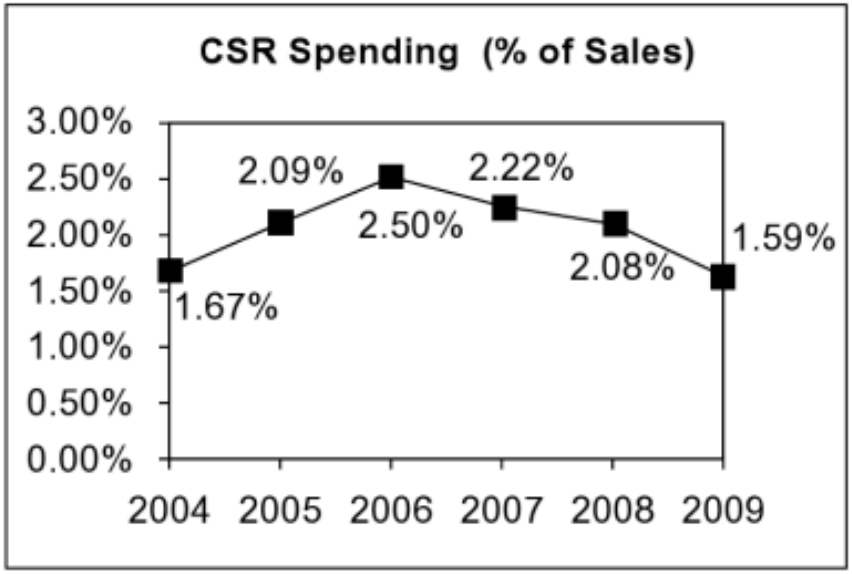
DATA INTERPETATION ON LINE CHARTS

Direction 1-4: Based on The following information.

The following Chart given annual data of Assets, Sales (As percentage of Assets) and Spending on Corporate Social Responsibility (CSR)(as percentage of sales) , of a Company for the period 2004-2009.

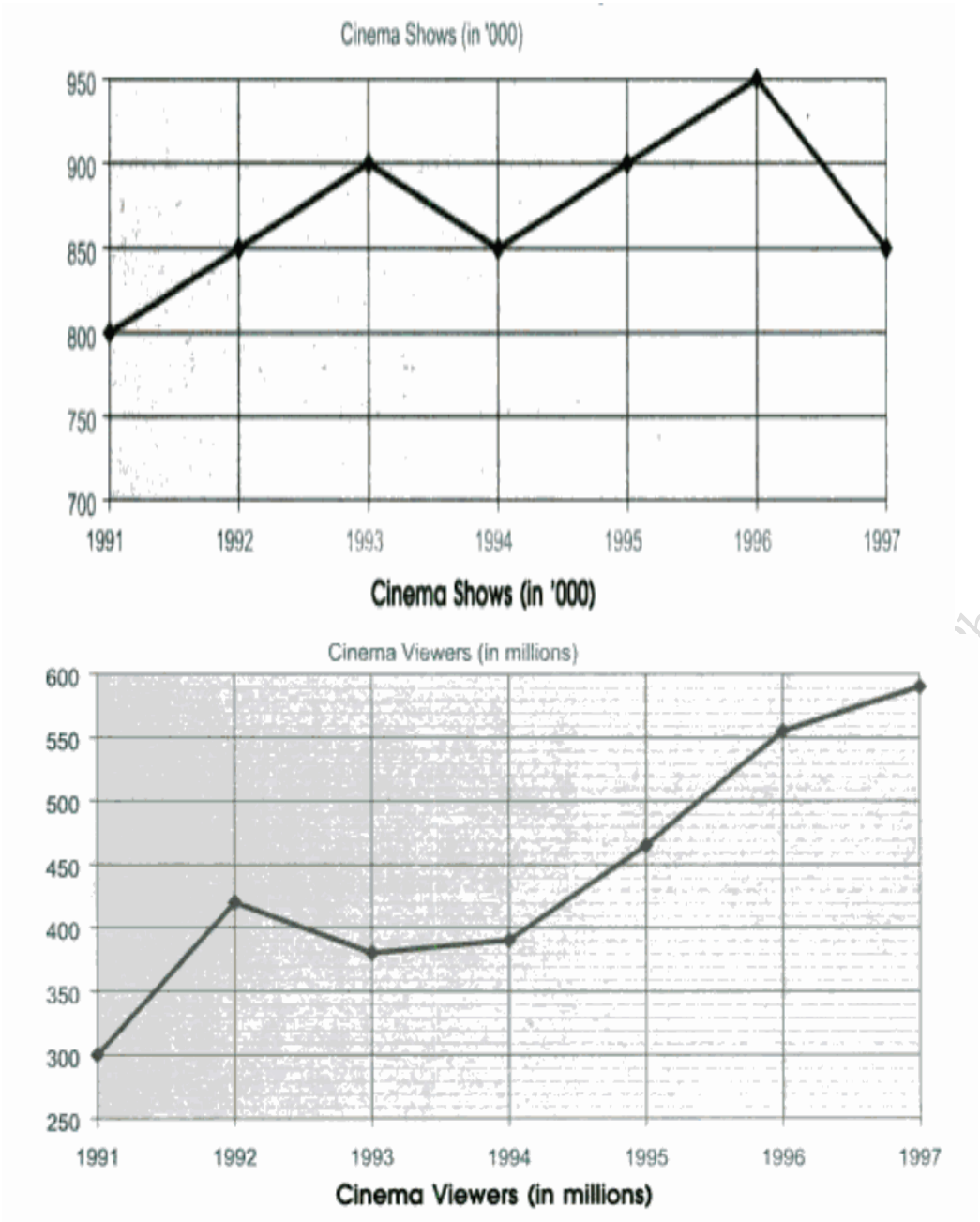






1. In which year was the increase in spending on CSR, vis-à-vis the previous year, the maximum?
(a) 2005 (b)2006 (c)2007 (d)2008 (e)2009
2. Of the years indicated below, in which year was the ratio of CSR/ Assets the maximum?
(a) 2005 (b) 2006 (c)2007 (d)2008 (e)2009
3. What was the maximum value of spending on CSR activities in the period 2004-2009?
(a) Rs.0.5 Crore (b)Rs.1.0 Crore (c)Rs. 2.0 Crore (d)RS.3.0 Crore (e)Rs.4.0 Crore
4. In which year, did the spending on CSR (measured in Rs.) decline, as Compared to previous year?
(a) 2006 (b)2007 (c)2008 (d)2009 (e)None of these

Direction 5-10: Based on the following line charts.



1. The average number of cinema viewers (in millions) per ten thousand cinema shows in the year 1996 is

(a) 6.1 (b) 4.3 (c) 5.8 (d) 4.9

2. The number of shows is the same in

(a) Alternate years (b) consecutive years (c) 1972,1974 and 1977 (d) none of these

3. The (total) percentage increase of the cinema viewers in these seven years is nearly

(a) 80 (b)97 (c) 90 (d) 100

4. The average number of shows per theatre, in thousands, of the year having maximum shows is approximately

(a) 1.5 (b) 15 (c) 1.2 (d)1.05

5. The maximum increase in the cinema viewers as compared to the previous year is in

(a) 1992 (b) 1995 (c) 1996 (d)none of these

6. In the seven years, how many times the number of cinema shows remained sane in alternate years?

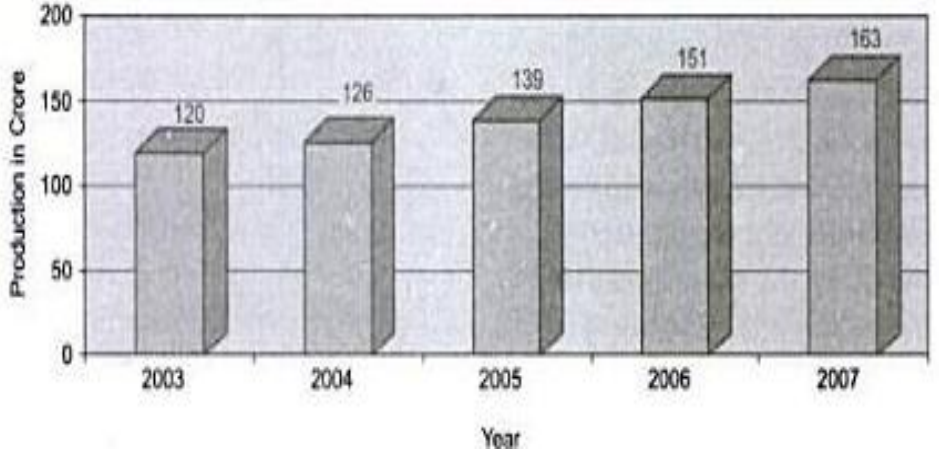
(a) not even once (b) thrice (c) once (d)twice

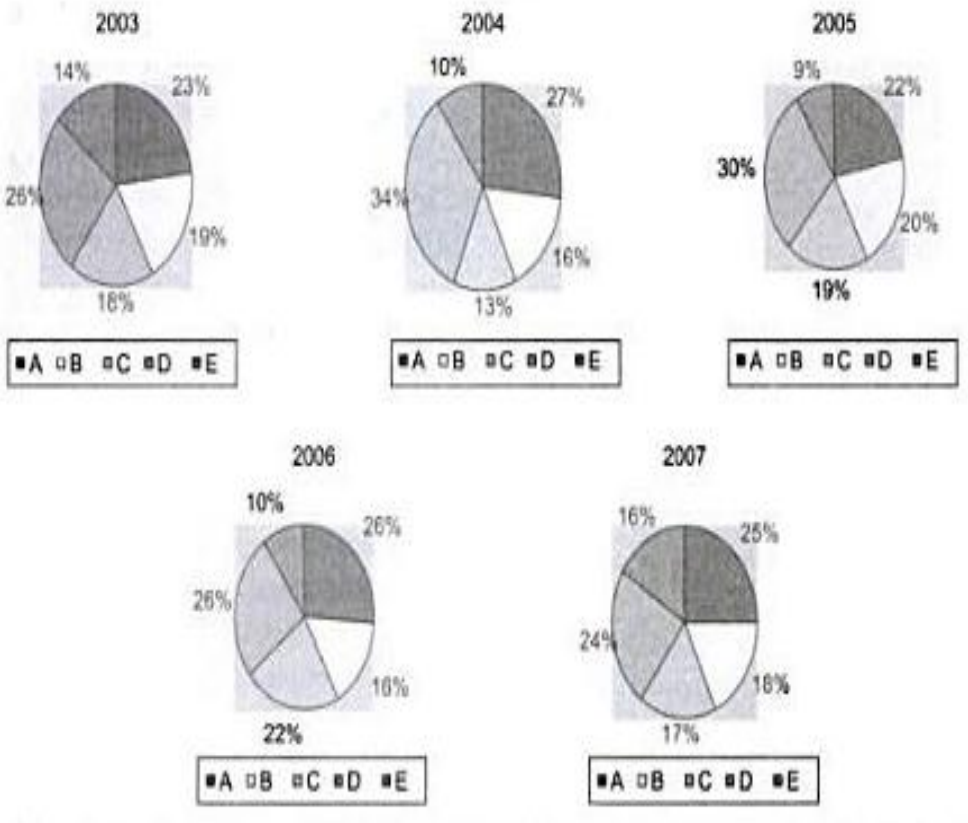
DATA INTERPRETATION ON MULTIPLE CHARTS

Direction for Question 1-4:

Refer to the following graph and pie chart to answer these questions:

Given here is the data of the company AMS Ltd. The Company publishes five books. The Production in its entire array of five books (in crore). Quant's (A) ,DI (B), Reasoning (C), English (D), and General awareness (E) and its total turnover over a period of five years(from 2003 to 2007) is shown in the bar charts. The distribution of the turnover for each year. For each of the five products is shown in the pie charts (as %)





1. If we assume that the book on English maintained y% share on an average every year in the company's productions then what is the value of y?
1) 26% 2) 27% 3) 28% 4) cannot be determined
2. If for two consecutive years, the highest growth in percentage terms of the company's productions
Between two successive years be b% then the average compounded annual growth rate over the given period is C% then what is the value of the difference between the two is:
1) 2.35% 2) 2.40% 3) 2.30% 4) 2.75% 5) None of these
3. How much more is the combined production of Quant and Reasoning books in 2006 to that of the combined turnover of DI and English in 2007?
1) Rs. 3.9crore 2) Rs. 3.8crore 3) Rs. 4.5cr 4) Rs. 4.2crore 5) Rs. 4crore
4. Which of the following is not true?
1) For the given 5 year period the average of the production of the company is more than the third year's production
2) B's production has been fluctuating in the given period
3) The maximum percentage increases in the turnover of the individual of products is 72% in between any two consecutive years
4) Both A and B
5) None of the above

Refer to the data given below Figure (a and b) and answer the question that follows.

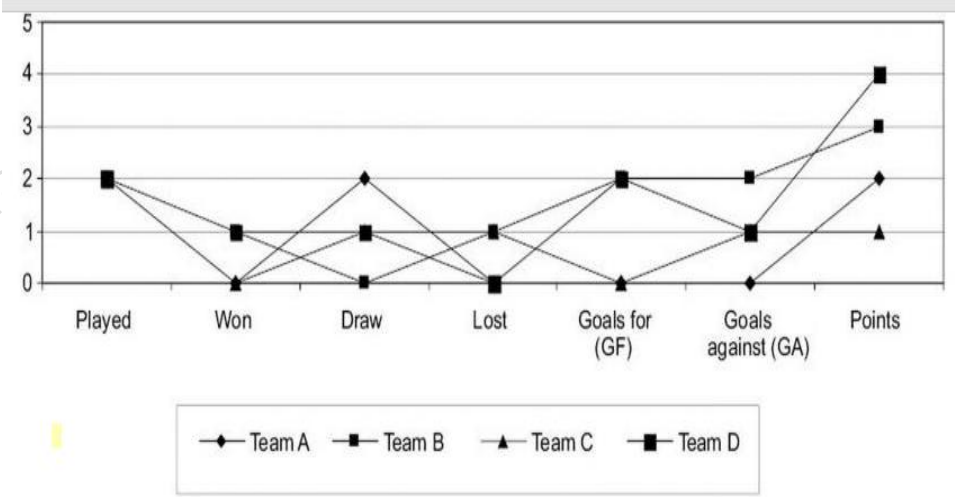


Figure (a)

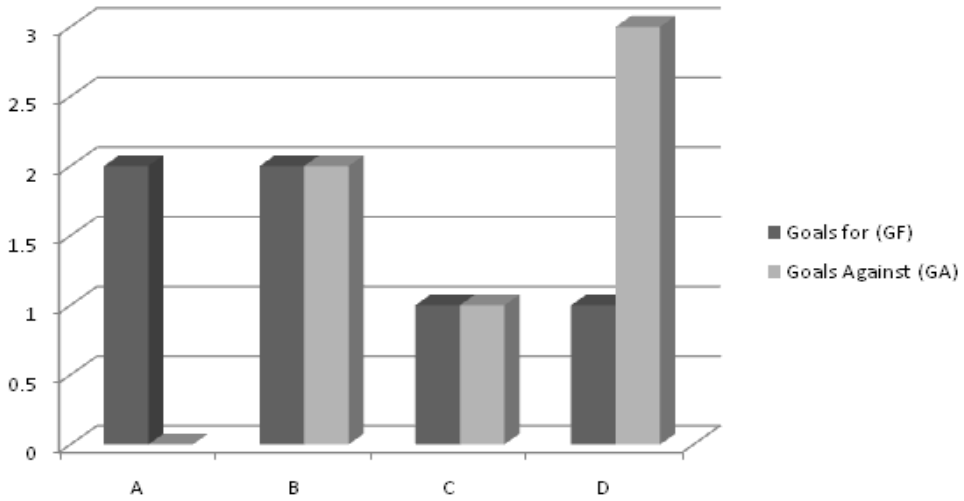


Figure (b)

The world cup Hockey tournament is being played between four team; there are a total of two rounds in the game. In each round a particular team plays one match with each of the opponents.
The points that a team receives in the match is as given below:
A win gives 3 points
A draws gives 1 point to each of the contesting teams
No points are given for a class
The line charts below (Figure 1.14(a)) gives the data of the matches played in the first round
The remaining matches of the first round resulted in a draw

The bar graph given below (Figure b) gives the data of the goal made in the matches played in the second round
The following gives some information regarding the result of the matched played in the second round

- C played only one match against B and the result was a draw
- A did not won the matches
- D lost two of the matches that it played
- A had 10 points at the end of the second round

5. which of the following could be the fifth match played in the first round of the tournament?
1) A Vs C 2) C Vs D 3) B Vs D 4) B Vs D 5) A Vs D
6. How many matches did C win in the second round?
1) 1 2) 2 3) 3 4) 4 5) 5

Additional Information When the comparisons of the goals of the teams after the tournament were made, then the following was obtained:
A had three goals for, B had 5, C had 1, and D had 3 which in term of goals against A, and 1, B had 2 and D1
7. What was the score of the match between C and D in the first round?
1) 0-0 2) 1-1 3) 2-2 4) Cannot be determine 5) None of these
8. If the goal comparison after the tournament is the same as in the above question, then which team has stood third? For the team having the same point, the team with minimum GA holds the higher position
1) A 2) B 3) C 4) D 5) It was a tie.

VERBAL APTITUDE

PARAGRAPH COMPREHENSION

Direction from 1 to 20: Read the passages given below and answer the questions that follow them.

1. A bar code consists of a printed series of wide, vertical lines that represent a numerical code. The Universal Product Code (UPC) is the standard bar-code format that lists the manufacturer's identification number and a product identification number. An optical scanner can read the bar code and the attached computer can match the product number with a list in its database.
According to this passage, a bar code
A. Is the same thing as a UPC
B. Is an optical scanner.
C. Is put on products to discourage forgery.
D. Represents a numerical code.

2. It is to progress in the human sciences that we must look to undo the evils which have resulted from knowledge of physical world hastily and superficially acquired by population unconscious of the changes in them that the new knowledge has imperative. The road to a happier world than any known in the past lies open before us if atavistic destructive passions can be kept in leash while the necessary adaptations are made. Fears are inevitable in time, but hopes are equally rational and far more likely to bear good fruit. We must learn to think rather less of the dangers to be avoided than of the good that will lie within our grasp if we can believe in it and let it dominate our thoughts. Science, whatever unpleasant consequences it may have by the way, is in its very nature a liberator, a liberator of bondage to physical nature and in time to come, a liberator from the weight of destructive passions. We are on the threshold of utter disaster or unprecedentedly glorious achievement. No previous age has been fraught with problems so momentous; and it is to science that we must look to for a happy future.
If man's bestial yearning is controlled
A. the future will be tolerable
B. the future will be brighter than the present
C. the present will be brighter than the future
D. the present will become tolerable

3. Visiting New York City and taking in a Broadway musical has always been a dream of Kevin's, but he knew a visit to the big city would be very expensive. He wanted to plan a short vacation to the city over a holiday weekend. Could he visit the city on a limited budget? Searching the Internet, he found opportunities for reduced-price hotels, half-price Broadway play tickets, and a special on train transportation. He was ecstatic as he started to pack his bags.
For the paragraph above, which of the following is the best title?
A. New York, an Expensive City
B. Kevin's Budget
C. Finding Cheap Tickets
D. Kevin Goes to the Big City

4. Thomas Alva Edison is one of the most well-known inventors in history. He is most famous for inventions like the phonograph, the motion picture camera, and the light bulb. However, even Edison failed in a few attempts at invention, namely in trying to develop a better way to mine iron ore during the late 1880s and early 1890s. He was tenacious in his attempts to find a method that worked, but he eventually gave up after having lost all the money he had invested in iron-ore mining projects.
In this context, the word tenacious means
A. Angry
B. Persistent
C. Lazy
D. Happy

5. Global warming is an increasingly serious environmental problem. It is caused by "greenhouse gases," which are created by things we do to the environment every day. But there are many little things people can do to reduce greenhouse gas emissions. You can do your part by carpooling to save gasoline. Four people can ride to school or work in a carpool instead of each person taking a car and driving alone. Save electricity by turning off the lights, the television, and the computer when you are through with them. Save energy by taking the bus or by riding your bicycle to school or to run errands. Walk to where you want to go. Recycle your cans, bottles, plastic bags, and newspapers. If you care about the future of this planet, help protect the environment! Get with the program!
In the paragraph above, what is the author's purpose?
A. To entertain readers
B. To describe global warming
C. To offer directions
D. To move readers to action

6. Today perhaps your only association with the word 'polio' is the Sabin Oral Vaccine that protects children from the disease. Fifty five years ago this was not so. The dreaded disease, which mainly affects the brain ans spinal cord, causing stiffening and weakening of muscles, crippling and paralysis - which is Why I am in a wheelchair today. If somebody had predicted, when I was born, that this would happen to me, no one would have believed it. I was seventh child in a family of four pairs of brothers and sisters, with huge 23 year gap between the first and last. I was so fair and brown haired that I looked more look like a foreigner than a Dawood Bohri. I was also considered to be the healthiest of the brood.
In this passage, the word 'brood' refers to
A. polio victims
B. foreign children
C. children in the family
D. Indian Children

7. Harold a professional man who had worked in an office for many years had a fearful dream. In it, he found himself in a land where small slug-like animals with slimy tentacles lived on people's bodies. The people tolerated the loathsome creatures because after many years they grew into elephants which then became the nation's system of transport, carrying everyone wherever he wanted to go. Harold suddenly realized that he himself was covered with these things, and he woke up screaming. In a vivid sequence of pictures this dream dramatized for Harold what he had never been able to put in to words; he saw himself as letting society feed on his body in his early years so that it would carry him when he retired. He later threw off the "security bug" and took up freelance work.
In his dream Harold found the loathsome creatures
A. In his village
B. In his own house
C. In a different land
D. In his office

8. Space flight is a somewhat common experience these days. Nowadays the International Space Station generally is the home of several astronauts from the United States and Russia. Astronauts generally spend several months in a weightless condition. They sleep, eat, and work without the effects of gravity. One of the effects of lengthy space travel is the atrophy of major muscle groups and the stress of travel on the heart and lungs. When these space

travelers return to Earth, it takes several days for them to adjust back to gravity and to walk normally.
In this instance the word atrophy means
A. Strengthening.
B. Defining.
C. Weakening.
D. Breaking.

9. Bologna, Italy, is a city with 26 miles of covered walkways dating from the 1200s. The atmosphere of this beautiful city and its residents envelope you like a warm hug. In the center piazza of the city are two leaning towers, forming the most notable landmarks. Around the corner is the famous Roxy coffee bar, a hangout for many of the young university students who are studying medicine and political science. The nearby open marketplace bustles with color and excitement. Listening closely, you can hear many languages spoken by the tourists who visit each year.
In the paragraph above, which of the following best states the main idea of the passage?
A. Bologna is an old city.
B. University students love Bologna.
C. Bologna is an interesting place to visit.
D. Bologna has two leaning towers.

10. The object underlying the rules of natural justice "is to prevent miscarriage of justice" and secure "fair play in action "As pointed out earlier the requirement about recording of reasons for its decision by an administrative authority exercising quasi-judicial functions achieves his object by excluding changes of arbitrariness and ensuring a degree of fairness in the process of decision making. Keeping in view the expanding horizon of the principle of natural justice which governs exercise of power by administrative authorities. The rules of natural justice are not embodied rules. The extent of their application depends upon the particularly statutory framework where under jurisdiction has been conferred on the administrative authority. with regard to the exercise of particular power by an administrative authority including exercise of judicial or quasi-judicial functions the legislature, while conferring the said power, may feel that it would not be in the larger public interest that the reasons for the order passed by the administrative authority be recorded in the order and be communicated to the aggrieved party and it may dispense with such a requirement.
From the passage it is clear that it is the legislature that
A. invests the administrative authority with enormous powers
B. embodies rules
C. has the larger interests of public welfare
D. leaves administrative authority enough discretion to interpret rules

11. Courage is not only the basis of virtue; it is its expression. Faith, hope, charity and all the rest don't become virtues until it takes courage to exercise them. There are roughly two types of courage. The first an emotional state which urges a man to risk injury or death, is physical courage. The second, more reasoning attitude which enables him to take his career, happiness, his whole future or his judgment of what he thinks either right or worthwhile, is moral courage. I have known many men, who had marked physical courage, but lacked moral courage. Some of them were in high places, but they failed to be great in themselves because they lacked moral courage. On the other hand I have seen men who undoubtedly possessed moral courage but were very cautious about taking physical risks. But I have never met a man with moral courage who couldn't, when it was really necessary, face a situation boldly.
All virtues become meaningful because of
A. faith
B. charity
C. courage
D. hope

12. But I did not want to shoot the elephant. I watched him beating his bunch of grass against his knees, with the preoccupied grandmotherly air that elephants have. It seemed to me that it would be murder to shoot him. I had never shot an elephant and never wanted to. (Somehow it always seems worse to kill large animal.) Besides, there was the beast's owner to be considered. But I had got to act quickly. I turned to some experienced-looking Barman's who had been there when we arrived, and asked them how the elephants had been behaving. They all said the same thing; he took no notice of you if you left him alone, but he might charge if you went too close to him.
The phrase 'Preoccupied grandmotherly air' signifies
A. being totally unconcerned
B. pretending to be very busy
C. a very superior attitude
D. calm, dignified and affectionate disposition

13. I felt the wall of the tunnel shiver. The master alarm squealed through my earphones. Almost simultaneously, Jack yelled down to me that there was a warning light on. Fleeting but spectacular sights snapped into an out of view, the snow, the shower of debris, the moon, looming close and big, the dazzling sunshine for once unfiltered by layers of air. The last twelve hours before re-entry were particular bone-chilling. During this period, I had to go up in to command module. Even after the fiery re-entry splashing down in 81o water in south pacific, we could still see our frosty breath inside the command module.
The word 'Command Module' used twice in the given passage indicates perhaps that it deals with
A. An alarming journey
B. a commanding situation
C. a journey into outer space
D. a frightful battle

14. Piccadilly Circus was full of loneliness. It seethes and echoes with it. To live near it. Looking down on it is a discomforting exercise. You can't feel the pulse of London here, though people expect to. To Londoners it is a maddening obstruction between one place and another, and few voluntarily linger there. The only locals are those who live off the lingerers; the lingerers are primarily sightseers, with a fair sprinkling of people hoping to draw attention to themselves - both typically from the provinces. They have come to see the heart of London and expect to see spectacle, glamour and vice.
Piccadilly Circus is
A. The name of a Circus company
B. A lonely and resounding old building
C. A centrally located area in London
D. A huge heap of ruins

15. The Panama Canal is a ship canal that cuts through the Isthmus of Panama, connecting the Atlantic and Pacific oceans. Although several foreign companies tried to build the canal throughout the 19th century, none were successful. After the U.S. helped Panama revolt against Columbia, the U.S. was given rights to the land the canal would occupy. The U.S. government finished the canal in 1914.
According to this passage:
A. Panama and Columbia fought a war over the Panama Canal.
B. The U.S. was given rights to the canal land.
C. Foreign companies built the canal before the U.S. stepped in.
D. Panama built the canal in 1914.

16. Scientists believe that a black hole is created when a supernova from a large star collapses on itself. This collapse causes a gravitational field that grows more and more intense until nothing can escape from its pull, not even light. It is thought that the universe may end as a black hole.
According to this passage:
A. A black hole emits light
B. A supernova is a black hole.
C. The gravitational field of a black hole allows nothing to escape.
D. The universe was created by a black hole.

17. Each questions has a main statement followed by four statement labeled, A,B,C,D. Choose the ordered pair of statements where the first statement implies the second, and the two statement are logically consistent with the main statement.
If I talk to my professors, then I do not need to take a pill for headache
A) I talked to my professor
B) I did not need to take a pill for headache
C) I need to take a pill for headache
D) I did not talk to my professors
A. AB only
B. DC only
C. CD only
D. AB and CD

18. Shooting a cat with a BB gun or anything else is animal cruelty and is illegal. The recent incident in our neighborhood should be reported to the Society for the Prevention of Cruelty to Animals, the local humane society, or the police. We must as a community band together to find the perpetrators, prosecute them, and get the person or persons into some serious counseling program. It's important for all of us to be watchful and to speak up about this horrific behavior. These incidents must be stopped before these individuals cause even more serious harm.
In the above paragraph, which of the following best describes the author's tone?
A. Happy about the situation
B. Biased in favor of cats
C. Angry about the situation
D. Depressed about the situation

19. The dinosaurs became extinct at the end of the Cretaceous Period. Reasons for this event are still undetermined. Some scientists attribute it to a cataclysmic occurrence, such as a meteor that struck the Earth, kicking up vast quantities of dust. Another possibility is the great increase in volcanic activity that is known to have taken place at the end of the Cretaceous period. Either cause could have filled the atmosphere with enough dust and soot to block out the sunlight, producing a dramatic climate change. Recent discoveries indicate that in many places on several continents, there is a layer of iridium in geologic strata associated with the Cretaceous Period. Iridium is an element associated with lava flows.
An inference test item might look like this:
According to this passage, the dinosaurs became extinct because of which of the following conditions?
A. Disappearance of vegetation
B. Radiation from the sun
C. Climate changes
D. Volcanic activity

20. I felt the wall of the tunnel shiver. The master alarm squealed through my earphones. Almost simultaneously, Jack yelled down to me that there was a warning light on. Fleeting but spectacular sights snapped into and out of view, the snow, the shower of debris, the moon, looming close and big, the dazzling sunshine for once unfiltered by layers of air. The last twelve hours before re-entry were particular bone-chilling. During this period, I had to go up in to command module. Even after the fiery re-entry splashing down in 81o water in south pacific, we could still see our frosty breath inside the command module.
Which one of the following reasons would one consider as more as possible for the warning lights to be on?
A. There was a shower of debris.
B. Jack was yelling.
C. A catastrophe was imminent.
D. The moon was looming close and big.

READING COMPREHENSION

Directions from 1 to 20: Read the passages given below and answer the questions that follow them.

I. No one has yet excavated a complete dinosaur skeleton from this site near Colville River or anywhere else in Alaska. Never the less, my group and other paleontologists have been able to identify from partial skeletons, isolated bones, teeth and fossil foot prints, eight types of dinosaurs that lived as contemporaries in the far north. All eight date to the Cretaceous period, which lasted from 145 million to 60 million years ago .Most come from just the period lasting from 75 million to 70 million years ago, Some five million years before the famous mass demise of the planet's dinosaurs. Four of the species ate plants and four others, called theropods, preyed on the plant eaters and other creatures. By far the richest area of the state for remains of both herbivores and predators is the northern part, referred to as the North Slope.

The duck-billed hadrosaur Edmontosaurus earns the prize for the most common type there and so is the best characterized. Hadrosaurs-large,plant-eating dinosaurs-also go by the name "duck-bills" because they had broad, flat mouths; in contrast to ducks, however, they had hundreds of teeth that could grind the tough plants they fed on. They could stand on their back legs to reach the overhead foliage, although they travelled on all fours, probably in a rocking gait, because their rear legs were longer than their front. Many hadrosaurs in other parts of the world had head ornamentations. Or crests, but Edmontosaurus did not. Weighing in at between 3,000 and 4,000pounds, Edmontosaurus ranks among the largest of the hadrosaurus found in North America. Like other hadrosaurs, Edmontosaurus were social animals that gathered in herds, as evinced by their bones, which have been found in piles at various places in northern Alaska, as though groups of them had died in a flash flood.

Every dinosaur that has been discovered thus far in Alaska has also been found elsewhere in western North America, so we cannot point to a distinct Alaskan dinosaur. We find fewer species of dinosaurs in these northern latitudes, however. This pattern of decreased biodiversity with increased distance from the equator follows the trend seen in modern animal populations and, as it is today, may be a function of the limited resources available in the far north. Alaska was not the only surprising home to dinosaurs. In the southern polar region, Judd Case of St.Mary's College of California and his colleagues are finding a record of dinosaurs in rocks of similar age.

How did dinosaurs find themselves at the planet's northern extreme More than likely they came from Asia, because ancestral forms of almost all the Cretaceous dinosaur families found in North America existed in Asia. Most paleontologists believe that some of these dinosaurs migrated across a land bridge exposed by a drop in sea level where the Bering Sea sits today. The configuration of continental plates during the Cretaceous suggests that the earliest

these plates were in position to serve as a land bridge was approximately 100 million years ago; the land bridge may have been exposed as many as three times during the period. Some of the immigrants probably just stayed in the far north because the environment there supplied their needs; others headed south.

One species, though, seems to have taken a different route. Alamosaurus, a plant-eating dinosaur roughly 20 meters in length, apparently arrived by southerly migration path-remains of its ancestors are found on the continents of South America and Africa. Alaska is built of enormous geologic blocks, some of which originated far from their present location. During the Cretaceous, however, many of these blocks of land were near their current latitudinal position or higher. Thus, the dinosaur fossils found in Alaska were not posthumously hijacked from distant climes and brought there on moving plates; they lived in the high latitudes during the Cretaceous. Did they stay there all year. And if so, how did they manage it?

Climatologically data from fossil pollen, leaves and wood indicate that the Cretaceous forests of northern Alaska consisted of a mixed canopy that included deciduous conifers with an under storey of flowering plants, ferns and cycads. Today, mixed coniferous forests occupy a wide but well-defined range of climates with mean annual temperatures from three to 13 degrees Celsius(37 to 55 degree Fahrenheit),suggesting that the average yearly temperature for northern Alaska during the Cretaceous was similar. One of the striking aspects of the modern Arctic is the angle of sunlight and the length of the day-commonly, though mistakenly, referred to as six months of daylight and six months of night. In actuality, north of the Arctic Circle, darkness occupies a longer part of each day until the winter solstice (December 22), when the sun does not rise. During the Cretaceous, northern Alaska was even farther north than it is today, and so the dinosaurs that lived there would have need mechanisms to cope with both the cold and the dark.

1. Which of the following can be inferred from the passage?
a. Biodiversity is greatest in the equatorial regions of the earth.
b. Hadrosaurs are not theropods.
c. All the species of dinosaurs that were found in western North America were also found in Alaska
A. Only a
B. Only a and b
C. Only b and c
D. a, b and c

2. The passage does not help answer one of the following questions regarding the Alaskan Dinosaurs. Identify it.
a. What was the coping mechanism that these animals adopted in order to survive the Alaska Weather?
b. Which migratory route did the dinosaurs take during the Cretaceous period?
c. What types of dinosaurs were found in Alaska?
d. During which part of the Cretaceous period did the Edmontosaurus inhabit Alaska?

3. Which of the following does the author seek to convey when he states that the dinosaur fossils in Alaska were not posthumously hijacked?
a. the mass demise of the planet's dinosaurs took place when Alaska was populated with Dinosaurs.
b. The land bridge across the Bering Sea predates the Cretaceous period.
c. The remains found in Alaska are mainly of those dinosaurs that died in Alaska.
d. the Alaskan weather was indirectly responsible for the demise of the hadrosaurs.

4. The one feature that sets apart the Edmontosaurus from other hadrosaurs is
a. Its preferred place of habitation
b. Its eating and preying habits
c. The absence of crests on its head
d. Its socializing behavior

5. According to the passage, when did the mass demise of the planet's dinosaurs take place?
a. After the end of the Cretaceous period
b. At the beginning of the Cretaceous period
c. At the far end of the Cretaceous period
d. This question cannot be answered based on the information given in the passage

II. Half a century after the cold war, Sir Martin Rees, a 61-year-old veteran of the anti-nuclear movement believes that the world came closer-and more often-to the brink of thermonuclear destruction than most people realize. Could it happen again, more broadly, could man, even unwittingly, unleash a chain of events that destroys the natural environment and ultimately humanity itself?
The debate over how to safeguard our world is not limited, of course, to disaster scenarios. Conservationists, politicians and scientists of every hue continue to hold forth on mankind's environmental depredations. For Sir Martin, a respected Cambridge University astrophysicist and Britain's Astronomer Royal, the emphasis is on warning; for others it is the more difficult task of trying to devise prescriptions.
The specter of a terrorist attack or an accident involving bio-organisms or nanotechnology so concerns Sir Martin that he is ready to wager $1,000 that 1 million people will die as a result of a single horrendous act, by 2020.In addition to threats from disgruntled misfits or religious radicals, he worries about the destruction of the natural environment that may result from broader policies made by society. And he is particularly concerned that the current pattern of industrialization, urbanization and motorization might fuel climate change and biodiversity loss on such a scale as to lead to environmental disaster. However, unlike the most dystopian works, which are often misleading, “Our Final Century" is lively, informative and often witty. Sadly, the same cannot be said about "The Wealth of Nature”, a provocative but unsatisfying work by Robert Nadeau, who teaches at America's George Mason University. Mr.Nadeau believes that the world is already in throes of an environmental disaster of man's making. Conventional economics, he says, making a play on Adan Smith's "The Wealth of Nations", is not very good at valuing nature and "cannot introduce the incentives necessary for a sustainable global environment."He dismisses recent efforts by environmental economists to put "a green thumb on the invisible hand": first in Scandinavia, and now in many countries, governments are imposing effluent taxes and other market-centered reforms to help reduce pollution. He also dismisses similar efforts by ecological economists-cuddlier, philosophically greener versions of environmental economists-as ultimately destined to failure.

It is easy for Mr.Nadeau to scoff at the prospects of greening Adam Smith's hand, but in fact market-based environmentalism may well be the best hope of reconciling future economic growth with the need to preserve nature. That is certainly the view of a distinguished group of scientists, economists and other conversation experts assembled by the Royal Society, Britain's premier scientific body. In "Capturing Carbon and Conserving Biodiversity; The Market

Approach", the bowfins' examine various challenges involved in dealing with two of the biggest environmental problems: global warming and biodiversity loss.

Crucially, they argue that turning to market forces can help solve both problems at once. By putting an economic value on the neglected "ecosystem services" provided by forests, such as their ability to absorb carbon from the atmosphere, they argue that both deforestation and climate change can be dealt with. That is not to say that the market-friendly approaches are cure-alls. There are still plenty of problems to overcome. One of them is that scientists still do not fully understand how and how fast different trees absorb carbon as they grow, and this makes accurate measurements particularly difficult.

Even so, explains Ian Swingland, who edited a collection of articles on this issue, this approach is far more promising than the failed conservation approaches of the past, that relied on "a donation-driven western culture permeated by the idea that so called expert and political committees could and should plan what should happen, and draw lines on maps as boundaries between people and the rest of the animal and plant world. Well-meaning it may have been, but disastrous it has proved". In arguing that "biodiversity can pay for itself through benign systems of sustainable extraction, where people can receive some equitable share by right, not patronage", Mr.Swingland and his co-authors extraction make a compelling case that the best way to reduce the risk of any potential eco-disaster is to embrace market greenery.

The future may be brighter than the eco-doomsayers suggest. One reason is that man has more power to influence that future benignly-through innovation in technology and economic policy-than some suggest. Another is that it is simply wrong to imply that most environmental indicators suggest that an environmental disaster is imminent. Inspect Sir Martin's work closely, for example, and you find that he is careful about his language and predictions; unlike many greens(and ,it must be said, Mr.Nadeau at times),who adopt the alarmist tactic of giving only the shocking high end of forecasts of potential global warming without mentioning the low end of the forecast, Sir Martin tends to give ranged and add appropriate qualifiers and caveats. The Cambridge academic is also very wary of the so-called precautionary principle; a misguided pseudo-philosophy invoked by greens to stifle innovation in areas like genetically modified foods.

So how does he justify his suggestion that mankind might have only a 50-50 chance of surviving the 21st century-our final century, to use the alarmist title of the book. Even before one could ask him that question at a recent literary event, Sir Martin confessed to being a fan of Bjorn Lomborg-a Danish academic who recently caused some controversy when he criticized the greens for systematically denying and distorting the fact that the environment has been getting healthier in many countries. Sir Martin then took the reviewer's copy of "Our Final Century" and penciled in a question mark after the title. His publishers had ruled it out. The American publishers even changed the title from "Our Final Century" to "Our Final Hour". Sir Martin is clever enough to know that the end is not nigh, but he put up with the chicanery in order to gain a wider audience. A small sin, perhaps, in such an important book.

6. According to the author, the future may yet be green because
a. Technological innovation may yet save the day
b. Current environmental indicators do not necessarily suggest an imminent disaster
c. Academicians like Mr. Swing land have started a debate which is likely to influence Policy making in future.
A. Only B. Only a and b
C. a, b and c D. Only b

7. According to the author, Sir Rees
a. Presents a nightmarish vision of our ecological future in 'Our Final Century'
b.Is an irresponsible scaremonger whose only saving grace is that he is better than Mr.Nadeau
c. Does not have the courage of conviction that doomsayers like Mr.Nadeau have and Hence does not mention in this book, the shocking high forecasts of potential global Warming..
d. Subscribes to the precautionary principle, even though it stifles innovation

8. Why does the author consider Sir Martin's agreeing to have the title of his book changed, a small' sin?
a. The title was changed with the intention of increasing sales, by piquing interest and this is perhaps not entirely illegitimate.
b. The new title goes against what is said in the book
c. The title uses deception in order to gain readership
d. Sir Martin colluded with the publishers for personal gain

9. Which of the following statements reflects Mr. Ian Swing land's view on environmental Conservation ?
a. Conservation projects succeed when they are funded by third parties.
b. The natural world lends itself to compartmentalization.
c. The term 'sustainable extraction', in the context of the exploitation of natural. Resources, is oxymoronic
d. None of the above.

10. The term 'invisible hand' as used in the passage, probably refers to
a. Policies that disregard environmental concerns
b. Man's potential capacity to reverse ecological damage through technological Innovation
c. Market economics that are not necessarily consistent with the goals of Environmental conservation
d. the role that academicians like Sir Martin Rees play in highlighting the severity of Environmental problems

III. F our bureaucrats and politicians killed our industrial revolution, won't they do the same with the knowledge revolution. I believe they will not prevail this time around, for several reasons. One, because our economic reforms are curtailing their ability to inflict damage. Two, because high-technology business is virtual and it is difficult to control what you cannot see. Three, because the internet creates transparency and brings transactions into the public domain. It undercuts the bureaucrat's power, which is based on the bartering of knowledge.

Many are rightly skeptical about the new economy's ability to spread to the masses. They can only see the "digital divide". It is true that people will benefit only if they have education. It is also true that four out of ten children in India are illiterate. It is worse for girls and in the backward northern states, where teachers are often absent, schools lack the basic facilities, children are not motivated and they drop out. But there is a hopeful sign: there is a new found thirst and enormous pressure from below for education. In the past six years, literacy has risen from 52 to 62 percent. This is a huge

improvement, and if this trend continues, universal literacy is not far behind-despite the politicians. The happiest news is from the backward states, where the growth has been the highest: and among girls, literacy has grown faster than among boys. In some states, responsibility for education is beginning to shift to the elected village panchayat council, and this has brought more accountability. So perhaps there is hope. If there is one thing that could secure our future, it is vigorous attention to building human capabilities.

A true measure of India's failure is not its poverty, but its inability to create a middle class, India's middle class was less than 10 percent of the population in 1984-85,according to the National Council for Applied Economic Research(NCAER).Since then, it has more than tripled, but is still less than 20 percent .If the economy grow 7 percent in the foreseeable future and the population 1.5 percent, if the literacy rate keeps rising, and if we assume that the NCAER's historical middle-class growth rate of the past fifteen years are correct, then half of India will turn middle class between 2020 and 2040.To be sure, there will be huge disparities .Much of west and south India will turn middle class by 2020,but backward states like Bihar . Uttar Pradesh, and Orissa won't get there before 2040.Disparities are obviously bad, but vigorous migration helps to ameliorate them and creates pressure on the backward states to catch up. At these milestones, based on the same growth assumptions, India's individual purchasing power will climb to approximately $5,653 in 2020(from $2,149 in 1999)and $16,500 in 2040.When half the population in society is middle class, its politics will change, its worldview will be different, its poor will be fewer, and society will have greater means to look after them. Thus, to focus on the middle class is to focus on prosperity, unlike in the past, when our focus has been on redistributing poverty. This does not mean that one is callous. On the contrary, the whole purpose of the enterprise is to lift the poor-and lift them into the middle class.

There are pessimists, however. Like Malthus, they moan about India's rising population. Like Ricardo, they worry about the ability of our land to feed the people. The fact is that Malthus and Ricardo have been proven wrong. India's situation illustrates this. In the spring of 2000, its population crossed a billion when the nation's warehouses were bulging with grain and the main concern of the agriculture ministry was how to dispose of this mountain of grain without incurring a loss. Admittedly nutrition levels are still low, but people no longer worry about India's food problem; as we observed, the last famine occurred during the last days of the British Raj in 1942-43.Marx understood far better than Malthus, Ricardo, or our current pessimists that growth is natural in a market economy and there is a positive link between technological advance and wealth. Although the old Malthusian perspective is no longer relevant, it is important to remember that there are wide diversities in India's population growth rate, which is falling very rapidly in some regions and very slowly in others. Studies show that the difference between the two trends is explained largely by female literacy and female job opportunities. Thus, gender equity and women's empowerment seem to be at the heart of the matter.

11. According to the author, the extent of the spread of the middle class, is an indication of
a. The growth of the market economy
b. The spread of prosperity to the poor class
c. The success in distributing the poverty across classes
d. The increased purchasing power of the middle class

12. The author attributes the difference in the population growth rate in the various regions in India to
a. The link between technological advance and wealth
b. The success of efforts made by the government to replicate population control measures taken by other countries
c. The differences in the educational and economic status of women in these regions
d. All the above reasons

13. Bureaucrats will not be able to meddle with the knowledge revolution because
a. Of its very nature
b. Economic reforms protect it from being exploited
c. This revolution brings to an end the monopoly that they have on information
d. Of all the above statements

14. Which of the following does the author refer to when he uses the term 'redistributing poverty'?
A. Policies that inadvertently ensure that the poor remain where they are and the middle class prospers
b. Policies that ensures that the poor move up the economic ladder
c. Policies that help maintain status quo in the relative economic status of various groups in the society
d. Policies that unintentionally ensure that nobody prospers.

IV. One of the most fateful errors of our age id the belief that "the problem of production' has been solved. Not only is the belief firmly held by people remote from production and therefore professionally unacquainted with the facts-it is held by virtually all the experts, the captains of industry, the economic managers in the governments of the world ,the academic and not so academic economists ,not to mention the economic journalists. They may disagree on many things but they all agree that the problem of production has been solved; that mankind has at last come of age. For the rich countries, they say, the most important task now is 'education for leisure' and, for the poor countries ,the 'transfer of technology'.

That things are not going as well as they ought to be going must be due to human wickedness. We must therefore construct a political system so perfect that human wickedness disappears and everybody behaves well, no matter how much wickedness there may be in him or her. In fact, it is widely held that everybody is born well; if one turns into a criminal or an exploiter, this is the fault of 'the system'. No doubt 'the system' is in many ways bad and must be changed. One of the main reasons why it is bad and why it can still survive in spite of its badness is this erroneous view that the 'problem of production' has been solved. As this error pervades all present-day systems, there is at present not much to choose between them.

The arising of this error, so egregious and so firmly rooted, is closely connected with the philosophical, not to say religious, changes during the last three or four centuries in man's attitude to nature. I should perhaps say: western man's attitude to nature, but since the whole world is now in a process of westernization, the more generalized statement appears to be justified. Modern man does not experience himself as a part of nature but as an outside force destined to dominate and conquer it. He even talks of a battle with nature, forgetting that, if he won the battle, he would find himself on the losing side. Until quite recently, the battle

seemed to go well enough to give him the illusion of unlimited powers, but not so well as to bring the possibility of total victory into view. This has now come into view, and many people, albeit only a minority, are beginning to realize what this means for the continued existence of humanity.

The illusion of unlimited powers, nourished by astonishing scientific and technological achievements, has produced the concurrent illusion of having solved the problem of production. The latter illusion is based on the failure to distinguish between income and capital where this distinction matters most. Every economist and businessman is familiar with the distinction, and applies it conscientiously and with considerable subtlety to all economic affairs-except where it really matters: namely, the irreplaceable capital which man has not made, but simply found, and without which he can do nothing. A businessman would not consider a firm to have solved its problems of production and to have achieved viability if he saw that it was rapidly consuming its capital. How, then, could we overlook this vital fact when it comes to that very big firm, the economy of Spaceship Earth and, in particular, the economies of its rich passengers?

One reason or overlooking this vital fact is that we are estranged from reality and are inclined to treat as valueless everything that we have not made ourselves. Even the great Dr.Marx fell into this devastating error when he formulated the so-called 'labor theory of value'. Now, we have indeed labored to make some of the capital which today helps us to produce-a large fund of scientific, technological and other knowledge; an elaborate physical infrastructure; Innumerable types of sophisticated capital equipment, etc-but all this is but a smaller part of the total capital we are using. Far larger is the capital provided by nature and not by man-and we do not even recognize it as such. This larger part is now being used up at an alarming rate, and that it why it is an absurd and suicidal error to believe, and act on the belief that the problem of production has been solved.

15. Identify the statement that CANNOT be attributed to the author with regard to the control of the systems of society.
a. Faulty systems tend to breed wickedness
b. The problem of production is the real reason behind the evils or problems of society
c. All present day systems have a certain inbuilt error
d. None of the above

16. The belief commonly held by most people including laymen and experts is that
a. Everything has been achieved and hence man can relax in his quest for supremacy over nature.
b. The problem of production in poor countries can be solved by transferring technologies to them.
c. The element of human wickedness is the most important hurdle to be overcome in solving the problem of production.
d. Man has successfully intervened, manipulated and dominated nature to suit his purposes.

17. According to the author, the problem of production has not yet been solved because
a. Man is still exploiting his resource base (i.e. nature); in spite of the hue and cry the world over, to reduce the level of exploitation
b. Of man's failure to realize that his economic activities are adversely affecting nature
c. Technology is yet to be transferred to developing countries
d. The detrimental effect that the new technologies have when used for achieving economic goals

18. One of the prominent reasons, that fuelled the wrong belief that the problem of production has been tackled, is
a. The distinction that man makes between nature and himself.
b. The apparent power offered by the latest developments in science.
c. The absence of any difference between income and capital
d. The all pervasive nature of this error.

19. Why would man find himself on the losing side if he were to conquer nature for economic progress?
a. He is not destined to win this one-sided battle.
b. The benefits of scientific and technological development are merely illusory.
c. In conquering nature, he would be killing the goose that lays the golden eggs.
d. He is handicapped by a faulty understanding of the issues related to income and capital.

V. As practitioners of astrology have known, Mars can be a planet of constructive and destructive energy. Depending on this intend, he can protect or harm. No doubt Mars is feared by many. He is called Mangala, the auspicious one, in hopes that such a pleasant name would appease him and soften his wrath. Mars is depicted as Subramanya, a youthful, active, boisterous, weapon carrying young man, riding on a tiger. His energy or Shakthi is seen in the 'vel' or spear, vigorously, ferociously ripping life to its core with focused intent

Knowing the nature of Mars, sages throughout the centuries have guided us to develop codes to understand, contain and direct the dreaded but useful fearsomeness of Mars energy. Lord Krishna tells Arjuna in Mahabharata,"Yogastah kuru karmani" or "established in being, perform action". American author, Ernest Hemingway expressed themes centering on being strong, yet calm, while facing isolation, exhaustion and violent behavior. He wrote many of his tales centered on battlefields, lion hunters, sharks, fearless matadors and powerful bulls. He coined the term "grace under pressure" as the attitude a man needs to adopt to stay centered and survive with dignity in the face of the challenge.

Although Mars can induce fear in the soldier trying to stay alive on the battlefield, or an executive trying to avoid faltering in uncertain economic times or parents trying to support their families on reduced resources, fear (or extreme alertness) can have yet another face and a positive value in that it induces us to be cautious and mindful in situations where recklessness or panic could result in injury or loss. Those who have been in battle, in one form or another, known that there is no indignity .It is natural to have some degree of apprehension when placed in alien surroundings under adverse conditions. While we do not want to invite situations that leave us uneasy or anxious, we surprisingly might find a benefit in the mindfulness demanded by these Martian conditions. If we were never a bit concerned or apprehensive about our outcomes, there might be little motivation to compel us to make those necessary changes in our lives.

The key to working with Mars energy is that each person must find a way not to be overcome by fear. We must live within the calmness of Mars and not give in to panic. We want to be alert but not alarmed. An encouraging image of Mars, truly in his Mangala or auspicious form, is that of the warrior who strives to stay calm and in command of himself as he works with his stresses, rather than letting his stresses work on him. Our productive continuance in life comes from the ability to remain calm and manage the inevitable stresses that we encounter on an

almost daily basis. Mars can encourage us into action or drain us to the point of discouragement. He can light a fire under us or burn us up. He can move us along or cut us off in our tracks. Mars can add vim and vigor or severe our life force. Mars can leave us spent or inspired. Mars can teach us to work productively and execute our tasks at maximum efficiency in demanding situations. There are many life events that can lead to stress. With the hustle and bustle of life around us, most have experienced that stressful events just don't come one at a time, but often occur in groups. The events are not stress themselves, but are stress producers. Some call these events "stressors". They are the cause while stress is the response. Once the body recognizes the presence of a stressor, it then begins to act to protect itself. This is where the calmness of Mars begins to play its role and "goes to war" for us.

20. We can hope to exploit the positive aspects of Mars energy when we do one of the following. Which one?
a. Identify stressors.
b. Maintain a positive approach to problems.
c. Be alert to the factors that trigger stresses.
d. Follow the principle of "grace under pressure"

VI. Philosophy is the science of principles; not, as the superficial thinkers or unthinkers of our materialistic age would have us believe, of sensible or material facts, the proper object of the physical sciences, as astronomy, electricity, chemistry, mechanics, geology, hydraulics, etc. Principles precede facts, originate and govern them. Indeed we know not facts themselves, nor understand their significance or meaning, until we have referred them to their principles. What in the English-speaking world is in our days called philosophy is simply an induction from the observation of the facts of the physical order, and is confined by Sir William Hamilton to physics, psychology, and logic, and excludes not only the supernatural, but the supersensible or intelligible, though within the province of natural reason. But without meaning to disparage philosophy in this sense, or the physical sciences, the fruits of which are seen in the mechanical inventions and material progress of the age, we must maintain that it is infinitely below philosophy, properly so-called. It is, in a subordinate sense, scientia, but not sapient, according to Aristotle, the science of principles, which are supersensible and not obtained by way of induction from sensible facts, whether facts of external nature or of the soul itself. All principles are supersensible and are objects of the intellect; in no cases of the senses. Some of them are known or knowable by the light of nature; others only by the light of supernatural revelation. The science of the former is the philosophy of the natural; of the later is the philosophy of the supernatural.

These two philosophies are of principles equally certain; for the light of reason and the light of revelation are both emanations of the divine light or Logos, and each is infallible. We may err and take that to be reason which is not reason, or that to be revelation which is not revelation; but neither can itself err ,for both rest on the veracity of God, who is Truth itself, and can neither deceive nor be deceived. The science of revealed principles is as truly science as is the science of principles known by the light of nature, and differs from it only as to its medium. We may then speak of the philosophy of the supernatural with as much propriety and confidence as of the philosophy of the natural.

The philosophy of the supernatural follows the analogy of the natural. The philosophy of the natural presents the principles of the natural so far as they are cognizable by natural reason in their intelligible phase, their relation to one another, and the facts of the sensible order which they explain and govern. Their philosophy of the supernatural presents the principles so far as revealed of the supernatural order, their mutual relation and reciprocal dependencies, and their relation to the natural order which they explain and complete, and which without them is not only incomplete, but absolutely without purpose or meaning.

We do not pretend to enumerate and describe the principles of the supernatural philosophy, for we are neither philosopher nor theologian enough for that; we lack both the ability and the learning to do anything of the sort. All we aim at here is to show that there is a philosophy of the supernatural as well as of the natural; and that we live in times when for the vindication of the faith against the various classes of its enemies,it is necessary to recognize and study it to a far greater extent than it is ordinarily studied in our seminaries. The age has no respect for authority, and though we prove conclusively that the Church is divinely commissioned and assisted to teach the faith, and is therefore infallible, we do not meet the real difficulties of the more cultivated classes of unbelievers, or prepare them to accept any article, dogma or preposition of the faith for the reason that she teaches it. The world outside of the Church may be credulous and superstitious ,able, as Clemens of Alexandria said to the Greeks," to believe anything and everything except the Truth", but have undeniably lost all faith in the supernatural order, and really believe only in the natural, if indeed even so much as that. Our separatists, who profess to have communications with the spirits of the departed, do not really admit a supernatural order. The real cause of this unbelief, so far as it is intellectual ,not moral ,is in the assumption that the natural and the supernatural are held by the Church as by the sects to be two separate, independent, and unrelated orders ,Indeed as two antagonistic orders. They take their views of Christian theology not from the teaching of the Church ,but from some terrorists as Calvinists and Jansenists ,who in their theories demolish nature to make way for grace .The supernatural appears to them an anomaly in the Creator's works; something arbitrary, illogical, without any reason in the nature of things ,or the principles of the universe .No amount of evidence, they contend ,can suffice to prove the reality of any order that is above nature or above the reach of natural reason. Hence they attempt to reduce miracles and all marvelous events, too well authenticated to be denied as facts, to the natural order, explicable by natural laws, though we may as yet be ignorant of these laws. Carlyle ,one of the oldest contemporary British thinkers and writers ,in his 'Sartor Resartus',has a chapter headed 'natural-supernaturalism ',in which he reduces the supernatural to the natural, and therefore really denies it while apparently asserting it. Natural supernaturalism is a contradiction in terms; and it is more manly to deny the supernatural outright than it is to attempt to explain it by the operation of natural laws.

21. Identify the statement(s) that is/are not true according to the passage
a. Sir William Hamilton had included in philosophy, only those facts that could be arrived at through observation of sensible facts.
b. Reasoning through supernatural revelation constitutes the philosophy of the supernatural.
c. Carlyle is the author of 'Sartor Resartus'
d. Principles are framed after facts are thoroughly analyzed.

22. The relationship between the philosophy of the supernatural and that of the natural can best be described as
a. Interdependent

b. Paradoxical
c. Mutually exclusive
d. Oxymoronic

23. Most people who communicate with spirits of the dead do not believe in the existence of a supernatural order because
a. They tend to follow theories that do not give enough precedence to nature.
b. They fail to see that both the natural and the supernatural are related orders.
c. Theories like Calvinism and Jansen son, tend to color their thought processes.
d. They firmly condemn the existence of anything beyond the purview of nature.

24. The author feels that the two philosophies mentioned in the passage can never be wrong because
a. Both of them are made up of solid, scientific principles.
b. God and Truth are synonymous; hence each one is true in itself
c. It is assumed that the principles of these two share a divine origin.
d. The medium through which they express is the same.

25. A possible definition of 'supernatural' as deduced from the passage could be that it is
a. Some force beyond the laws of nature.
b. Something that requires justification by faith and predestination.
c. That which could be understood by the application of supernatural revelation alone.
d. Any force beyond the scope of the laws of physics, psychology and logic.

VERBAL ABILITY

Direction from 1 to 26: In each of the question five sentences are given. They are labeled as A, B, C, D, E arrange them in a logical manner to form a coherent paragraph. From the given option choose the appropriate one.

1. (A) He recent constitution bench has pronounced on the subject.
(B) In the rarest of rare cases where the dignity, integrity and independence of the bar or the bench are at the stake.
(C) The phenomenon of strikes by lawyers is endemic in our legal system.
(D) The judgments categorically hold that the lawyers have no right to go on strike.
(E) But this prohibition is not absolute.
1. bdeac 2. deabc 3. cdeb 4.cadeb

2. (A) Happiness is a moot, concept, but there is no doubt that seeing and experiencing nature is good for us.
(B) Summer is the ideal season for this.
(C) Better still, doing something like trekking in the wild or coursing past glaciers triggers changes in our mental state that can be positively beneficial in our day to day life.
(D) Life today is veering round to the dictum, 'work' hard and 'play hard.
1. cdab 2.Abcd 3.dcab 4.dacb

3. (A) Though pillaging for fuel wood and fodder has been continuing for years now, the serious threat to these Mangroves comes from the illegal prawn farms, nearly 10,000 hectares of mangroves come under prawn farms along the coast.
(B) The mangrove forest that appears lush and dense forms only a narrow strip.
(C) According to experts, the disappearance of the mangroves will prove a serious loss of mankind, unless they are saved from extinction.
(D) But the beauty is only skin deep.
(E) At first glance, the Mahanadi delta in coastal Orissa seems perfect- a maze of rivers and creeks cutting enchanting swathes through the mangroves.
1. edbac 2. bceda 3. acbde 4. Cabed

4. (A) They occasionally appear in some pigeon breeding flocks and also in the wild.
(B) The gene for albinism interferes with the production of a precursor to the pigment melanin, making albino pigeons not only white but pink eyed, thereby leaving them with a relatively poor eye sight.
(C) Each parent must carry the recessive gene for albino offspring to appear.
(D) Albinos occur in many bird species including pigeons.
(E) Pigeon breeders try to avoid albinos, as their all-white colour makes them stand out in a crowd, much to their disadvantage when the predators or even suspicious fellow pigeons are around.
1. cdeab 2. Ebacd 3.Dacbe 4. Bacde

5. (A) The name is self explanatory.
(B) But he has been fooled several times by a similar looking mineral called "fool's Gold".
(C) So all that glitters is not gold.
(D) For many years man has been fascinated by the yellow metal "gold".
(E) Chemically, fool's gold is iron pyrite.
1. edcba 2. dbaec 3. baedc 4. Cdbea

6. (A)These sentiments prompted the ceremonial welcome extended to Lord Rama may aeons ago when he returned from his 14 yrs exile to Ajodhya after defeating the demon king Ravana.
(B) Coinciding with the 13th day of the dark fortnight of Ashwin, the festival draws the significance from the word Deepavali, a string of lighted lamps.
(C) The celebrations have continued to this time and age with diwali.
(D) The lamps accompanied by the lighting of firecrackers, symbolize mankind's quest for enlightenment by conquering all evil vice temptation and ignorance.
(E) The classic power play of good and evil reaches a telling climax with light prevailing over darkness on diwali night.
1. ebdac 2. Cdeab 3. bcead 4. dbcae

7. (A) It affects anyone and everyone catching them unaware.
(B) But if one is diagnosed to be a heart patient there are ways of coping with it mainly by changing one's lifestyle.
(C) Heart ailments are on the increase today.
(D) Today, one has to be extra careful if one wants to lead a healthy life.
(E) This is invariably attributed to the changing lifestyle fraught with stress and strain
1. debac 2. Ceadb 3. acdeb 4. Bedac

8. (A) In dealing with neighboring Singapore, he has given notice that the price of Malaysian waters to its island neighbor will increase manifold, a move that will seriously affect industry prospects in Singapore.
(B) The strategy planners seem completely ignorant of the enormous economic clout that India has over the region.
(C) Similarly India should exact a high economic price from Pakistan and its allies in the Security Council.
(D) India needs to learn economic welfare from that past master Mahathir Mohammad of Malaysia who has skillfully thrust and parried with rivals without raising his vote.
(E) India's military options are becoming increasingly costly.
1. dbcea 2. Abcde 3. adcbe
4. ebdac 5. bdcae

9. (A) Coal mining in the surrounding hills is cited as another reason.

(B) Water pollution is adding to the trouble.
(C) Situated in 1,300 m above sea level, cherrapunjee receives an average of 10,000 mm of rainfall annually.
(D) Deforestation and soil erosion coupled with lack of water retention facilities have contributed to the problem.
(E) So it is paradoxical that its 30,000 people suffer from water scarcity.
1. dcbae 2. cbaed 3. Bbead 4. Cedba

10. (A) Good parenting can enable children to accept facts of life and persuade them to precede pro actively in an active mode.
(B) Once you accept this fact a certain understanding is generated, thus enabling you to accept whatever life gives you.
(C) However when faced with failure they might become dispirited.
(D) The challenge of life is in accepting the fact that "life is not fair".
(E) Children are very creative.
1. ecadb 2. Aecbd 3. decba 4. Bdace

11. (A) It is a symbol of regeneration of eternity and life.
(B) Water plays an all-preservative role in our weddings and ceremonies.
(C) To the Indian mind a wedding is a very important function.
(D) It is perhaps only apt that water should play such an important and symbolic role in these weddings.
(E) Perhaps this is inevitable in the light of the critical role water plays in our everyday life.
1. becad 2. Cdeba 3. acdbe 4. bceda

12. (A) In most cases, women were allowed as an afterthought.
(B) While you still find members balancing high balls and playing bridge, the focus shifted to entertainment and sporting activities.
(C) English men introduced us to the club culture.
(D) But gradually, club priorities underwent changes.
(E) Initially considered a luxurious indulgence, clubs were also rated by their snob value; getting admittance into any of them involved endless rounds of recommendations and background checks.
1. bedac 2. Ceadb 3. edabc 4. dceab

13. (A)The furious monarch, came to know of this decision, and sent word to the Indian ruler that if he were to use his gloves he would be sent off peremptorily from Buckingham Place.
(B)Indian history is replete with strange love of the orthodox caste conscious Indian Maharajas.
(C) Despite the fact, that the British king emperor was their all-powerful Suzerain the Indian Maharajas were so conscious of their "high caste" that they did not want to lower themselves by dining with him, if possible.
(D)The Maharaja had to shake hands although unwillingly.
(E) In fact one of them did not want to be contaminated by touching King George V so he planned to wear a glove while shaking hands with the Emperor.
1. bcaed 2. Caedb 3. adebc 4. bcead

14. (A) Even the word enlightenment is becoming popular as a legitimate concept which is no longer completely foreign to our ears.
(B) Over the past several years there appears to have been an explosion of internet in all matters spiritual.
(C) For more and more people these days it has become acceptable to begin to speak openly about some of the most fundamental spiritual questions.
(D) It is now no longer embarrassing to admit to having spiritual interests or feelings.
(E) We live in interesting times.
1. bedac 2. acdbe 3. cedab 4. ebdca

15. (A) He Indian labor is very mobile at the lowest levels of occupation, but it is the middle level working class that finds it difficult to move across the country in search of a job.
(B) Certainly not for the average middle-class families settled in cities.
(C) Such mobility is not always possible in India.
(D) Economic security not only depends on the mobility of workers and location of jobs.
(E) The idea of economic security substituting for job security had emanated in the U.S. where people can move seamlessly from one coast to another with minimum disruption to their lives.
1. acbed 2. ebacd 3. aedcb 4. decba

16. (A) And the saying goes" you can have it or hate it, but you cannot ignore!".
(B) Likewise more and more people want to explore this field as a concern.
(C) the most modern of all the fine arts, films encompasses visual musical and theatrical art forms to finally mould itself into a creation that keeps everyone in awe.
(D) Films today, are quite advanced, as newer techniques and expressions are being developed everyday to bring this world as close to utopia and reality alike.
(E) The earlier misconception of it being a big bad world is decreasing.
1. acdeb 2. edcba 3. dbeca 4. bcdea

17. (A) In winter the snowfall is so heavy that all the houses in the village get buried under the snow.
(B) It is the last village on the Indian side on the border with china.
(C) Niti is a village situated at a height of 3000m above sea level in Uttaranchal.
(D) at the first hint of winter, nit's villagers make an exodus to bhimtala , a village at lower altitude and return only in summer
1. badc 2. bcda 3. dbca 4. cbad

18. (A) Ageing is a fact of life which does not take place sudden.
(B) Though elders are prone to all types of disorders it is possible to make remedial measures which would enable one to lead a happy and contented life.
(C) Anyone who lives reasonably long must definitely undergo the process of ageing.
(D) It is fixed and definite for all individuals in the normal course of a life-time and death is the end result.
1. bcda 2. Cdab 3. adcb 4. dacb

19. (A) progressively people are now taking up specialized courses, which suit their interests and requirements.
(B) Hindi is the national language, but English had become the lingua franca in the country.
(C) While our constitution recognizes 18 languages more than 5,000 dialects are spoken in various parts of the sub-continent
(D) Our country with a population of more than one billion is known for the multiplicity of its cultures and ethnicities
(E) however the desire for learning new languages is increasing.
1. dcbea 2. cbaed 3. abedc 4. beacd

20. (A) the recent constitution bench has pronounced on the subject.
(B) In the rarest of rare cases where the dignity, integrity and independence of the bar or the bench are at the stake.
(C) The phenomenon of strikes by lawyers is endemic in our legal system.
(D) The judgments categorically hold that the

lawyers have no right to go on strike.
(E) But this prohibition is not absolute.
1. bdeac 2. Deabc 3. acdeb 4. cadeb

21. (A) Good parenting can enable children to accept facts of life and persuade them to proceed proactively in a creative mood.
(B) Once you accept this fact a certain understanding is generated, thus enabling you to accept whatever life gives you.
(C) However when faced with failure they might become dispirited.
(D) The challenge of life is in accepting the fact that "life is not fair".
(E) Children are very creative.
1. ecadb 2. aecbd 3. decba 4. bdace

22. (A) They occasionally appear in some pigeon breeding flocks and also in the wild.
(B) The gene for albinism interferes with the production of a precursor to the pigment melanin, making albino pigeons not only white but pink eyed, thereby leaving them with a relatively poor eye sight.
(C) Each parent must carry the recessive gene for albino offspring to appear.
(D) Albinos occur in many bird species including pigeons.
(E) Pigeon breeders try to avoid albinos, as their all-white color makes them stand out in a crowd, much to their disadvantage when the predators or even suspicious fellow pigeons are around.
1. cdeab 2. Ebacd 3. dacbe 4. bacde

23. (A) the trust was formed in order to ensure peace for development and rebuilding of the village.
(B) It focuses the mind on basic issues.
(C) Interestingly, it was the youth who took the lead.
(D) when the rest of the gujarat was torn apart in communal violence, people of khambra village, in kutch district who lived through the massive earthquake of january 26th January 2001, formed a Hindu Muslim Ekta Vikas Trust.
(E) Adversity has its uses.
1. dcbea 2. Cdeab 3. acdbe 4. ebdca

24. (A) Notionally, the land belonged to the king and no one could be evicted from it.
(B) The produce of the land was meanwhile, shared by all villagers.
(C) Prior to the arrival of the British in India, land was not seen as a commodity, which could be bought and sold.
(D) Ranjit Singh for instance waived tax collections for a year, to compensate for lack of rains.
(E) Kings showed concern for the peasantry and when required, were prepared to live more frugally.
1. aedbc 2. edabc 3. deabc 4. caedb

25. (A) Besides improving quality of groundwater, it raises water levels in bore wells and mitigates the effects of drought.
(B) However according to new thinking the need of the hour is rain water harvesting, not just to meet the increasing demand in big metros but also to augment ground water storage.
(C) Traditionally most experts have been of the view that water scarcity can be tackled with proper management of the existing supply, conservation and setting up a dual pipe system and pricing.
(D) Besides it reduces soil erosion and choking of storm water drains.
(E) The benefits of rain water harvesting are immense.
1. eacbd 2. Cbead 3.bcade 4. Aecbd

26. (A) In this fast changing scenario a great opportunity has emerged in India
(B) Now added to all these is the hot new technology of the internet which has resulted in geographical distances becoming irrelevant to many purposes
(C) In the past decade or two, it has often being said that men live in a global village.
(D) The convergence of all these technologies has meant that we can be the back office for the developed world.
(E) This had increasingly become a reality with the advent of satellite television and the evolution in telecommunications.
1. daceb 2. cebad 3.adebc 4.eacbd

ANALOGIES

Directions for questions 1 to 30: In each of the following questions, capitalized pair of words is given followed by four numbered pairs of words. Select from choices the pair which exhibits the same relationship as the capitalized pair of words and mark its number as your answer.

1. Saturated: Wet::
A. Acrid: Acidic
B. Damp: Drenched
C. Distant : Faraway
D. Arid : Dry

2. Football: Sport::
A. Rhythm : Poetry
B. Verse: Literature
C. Dancing :
D. Research : Biology

3. Gets On: Bus::
A. Hopes : Fear
B. Enters: Account Book
C. Disembarks: Airplane
D. Boards: Rowboat

4. Century: Years::
A. Rupees: Paisa
B. Yard: Inches
C. Week: Days
D. Centimeter: Millimeters

5. Bucket: Water::
A. Milk : Quart
B. Eggs : Dozen
C. Shaker : Salt
D. River : Ocean

6. Cacophonous: harmonious::
A. bellicose: pacific
B. beauty: peace
C. tempestuous: stormy
D. considerate: sympathetic

7. Humans: Society::
A. Kinsfolk : Family
B. Spectators: Game
C. Animals: Jungle
D. Rivals: Team

8. Author: Manuscript::
A. Architect : Blueprint
B. Engineer: Bridge
C. Optician: Spectacles
D. Doctor: Stethoscope

9. Sapling: Tree::
A. Puppy : Dog
B. Canine : Feline
C. Cat : Lion
D. Poodle: Terrier

10. Disagreement: Harmony::
A. Predictability : Routine
B. Predicament: Dilemma
C. Advantage: Agreement
D. Impartiality: Prejudice

11. Tally: Votes::
A. Census : Population
B. Taxation: Revenue
C. Government: Laws

D. Team: Athletes

12. Lull: Storm::
A. Marriage: Divorce
B. Battery: Missiles
C. Recess: Business
D. Bonfire: Kindling

13. Tyre: Rubber::
A. Oasis: Desert
B. House :Roof
C. Paper: Wood
D. Pebble: Boulder

14. Nightly: Daily::
A. Nocturnal: Diurnal
B. Black: White
C. Sunset: Sunrise
D. Opalescent: Iridescent

15. Key: Ignition::
A. Helmet: Motorcycle
B. Switch: Light
C. Boot: Saddle
D. Pad: Helicopter

16. Rebellious: Conformist::
A. Accepting : Taking
B. Courteous: Rude
C. Acquiescent: Rebel
D. Darkness: Lamp

17. Satin: Soft::
A. Polyester: Expensive
B. Iron: Hard
C. Soft: Cotton
D. Wood: Colored

18. Mumble: Indistinct::
A. Scribble: Illegible
B. Screech: Gentle
C. Swagger: Timid
D. Sneeze: Deliberate

19. Wooden: Rigid::
A. Fractious: Whole
B. Mild: Strident
C. Illegal: Inconsiderate
D. Obstinate: Stubborn

20. Bull: Buys::
A. Wolf: Defrauds
B. Lion: Brokers
C. Tiger: Speculates
D. Bear: Sells

21. Cacophony: Euphony::
A. Belligerent : Soothing
B. Loveliness: Peace
C. Tempestuous: Atlantic
D. Horrific: Sympathetic

22. Mitigate: Punishment::
A. Change : Order
B. Place :Placement
C. Monotonous: Change
D. Alleviate : Pain

23. Grape: Raisins::
A. Corn: Flake
B. Flesh: Bone
C. Cane : Sugar
D. Jaggery : Cane

24. Axle: steer::
A. tire : ride
B. awl : puncture
C. plane : soar
D. knife : slice

25. Physician: Surgeon::
A. Nurse : Doctor
B. Optometrist: Ophthalmologist
C. Urologist: Gynecologist
D. Optician: Obstetrician

26. Caterpillar: Leaves::
A. Moth : Wool
B. Silkworm : Silk
C. Oyster : Shell
D. Anthracite : Coal

27. Kangaroo: Joey::
A. lion : pride
B. goose : gosling
C. bevy : beauties
D. foal: horse

28. Fickle: Stable::
A. Laughter : Barn
B. Equine: Horse
C. Impulsive: Considered
D. Fundamentals: Elemental

29. Sailor: Lighthouse
A. Snake: Hiss
B. Air Raid: Siren
C. Car Horn: Driver
D. Sleeper: Smoke Alarm

30. Codicil: Will::
A. Book : Chapter
B. Outhouse : Premises
C. Annexure: Book
D. Limb : Extremity

BINARY LOGIC

Directions for Question from 1 to 5: Refer to the following information to answer the questions that follow.

1. A, B, C, D, E, F and G are 7 girls having different amount of money from among Rs 10, 20, 40, 60, 80, 120 and 200 with them. They had 3 chocolates, 2 toffees and 2 lollipops each having anyone of them.

a. B and F do not have chocolates and they have Rs 200 and Rs 80 respectively.
b. C has Rs 60 with her and G has an amount which is neither Rs 40 nor Rs 120.
c. A has Rs 10 and does not have a toffee.
d. The girl having Rs 40 with her is the only one other than A to have the same type of item.
e. E and the girl having Rs 20 with her have the same kind of item.

1. G has how much amount with her?
a) Rs 20 b) Rs 10 c) Rs 60 d) none of these
2. Which of the following combination is correct?
a) C chocolate Rs 60 b) G toffee Rs 20 c) D chocolate Rs 40 d) none of these
3. Which of the girls have chocolates with them?
a) F, C, G b) C, G, E c) C, G, D d) G, D, E
4. Which girl has Rs 40 with her?
a) E b) A c) D d) none of these

2. Four families decided to attend the marriage ceremony of one their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage. Given below is some information about the families, and who reached when to attend the marriage.

a. The family with two kids came just before the family with no kids.
b. Shanthi who does not have any kids reached just before Sridevi's family.
c. Sunil and his wife reached last with their only kid.
d. Anil is not the husband of Joya.
e. Anil and Raj are fathers.
f. Sridevi and Anita's daughters go to the same school.
g. Joy a came before Shanthi and met Anita when she reached the venue.
h. Raman stays the farthest from the venue.

i. Raj said his son could not come because of his exams.
1. Whose family is known to have more than one kid for certain?
a) Ramans b) Rajs c) Anils d) Sunils
2. Name the correct pair of Husband and Wife?
a) Raj and Shanthi b) Sunil and Sridevi c) Anil and Sridevi d) Raj and Anita
3. Of the following pairs, whose daughters go to the same school?
a) Anil and Raman b) Sunil and Raman c) Sunil and Anil d) Raj and Anil
4. Which woman arrived third?
a) Shanthi b) Sridevi c) Anita d) Joya

3. Seven real life celebrities Amitabh Bachhan, S R Tendulkar, Saina Nehwal, Ratan Tata, Arundhati Roy, AR Rehman and Vishwanath Anand visited a charity function conducted by UNESCO on days from Monday till Thursday (at least 1 but not more than 2 on a single day).
a. Each of them belongs to a different profession among Acting, Chess, Music, Literature, Badminton, Business and Cricket.
b. Ratan Tata visits on Wednesday with the businessman.
c. The musician does not visit on Thursday and neither with Roy nor with Anand.
d. Cricketer AR Rehman visits alone on Monday.
e. Tendulkar visits on Tuesday and he is not a musician.
f. Nehwal visits on Tuesday too and Anand is not into business.
g. The musician and actor visit together.
h. The author visits on Wednesday.
i. Amitabh is neither into chess nor is he a businessman.
1. On which day do Chess and Badminton players visit?
a) Thursday b) Monday
c) Wednesday d) Tuesday
2. What is Ratan Tata? Profession?
a) Literature b) Business
c) Badminton d) Chess
3. On which day does Arundhati Roy visits?
a) Thursday b) Wednesday
c) Tuesday d) Monday
4. What is the profession of Amitabh?
a) Acting b) Badminton
c) Literature d) Music

4. Bhavya, Charu, Deepak, Priyanka, Rahul, Suraj, Tarun and Vanya are 8 students from the same college. They went for an internship into particular fields namely A, B, C, D and E and 3 of them worked in dual fields with none of the three having the same set of fields.
a. Deepak interned in dual fields of A and E and earned the least.
b. Bhavya worked in C, earned more than Rahul, Charu and Tarun and had the third highest earning.
c. Vanya interned in B and earned less than only Priyanka, who worked in a dual field.
e. Charu earned more than Tarun but less than Rahul.
f. Tarun worked in A and earned more than Suraj, who interned in a dual field of B and E.
g. 2 students had D as their field of work.
h. All 8 had different earnings.
h. C and D were not a part of the dual field internships.
1. Who among them earned more than only Deepak?
a) Only Charu b) only Vanya
c) Only Rahul d) none of these
2. Who among them earned more than Rahul?
a) Tarun, Vanya b) Bhavya, Tarun
c) Vanya, Charu d) Bhavya, Vanya
3. Priyanka interned in which dual fields?
a) B, E b) A, B
c) A, E d) none of these
4. Which of the following fields was the most opted for? (it may be single or a part of dual)
a) B b) A c) E d) none of these

5. In a zoo 7 different types of animals, tiger, elephant, gorilla, ostrich, bear, rhino and peacock, are displayed during a week, each animal on each day. Each of the animals has a caretaker P, Q, R, S, T, U and V in any order.
a. Elephant is looked after by V and is displayed on Thursday.
b. Ostrich is not displayed on Sunday and is taken care of by Q.
c. Bear and Peacock are displayed on Saturday and Tuesday respectively.
d. Rhino is looked after by U whereas the animal displayed on Monday is looked after by R.
e. Gorilla is not looked after by T and is being displayed on Wednesday.
f. The animal which is taken care of by P is displayed neither on Tuesday nor on Wednesday.
1. Which animal is being looked after by S?
a) Gorilla b) Peacock c) Tiger d) Bear
2. Rhino is displayed in the zoo on which day?
a) Friday b) Saturday
c) Wednesday d) Sunday
3. Tiger is displayed on which day?
a) Tuesday b) Wednesday
c) Friday d) Monday
4. Who is the caretaker of peacock?
a) P b) T c) S d) none of these

SYNONYM

Directions for questions 1 to 30: Each question gives a word followed by four choices. From the choices, select the most suitable synonym (word which means the same) for the main word and mark its number as your answer.

1. Vaunt
A) Lack B) Sufferance
C) Resign D) Boast

2. Canard
A) A Bird B) Spare
C) Offence D) Hoax

3. Foreclose
A) Shut Out B) Nearby
C) Liberty D) Indicate

4. Disparage
A) Separate B) Compare
C) Refuse D) Belittle

5. Figment
A) Perfume B) Undeveloped Fruit
C) Statuette D) Invention

6. Glib
A) Dull B) Thin
C) Weak D) Fluent

7. Lethal
A) Conventional B) Deadly
C) Averse D) Demonstrative

8. Beset
A) Plead B) Assail
C) Pertain To D) Deny

9. Gratuitous
A) Correct B) Unkind
C) Absurd D) Given Freely

10. Fent
A) Religious B) Digress
C) Pretense D) Swoon

11. Admonish
A) Warn B) Escape
C) Worship D) Distribute

12. Elation

A) Happiness B) Naturalize
C) Poverty D) Parsimony

13. Fetid
A) Comical B) Ornament
C) Stinking D) Regular

14. Admonish
A) Give B) Warn
C) Accustom D) Forgive

15. Ludicrous
A) Profitable B) Excessive
C) Disordered D) Ridiculous

16. Sage
A) Wise Man B) Tale
C) Era D) Fool

17. Apportionment
A) Coexist B) Period
C) Appoint D) Dispensation

18. Controversial
A) Pulse B) Polemic
C) Record D) Integrity

19. Vituperation
A) Moisture B) Parallel
C) Malediction D) Recover

20. Expurgate
A) Enjoy B) Clear
C) Display D) Harbor

21. Idolatry
A) Admiration B) Sadness
C) Corruption D) Faithless

22. Qualm
A) Concavity B) Amplitude
C) Misgiving D) Repute

23. Sagacious
A) Appealing B) Placid
C) Wise D) Shaky

24. Perambulate
A) Withdraw B) Obstruct
C) Retail D) Walk

25. Repeal
A) Sharp B) Applaud
C) Acceptance D) Abrogation

26. Superficial
A) Shallow B) Unusually
C) Proud D) Aged

27. Equivocal
A) Questionable B) Resistance
C) Actual D) Fall Apart

28. Intrepid
A) Middle B) Tolerant
C) Fearless D) Rude

29. Jettison
A) Throw B) Travel
C) Collect D) Sympathize

30. Protagonist
A) Prophet B) Explorer
C) Talented Child D) Leading Character

ANTONYMS

Directions for questions 1 to 30: Each question gives a word followed by four choices. From the choices, select the most suitable antonyms (word which gives the opposite meaning) for the main word and mark its number as your answer.

1. Clamorous
A. Raucous B. Blaring
C. Dissonant D. Stately

2. Container
A. Amphora B. Carafe
C. Chaff D. Jar

3. Bandage
A. Gauze B. Plaster
C. lint D. bandy

4. Clannish
A. Cliquish B. Close-knit
C. Insular D. Clanger

5. Hook
A. Brooch B. Claque
C. Hasp D. Buckle

6. Highwayman
A. Bandit B. Marauder
C. Bandanna D. Brigand

7. Clown
A. Comedian B. Jester
C. Buffoon D. Creole

8. Itinerant
A. Peripatetic B. Nomadic
C. Wayfaring D. Sprightly

9. Jailer
A. Warder B. Jalousie
C. Galore D. Guard

10. Election
A. Poll B. Plebiscite
C. Bandwagon D. Referendum

11. Escort
A. Convoy B. Chattel
C. Entourage D. Retinue

12. Masterpiece
A. Classic B. Archetypal
C. Urbane D. Copybook

13. Nimble
A. Adroit B. Patrician
C. nippy D. dexterous

14. Hilly
A. Craggy B. Rocky
C. Mountainous D. Mounted

15. Temporal
A. Transient B. Ephemeral
C. Mortal D. Melancholy

16. Symbol
A. Design B. Pattern
C. Motif D. Scrap

17. Opening
A. Ingress B. Turnstile
C. Vestibule D. Wheedle

18. Negotiate
A. Mediate B. Milliner
C. Intercede D. Liaise

19. Oracular
A. Clairvoyant B. Soothsayer
C. Lineage D. Sibyl

20. Motto
A. Maxim B. Sculpt
C. Aphorism D. Precept

21. Introverted
A. Reserved B. Contemplative
C. Introspective D. Intrusive

22. Jargon
A. Argot B. Patois
C. Cant D. Screw

23. Quay
A. Jetty B. Lurch
C. Wharf D. Breakwater

24. Motionless
A. Morel B. Inanimate
C. Immobile D. Paralyzed

25. Morose
A. Churlish B. Sullen
C. Humble D. Taciturn

26. Mouthful
A. Gobbet B. Morsel
C. Bite D. Muzzle

27. Speckled
A. Blotchy B. Rocky
C. Flecked D.Mottled

28. Tawdry
A. Gimmick B. Gimcrack
C. Shoddy D. Worthless

29. Spray
A. Squirt B. Spurt
C. Gush D. Jewry

30. Entrails
A. Viscera B. Eocene
C. Guts D. Bowels

ODD MAN OUT

Directions for questions 1 to 30: In each of the following questions, four words are given. Three of them are related in some way. Identify the: odd man' and mark its number as your answer.

1. A. cymbal B. harp
C. bonito D .bongo

2. A. limousine B. sedan
C. concord D. hatchback

3. A. Abbey B. Chasm
C. abyss D. crater

4. A. plummet B. plunge
C. plume D. sink

5. A. play B. pantomime
C. opera D. banquet

6. A. Putt B. Birdie
C. Eagle D. Puck

7. A. masticate B. scrunch
C. pulverize D. sepulcher

8. A. Misanthropic B. Cynosure
C. Incredulous D. cynical

9. A. Pierce B. précis
C. bowdlerize D. censor

10. A. Lufthansa B. Cathay-Pacific
C. Eurail D. Biman

11. A. cradle B. crib
C.cot D.croft

12. A. cryptic B. Esoteric
C. recondite D. crust

13. A. Fiend B. Fecund
C. Ingenious D. Fertile

14. A. Downgrade B. abnegation
C. repudiation D. contradiction

15. A. Ford B. Boeing
C. Toyota D. General Motors

16. A. Banshee B. Churl
C. Heathen D. Vandal

17. A. phantom B. Diana
C. Rex D. Mandrake

18. A. Halloween B. Mistletoe
C. Bunting D. Santa Claus

19. A. cuirass B. cudgel
C. bludgeon D. cosh

20. A. Haversack B. reticulate
C. racquet D. hold all

21. A. burrow B. nest
C. rodent D. rat

22. A. Tuna B. Octopus
C. electric ray D. salmon

23. A. Breach B. canny
C. fissure D. cranny

24. A. Incandescent B. smoldering
C. ablaze D. bursting

25. A. parody B. satire
C. burdock D. burlesque

26. A. Cube B. cubicle
C. cuboids D. cubic

27. A. crown B. enamel
C. dentine D. dendrite

28. A. Astute B. Guileful
C. Machiavellian D. atavistic

29. A. Bolster B. Hassock
C. Duvet D. Pillow

30. A. Tornado B. twister
C. cyclone D. volcano

PARAGRAPH JUMBLE

Directions from 1-20: The first line [A] and last line [F] of each question are fixed. Arrange the four lines in a logical sequence.

1. A. After some debate, the first constitution in 1956 proclaimed Pakistan as an Islamic state.
B. The principal institutions of state, and the economy, remained largely in the control of the secular tendency until, through racist prejudice, arrogance and awesome military incompetence it was unable to protect the integrity of the nation.
C. No one cared (or dated) to examine what it might mean.
D. The crisis of 1969-1971, and the second partition of the subcontinent, which created a Muslim-majority Bangladesh out of a Muslim-majority Pakistan, forced Pakistan to introspect deeply about its identity.
E. It was an uneasy compromise.
F. Perhaps the last true secularist of this Islamic state was the Western-oriented-gentleman Zulfikar Ali Bhutto, who came to power in 1971, preached emancipation from poverty and did not mind a spot of whisky in the evening.
(a) BDEC (b) CEBD (c) ECBD
(d) ECDB (e) CDBE

2. A. But in the industrial era destroying the enemy's productive capacity means bombing the factories which are located in the cities.
B. So in the agrarian era, if you need to destroy the enemy's productive capacity, what you want to do is bum his fields, or if you're really vicious, salt them.
C. Now in the information era, destroying the enemy's productive capacity means destroying the information infrastructure.
D. How do you do battle with your enemy?
E. The idea is to destroy the enemy's productive capacity, and depending upon the economic

foundation, that productive capacity is different in each case
F. With regard to defense, the purpose of The military is to defend the nation and be prepared to do battle with its enemy.
(a) CBED (b) DEBC (c) EDBC
(d)CDEB (e) BCDE

3. A) The experience of God feels like flying.
B) It feels as if I'm walking above the ground with such equilibrium that nothing can sway me from my path.
C) Its like being the eye of the storm.
D) I see without judgment or opinion.
E) it's just as everything passes in and out of my awareness like clouds.
a) ABEDC b) ABCDE c) ACBDE
d) ABDCE e) ADCBE

4. A. Embryonic stem cells are controversial because the embryos are discarded once the cells are extracted from them. Critics object to creation of embryos for the purpose of harvesting their cells.
B. Researchers are sourcing these to-be-discarded embryos for stem cells, and not creating new ones for the purpose.
C. The other objection is that the technology could be used in human reproductive cloning.
D. However, given the growth of infertility treatments and with more people opting for assisted reproductive techniques, fertility clinics end up with more embryos than they require.
E. Fears of reproductive cloning- as opposed to therapeutic cloning-are unfounded, too , since the US, like most countries, expressly prohibits it.
F. The Indian Council of Medical Research has laid down guidelines on stem cell research, following a proposal to set up a national apex committee for this purpose.
a) DBCE b) BDCE c) CEDB
d)CEBD e)DBEC

5. A. First, take five minutes to meditate for peace.
B. Allow them to radiate from your stillness out into your body.
C. Bring into your mind anyone against whom you have a grievance and let it go. D. Close your eyes.
E. Put your attention on your heart and inwardly repeat the words: peace, harmony, laughter, love.
F. Then introduce the intention of peace in your thoughts. After a few moments of silence, repeat this prayer: let me be loved, happy and peaceful; let my friends, my perceived enemies, all beings in the world be happy, loved and peaceful too.
a)CBED b)CDEB c)EBDC
d)DEBC e)DBEC

6. A. This is not only fallout of switching to bio-fuels.
B. Obama new energy plan, which backs a greater use of ethanol, could worsen the situation.
C. In the US, government subsidies have ensured that nearly 30 million tons of maize has been diverted for the production of ethanol.
D. Many American farmers' are also switching to maize production from other carps.
E. Several studies have found evidence of a link between spieling food prices and increased acreage for crops used to produce bio-fuel.
F. This has led to an increase in global food prices, particularly of wheat.
a)CDEB b)EBDC c)DCEB
d)EBCD e)EDBC

7. A) A statement is a posteriori (Latin, literally from the latter) just if it cannot be known to be true or false independently of experience.
B) One can establish whether it is true or false only by having certain experiences.
C) The cat is on the mat is a posteriori because it cannot be known to be true or false independently of experience.
D) Such as the experiences involved in looking at the cat and the mat,
a) BDCA b) ACBD
c) ABCD d) DBCA

8. A. Work is not intrinsically valued in India.
B. Once in office, they receive friends and relatives who feel free to call any time without prior appointment.
C. Quite often people visit ailing friends and relatives or go out of their way to help them in their personal matters even during office hours.
D. Even those who are employed often come late to the office and leave early unless they are forced to be punctual.
E. Although there are large regional variations, it is not infrequent to find a large number of people sitting here and there and doing nothing.
F. While working, one is struck by the slow and clumsy actions and reactions, indifferent attitudes, procedure rather than outcome orientation, and the lack of consideration for others.
(a) EDBC (b) DCEB (c) ECDB
(d) BCDE (e) CEDB

9. A. The estimate on the number of civilians has been a matter of debate for over six months.
B. The government contested both these figures as vastly exaggerated and estimated the number to be 75,000.
C. Neutral observers are now veering round to the view that the government figure appears more reliable.
D. The United Nations and other international agencies projected a figure of 2.5 lakhs.
E. The LTTE has consistently maintained that the figure is above four lakhs.
F. It is improbable for more than a lakh people to be presented in LTTE- controlled territory, which is shrinking with every passing day.
a)EDCB b)EDBC c)BCED
d)DEBC e)BEDC

10. The first line [A] and last line[F] of each question are fixed. Arrange the four lines in a logical sequence.
A. The government is working on a project close to the model camp to create facilities to accommodate more people.
B. Informed sources suggest that shortage of funds is a serious hurdle.
C. The authorities are not sure how long it will take to complete the facility.
D. There is no clarity at the moment on how long the people will stay in the camps.
E. On the paper, the government is gearing up to accommodate 200,000 displaced people.
F. The government argument is that it will take time to rebuild infrastructure and remove landmines before the people can return to their original places.
a)BCDE b)BDCE c)CEBD
d)CEDB e)CBDE

11. A. The current situation does not warrant such large-scale diversion of land and resources to produce bio fuels.
B. Given the global recession, there is little likelihood of oil prices soaring soon. So there is no immediate need to rush to substitute oil.
C. From a peak of 147 a barrel last year, oil prices are now below 40.
D. The electric car is an innovation that could significantly cut down the world's dependence on oil.
E. Instead the world should be looking at developing long-term replacements for fossil fuels.
F. What we need is more research to make

electric cars that can run longer on a single charge and are also competitively priced.
a)BCDE b)EDCB c)CBED
d)CDEB e)BCDE

12. A. For six decades, power in Pakistan has teetered between military dictatorship and civilian rule.
B. Man like Baitullah Meshed, Mangal Bagh and Maulana Faziullah are a very different breed from the mullahs who have already been co-opted and corrupted by the system.
C. When the credibility of civilians was exhausted the people welcomed the army; when the generals over stayed the welcome, the citizen turned to political parties.
D. How long before the poor and the middle classes turn to the theocrats waiting to take over a province like Swat to Islamic rule.
E. Pakistan is forcing a dangerous moment, when the credibility of both military and politicians seems to have ebbed beyond recovery.
F. They have a supplementary query which resonates with the treat and the village after 9/11: why is Pakistan's army fighting America's war against fellow Muslims?
(a) DBCE (b) CEBD (c) DBEC
(d) CEDB (e) BCDE

13. A. Why does the institution of the arranged marriage survive in India in this day and age? The India I am talking about in this case includes the educated middle class, where the incidence of arranged marriages continues without any difficulty as a legitimate way of finding a mate.
B. Twenty years ago, looking at the future, one would have imagined that by now, the numbers of the arranged marriage types would have shrunk and the few remaining stragglers would be looked down upon as belonging to a somewhat primitive tribe.
C. The answer lies partly in the elastic nature of this institution, and indeed most traditional Indian customs that allows it to expand its definition to accommodate the needs of modernity.
D. So today's arranged marriage places individual will at the heart of the process; young men and women are rarely forced to marry someone against their wishes.
E. But this is far from being so.
F. The role of the parents has moved to that of being presiding deities, with one hand raised in blessing and the other hand immersed purposefully in the wallet.
a)BEDC b)BECD c)CDBE
d)CDEB e)CBDE

14. A. If it had been only a question of an individual's excesses Zia's death could have been a swivel moment for the restoration of the pre-Zia era, particularly since his successor was Benazir Bhutto.
B. There are now over 20,000 of them, with perhaps two million students, most (not all) of them controlled by extremists.
C. The children of Gen Zia are now threatening Islamabad. Sometimes a simple fact can illuminate the nature of the society.
D. Worse, prompted by thoughtless advice. Benazir engineered the rise of the Taliban and helped it conquer Kabul.
E. But in the quarter century since his sudden death by mid-air explosion, no one in Islamabad has had the courage to change the curriculum or the challenge the spread of the madras's.
F. During the 2005 earthquake, male students of the Frontier Medical College were stopped by religious fanatics their elders from saving girls from the rubble of their school building.
(a) EDCB (b) EBDC (c) BDEC
(d) DCEB (e) DBCE

15. A. As a role of the individual increases and as dimensions of individuality get fleshed out in ever newer ways, marriage must account for these changes.
B. In contexts where communities fragment and finding mates as a task devolves to individuals, romance becomes a natural agent of marriage.
C. For the greater emphasis on the individual has also meant that personal needs and personal growth come to occupy a privileged position in every individual's life.
D. The trouble is that while the device works very well in bringing people together, it is not intrinsically equipped to handle these individuals over time.
E. The idea of romance makes the coming together of individuals seem like a natural event. Mutual attraction melts individuals together into a union.
F. Falling in love becomes infinitely easier than staying in it as individuals are no longer defined primarily by the roles they play in marriage.
(a) EBCD (b) EBDC (c) DCEB
(d) ECBD (e) BCDE

16. A. But Obama, while acknowledging that Detroit's auto majors would see the move as an added burden on an ailing industry in the short term, made clear that the way forward was to embrace green technology.
B. Such political commitment to fight climate change seems lacking in India. Attempts to set fuel emission standards have been stymied by inter-agency squabbling on exactly how such norms should be set.
C. It was only with the recent intervention of the Prime Minister's office that a consensus was reached.
D. Fuel economy regulations will go some way in reducing India import bill since we import 78 percent of our oil.
E. In doing so, he has sent a clear signal that his administration is prepared to act on climate change even in the face of opposition from interest groups such as the car industry.
F. The government should follow Obama's example and act quickly to fight climate change and cut oil imports.
a)DEBC b)EBDC c)EBCD
d)DBCE e)ECDB

17. A. It is typical of modern life to believe that nature is set up to be random and chaotic.
B. To bring God back, we have to follow new, even strange responses wherever they lead us.
C. Life looks meaningless when you have worn out old responses, old realities, and an old version of God.
D. This is far from true.
E. As one spiritual teacher wisely put it, The material world is infinite, but it is a boring infinity. The really interesting infinity lies beyond?
a) ABCDE b) ADCBE c) ACBDE
d) ADECB e) ADBCE

18. A. Given that the Indian armed forces have an overwhelming dependence on Russian defense equipment, the news that Russia has grounded its entire fleet of MiG-29 aircraft due to structural defects and subsequently found a large percentage unsafe to fly is ominous.
B. And in a large context, this is the latest in a series of developments over the past few years that suggest it is time for India to diversify its sources of defense equipment.
C. Russia defense manufacturing base is facing shortfalls in capabilities and capacities, leading to contract deadline overruns and increased costs, as seen repeatedly in the case of the Gorchakov.
D. The immediate implications for India are worrying the IAF operates over 60 of the aircraft and is in the midst of procuring 45 more to fly off the much-de-layed Admiral Gorchakov and

indigenous Cochin-built carriers.
E. Poor quality and a lack of spare parts only worsen the situation, as do its moribund R&D facilities which compel it to rely on technology dating back to the 1970s and 1980s.
F. India ambitious plans to upgrade its military technology and the changing profile of its requirements mean that it can no longer afford to persist with a strategy that depends Russia as its primary supplier.
a)CEBD b)DBCE c)BDCE
d)CEDB e)DBEC

19. A. Giving a new twist to probe into Mumbai attacks, Pakistan is now alleging that there were Elements in India who helped carry out the strikes and wants its investigators to be provided access to them.
B. In what could further delay the prosecution of Mumbai attackers, the paper said Pakistan is also seeking DNA samples of the terrorists involved in the strikes and more information about contacts made by them through the internet.
C. In its report, Pakistan has sought results of DNA tests on Ajmal Kasab and the nine other attackers killed by Indian security forces so that these could be matched with their family members, if any, in Pakistan, the source said.
D. There is a strong realization in Pakistani security agencies that without the help of elements in India, the Mumbai crime could have not been committed, official sources were quoted as saying by the Dawn newspaper on Tuesday.
E. Pakistan's investigation report into the Mumbai attacks, which was reviewed on Monday at a meeting of the Defense Committee of the Cabinet chaired by Prime Minister Yousuf Raza Gilani, would be sent to New Delhi in a couple of days, the paper quoted these officials.
F. Pakistan wants information about weapons by the terrorists and details of mobile phone calls made by them and taped by Indian security agencies.
a)BCDE b)EDCB c)DBEC
d)DECB e)CBDE

20. A. The Defence Ministry proudly proclaimed that the two LTTE- improvised, Czech-manufactured Zlin143 aircraft were brought down by anti-aircraft fire within an hour of their detection.
B. The body of the second pilot was found near the wreckage of the aircraft at Katunayake.
C. The air raids surprised political and diplomatic circles in Colombo, considering that on the day of the air raids the LTTE was confined to an area of less than 100 sq km.
D. Incidentally, the air raids coincided with the visit of Sir John Holmes, U.N. Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, for a first-hand assessment of the crisis triggered by the war.
E. The first craft crashed into the rear of the building housing the Inland Revenue Department, opposite the Air Force headquarters, killing the pilot and two persons in the building, three storey's of which were damaged, and injuring 45, including two airmen.
F. In the course of his interaction with the media, Sir John hinted at efforts by neutral parties to reach a settlement between the LTTE and the government for safe passage for the trapped civilians.
a)EBCD b)CDEB
c)BECD d)EBDC

SYLLOGISMS

Direction from 1 to 30:
Each of the Questions below are Given a set of statements followed by Three Conclusions Numbered I, II, III. Read all the conclusions and decide which of the Given Conclusions Logically Follows the Given statements.

1. STATEMENTS:
(A) All stairs are lifts
(B) No lift is an escalator
(C) Some escalators are helicopters
(D) Some lifts are planes
CONCLUSIONS:
I. No stairs is an escalator
II. Some helicopters are not escalators.
III. Some stairs are planes
IV. Some helicopters are escalators.
(a)Only either I or II or IV follow
(b) Only I and IV follow
(c) Only II and IV follows
(d) Only I, III and IV follow
(e) none of these

2. STATEMENTS:
(A) All bulls are bells.
(B) Some bulls are cows.
(c) Some bells are chairs.
CONCLUSIONS:
I. Some cows are chairs.
II. Some bells are bulls.
III. All bells are cows.
IV. All bells are bulls.
(A) All follow
(B) None follows
(C) Only II follows
(D)Only II and III follow.
(E) None of these.

3. STATEMENTS:
(A) Some envelops are guns.
(B) Some guns are seals.
(C) Some seals are adhesives.
CONCLUSIONS:
I. Some envelopes are seals.
II. Some gums are adhesives.
III. Some adhesives are seals.
IV. Some adhesives are gums.
(a) Only III follow (b) Only I follow
(c)Only II follow (d)Only IV follow
(e)None of these

4. STATEMENTS:
(A) All boxes are cartons.
(B)No cartons are packages.
(C)Some packages are letters.
(D) No box is a parcel
CONCLUSIONS:
I. All boxes are packages.
II. Some boxes are not cartons
III. All packages are letters
IV. Some Packages are not letters
(a)Only I and either III or IV follow
(b) Only I, II and either III or IV follow
(c) Only I and II follows
(d) Only I follow
(e) none of these

5. STATEMENTS:
(A) All stairs are lifts
(B) No lift is an escalator
(C) Some escalators are helicopters
(D) Some lifts are planes
CONCLUSIONS:
I. No stairs is an escalator
II. Some helicopters are not escalators.
III. Some stairs are planes
IV. Some helicopters are escalators.
(a)Only either I or II or IV follow
(b) Only I and IV follow
(c) Only II and IV follows
(d) Only I,III and IV follow
(e)None of these

6. STATEMENTS:
(A)Some sacks are backs
(B) All backs are bones
(C) No bone is muscle
CONCLUSIONS:

I. some sacks are not muscles.
II. Some sacks are not bones
III. All sacks are bones
IV. No sack is muscle
(A)Only I follow
(B) None follows
(C) Only IV follows
(D)I and either II or III follows
(E) none of these.

7. STATEMENTS:
(A)All stereos are CDs
(B) some stereos are cassettes
(C) Some CDs are pens
CONCLUSIONS:
I. some pens are stereos.
II. Some CDs are cassettes
III. Some pens are cassettes
IV .All stereos are pens
(A) Either I or IV follows
(B) Only II and III follow
(C) Either I or IV and II follows
(D) Only II follows
(E) none of these.

8. STATEMENTS
(a) Some cars are horses.
(b) All horses are guns.
(c)All guns are cows.
CONCLUSION
I. Some cows are cars.
II. Some cows are horses.
III. Some cows are guns.
IV. Some cars are guns.
(a) None follows.
(b) Only I and II follow
(c) Only II and III follow
(d) Only III and IV follow
(e) all follow

9. STATEMENTS:
(A) Some questions are answers.
(B) Some answers are writers.
(C) All the writers are poets.
CONCLUSIONS:
I. Some writers are answers.
II. Some poets are questions.
III. All the questions are poets.
IV. Some poets are answers.
(a) Only I and II follow
(b) Only I and IV follow
(c) Only I and III follow
(d)Only II and IV follow
(e) none of these

10. STATEMENTS:
(A) Some pots are pans
(B) Some pans are cookers
(C) All cookers are rafts
CONCLUSIONS:
I. Some rafts are pans
II. Some cookers are pots
III. Some rafts are pans
IV. Some pots are cookers
(a) All follow
(b) None follow
(c) Only I and III follow
(d)Only II and IV follow
(e) none of these

11. STATEMENTS:
(A)All the locks are keys.
(B) All the keys are bats.
(C) Some watches are bats.
CONCLUSIONS:
I. Some bats are locks.
II. Some watches are keys.
III. All the keys are locks.
(a) Only I and II follow
(b) Only I follow
(c) Only II follow
(d)Only I and III follow
(e) none of these

12. STATEMENTS:
(A)Most chairs are tables.
(B)No chairs are trolleys.
(C) All trolleys are tables.
CONCLUSIONS:
I. Some tables are not trolleys.
II. All tables are not trolleys.
III. Some chairs are tables.
IV. Some chairs are not trolleys
(a)Only II, III and IV follow
(b)Either I or II , III and IV follow
(c) Only I,III and IV follows
(d) All follow
(e) none of these

13. STATEMENTS:
(A) Many perfumes are diamonds.
(B) All aspirins are powders.
(c) No perfume is powder.
CONCLUSIONS:
I. Some diamonds are powders.
II. Some diamonds are powders.
III. No aspirins are perfume.
IV. Some diamonds are not aspirins.
(A)Only I, III and IV follows
(B) Either I OR II and III and IV follows
(C) Only III and IV follow
(D)Only I and IV follow.
(E) None of these.

14. STATEMENTS:
(A) All the bottles are boxes.
(B) All the boxes are bags.
(C) Some bags are trays.
CONCLUSIONS:
I. Some bottles are trays.
II. Some trays are boxes.
III. All the bottles are bags.
IV. Some trays are bags.
(a) Only III and IV follow
(b) Only I and II follow
(c) Only II and III follow
(d)Only I and IV follow
(e) none of these

15. STATEMENTS:
(A) All cats are cows.
(B) All horses are cows.
(C) Some cows are bulls.
CONCLUSIONS:
I. Some cats are horses.
II. Some horses are bulls.
III. Some bulls are cats.
IV. All bulls are cows.
(a)All follows
(b)None follows
(c) Only II and IV follow
(d)Only II and III follow
(e) none of these

16. STATEMENTS:
(A) Most bulls are cows.
(B) No bull is horse.
(c) All horses are cows.
CONCLUSIONS:
I. Some cows are not horses.
II. All cows are not horses.
III. Some bulls are cows.
IV. Some bulls are not horses.
(A)Only II, III and IV follow
(B)Either I OR II and III and IV follow
(C) Only I, III and IV follows
(D)All follow
(E) none of these

17. STATEMENTS:
(A) All grapes are apples.
(B) All papayas are apples.
(c) Some apples are mangoes.
CONCLUSIONS:
I. No grape is mango.
II. Some papayas are not mangoes
III. Some grapes are papayas
IV. All mangoes are grapes.

(A)Only I follow
(B) Either I OR III follow
(C) Only II and III follows
(D)Only I, II and III follows
(E) none of these

18. STATEMENTS:
(A) All rackets are jackets
(B) No cow is cat
(C) Only cats are dogs.
CONCLUSIONS:
I. Some rackets are not cats.
II.Some cats are jackets
II.Some rackets are cats
IV.No dog is a cow
(a)Only either I or II and IV follow
(b) Only II and IV follow
(c) Only III and IV follows
(d) Only I and IV follow
(e) none of these

19. STATEMENTS:
(a)Some desks are apartments
(b) All apartments are cars
(c) Some cars are trucks
CONCLUSIONS:
I. Some desks are trucks.
II. Some desks are cars.
III. Some cars are departments.
IV.No truck is a desk.
(a) None follows.
(b) Only II and III follow
(c) Either only I or II, III and Iv follow
(d) Either only I or IV, and II and III follow
(e) all follow

20. STATEMENTS:
(A) All stairs are lifts
(B) No lift is an escalator
(C) Some escalators are helicopters
(D) Some lifts are planes
CONCLUSIONS:
I. No stairs is an escalator
II. Some helicopters are not escalators.
III. Some stairs are planes
IV. Some helicopters are escalators.
(a)Only either I or II or IV follow
(b) Only I and IV follow
(c) Only II and IV follows
(d) Only I, III and IV follow
(e) none of these

21. STATEMENTS:
(A) Some cakes are bikes
(B) Some bikes are hills
(C) All laptops are bikes
CONCLUSIONS:
I. All laptops are hills
II. Some laptops are cakes
III. Some cakes are hills
IV. Some laptops are not cakes
(a) Only I follow
(b) Only either II or IV follows
(c) Only I or III follow
(d)Only I and IV follow
(e) none of these

22. STATEMENTS:
(A) No proud is animal
(B) Some sheep's are animals.
(c) All cats are sheep's.
CONCLUSIONS:
I. No cat is proud.
II. Some cats are animals.
III. No animals are cat.
IV. Some proud are sheep's.
(A)Only III follows
(B) Only Either II OR III follows
(C) Only I follows
(D) Only I and either II or III follows
(E)None of these

23. STATEMENTS:
(A) All mirrors are phones. .
(B) Some phones are gadgets. .
(c) All gadgets are mirrors.
CONCLUSIONS:
I. Some gadgets are phones. .
II. Some gadgets are mirrors. .
III. Some gadgets are not mirrors. .
IV. Some mirrors are phones.
(A)None follows.
(B) Only I and II follows
(C) Only II and III follows
(D)Either II or IV follows
(E) none of these

24. STATEMENTS:
(A) Some cats are elephants. .
(B) No elephant is river. .
(c) All rivers are roads.
CONCLUSIONS:
I. No cat is river. .
II. Some roads are rivers. .
III. Some elephants are cat. .
IV. Some cats are rivers. .
(A)Only I and II follows.
(B) Only II, III and IV follow.
(C) Only either I OR IV or III follows.
(D)Only I, II and III follows.
(E) None of these.

25. STATEMENTS
(A)Some apples are flowers
(B) No flower is papaya
(C) All papayas are baskets
CONCLUSION
I. Some apples are baskets.
II. Some baskets are papayas.
III. Some baskets are apples.
IV. Some flowers are apples
(a) All follows
(b) None follows
(c) Only II and IV follow
(d) Only II and III follow
(e) none of these

26. STATEMENTS:
(A) All the books are papers.
(B) Some papers are journals.
(C) Some journals are calendars
CONCLUSIONS:
I. Some journals are books.
II. Some calendars are papers.
III. Some books are journals.
IV. Some books are calendars.
(a) Only I follow
(b) Only II follow
(c) Only III follow
(d) Only IV follow
(e) none of these

27. STATEMENTS:
(A) Some cars are jeeps.
(B) All the boxes are jeeps.
(C) All the pens are cars.
CONCLUSIONS:
I. Some cars are boxes.
II. No pen is jeep.
III. Some boxes are cars.
(a) None of the III
(b) Only I and II follow
(c) Only I and III follow
(d) Only II and III follow
(e) none of these

28. STATEMENTS:
(A) All the papers are books.
(B) All the bags are books.
(C) Some purses are bags.
CONCLUSIONS:
I. Some papers are bags.
II. Some books are papers.
III. Some books are purses.
(a) Only I follow

(b) Only II and III follow
(c) Only I and II follow
(d)Only I and III follow
(e) none of these

29. STATEMENTS:
(A) Some rats are cats.
(B) Some cats are dogs.
(C) No dog is cow.
CONCLUSIONS:
I. No cow is cat.
II. No dog is rat.
III. Some cats are rats.
(a) Only I follow
(b) Only I and II follow
(c) Only I and III follow
(d) Only II and III follow
(e) Only III follows

30. STATEMENTS:
(A) Some keys are staplers.
(B) Some staplers are stickers.
(C) All the stickers are pens.
CONCLUSIONS:
I. Some pens are staplers.
II. Some stickers are keys.
III. No sticker is key.
IV. Some staplers are keys.
(a) Only I and II follow
(b) Only II and IV follow
(c) Only II and III follow
(d) Only I and IV and either II or III follow
(e) none of these

LOGICAL DEDUCTION

Direction from 1 to 8 : Each of the following questions has a set of four statements. Each statement has three segments. Choose the alternative where the three segments in the statement can be logically deducted using both the preceding two, but not just from one of them

1. A. All mammals are viviparous. Some fish are viviparous. Some fish are mammals
B. All birds are oviparous. Some fish are not oviparous. Some fish are birds
C. No mammal is oviparous. Some creatures are oviparous and some are not. Some creatures are not mammals
D. Some creatures are mammals. Some creatures are viviparous. Some mammals are viviparous
a) A only b) B only
c) C only d) D only

2. A. All earthquakes cause havoc. Some landslides cause havoc. Some earthquakes cause landslides
B. All glass things are transparent. Some curios are glass things. Some curios are transparent
C. All clay objects are brittle. All XY are clay objects. Some XY are brittle
D. No criminal is a patriot. Ram is a criminal.ram is a patriot
a) D only b) B only
c) C and B d) A only

3. A. All II ms are in India. No BIMSs are in India. No IIMs are BIMs
B. All IIMs are in India. No BIMs are in India. No BIMs are IIMs
C. Some IIMs are not in India. Some BIMs are not in India. Some IIMs are BIMs
D. Some IIMs are not in India. Some BIMs are not in India. Some BIMs are IIMs
a) A and B b) C and D
c) A only

4. A. All good people are Knights. All warriors are good people. All knights are warriors.
B. No footballers are ministers. All footballers are tough. Some ministers are player.
C. All pizzas are snacks. Some meals are pizzas. Some meals are snacks.
D. Some barkers are musk-deer. All barkers are sloth bears. Some sloth bears are musk-deer.
a) C and D b) B and C
c) A only d) C only

5. A. MD is an actor. Some actors are pretty.MD is pretty.
B. Some men are cops. Some men are brave. Some brave people are cops.
C. All cops are brave. Some men are cops. Some men are brave.
D. All actors are prettyu.MD is not an actor, MD is not pretty.
a) D only b) C only
c) A only d) B and C

6. A. Many singers are not writers. All poet are singers. Some poets are not writer
B. Giants climb beanstalks. Some chicken do not climb beanstalks. Some chicken are not giants.
C. All explorers live in snowdrifts. Some penguins live in snow drifts. Some penguins are explorers.
D. Amar is taller than Akbar. Anthony is shorter than Amar. Akbar is shorter than Anthony.
a) A only b) B only
c) B and C d) D only

7. A) The orangutan frowns upon the world
B) The orangutan is not angry
C) The orangutan does not frown upon the world
D) The orangutan is angry
a) CB Only b) BA Only
c) CD and BA d) DB and CA

8. A. No cowboys laugh. Some who laugh are sphinxes. Some sphinxes are not cowboys
B. All ghosts are fluorescent. Some ghosts do not sing. Some singers are not fluorescent
C. Cricketers indulge in swearing. Those who swear are hanged. Some who are hanged are not cricketer
a) A and B b) C only
c) A and D d) D only

Directions from 9 to 18:
Each question has a main statement followed by four statements labeled, A, B, C, D. Choose the ordered pair of statements where the first statement implies the second, and the two statements are logically consistent with the main statement

9. I will marry Vandana only if she wears my ring.
A) I married vandana.
B) Vandana wore my ring.
C) I could not marry Vandana.
D) Vandana didn't wear my ring.
a) BA b) BC c) DC d) CD

10. Either Ravana is a demon, or he is a hero
A) Ravana is a hero
B) Ravana is a demon
C) Ravana is not a demon
D) Ravana is not a hero
a) CD only b) BA only
c) CD and BA d) DB and CA

11. Whenever Rajeev uses the internet, he dreams about spiders
A) Rajeev did not dream about spider
B) Rajeev used the internet
C) Rajeev dreamt about spider
D) Rajeev did not use the internet
a) AD b) DC c) CB d) DA

12. If I talk to my professors, then I do not need to take a pill for headache
A) I talked to my professor
B) I did not need to take a pill for headache
C) I need to take pills for headache
D) I did not talk to my professors
a) AB only b) DC only
c) CD only d) AB and CD

13. You can drive over 100 kmph only on the freeway.
A) You are on the freeway.
B) You cannot drive over 100 kmph.
C) You can drive over 100 kmph.
D) You are not on the freeway.
a) DB b) AC c) BD d) AB

14. Martina wins the tournament provided she plays the final.
A) Martina played the final.
B) Martina won the tournament.
C) Martina did not win the tournament.
D) Martina did not play the final.
a) AB b) BA c) CD d) AC

15. Whenever Vijay reads late into the night, his grandfather reprimands him.
A) His grandfather does not reprimand Vijay.
B) Vijay reads late in the night.
C) Vijay reads early in the morning.
D) Vijay's grandfather reprimands him in the morning.
a) CD b) BD c) AB d) None of these.

16. All irresponsible bosses shout if their workers do not fall in line.
A) All irresponsible bosses do not shout.
B) Workers fall in line.
C) Workers do not fall in line.
D) All irresponsible bosses shout.
a) AB b) BA c) CA d) All the above.

17. When I see a horror movie I have a bad dream.
A) I saw a horror movie.
B) I didn't see a horror movie.
C) I didn't have a bad dream.
D) I had a bad dream.
a) CB b) AD c) BC d) AC

18. Each question has a main statement followed by four statements labeled A, B, C and D. Choose the ordered pair of statements where the first statement implies the second and the two statements is logically consistent with the main statement.
You can find Chinese toys only in China.
A) I didn't find Chinese toys.
B) I found Chinese toys.
C) I went to the fair.
D) I didn't go to China.
a) CD b) CB c) CA d) AD

SENTENCE COMPLETION

Directions for questions 1 to 30: Select the correct phrase from among the choices that completes the given sentence. Please note that more than one choice may fit in to make a syntactically correct sentence, but select the choice that is logical in the context of the sentence

1. In all_____ Harsh will get the job
A. likelihood B. odds C. options
D. candidates E. evens

2. There are several _____categories of nouns in the English language.
A. various B. disparate C. discrete
D. divergent E. types

3. Jess caused her parents a lot of _____when she was a teenager
A. problem B.yearning C.anxiety
D.vex E.compulsion

4. The leading newspaper has revealed that the PM had _____in the secret decision to sell arms to the dictator
A. countenance B. acquiesced
C. forewarned D. accede E. espionage

5. The Shah Of Iraq Was _____ From His Country.
A. war B. about
C. barter D. banished

6. The king has _____to a proposal to enhance the powers of the council of ministers
A. coincided B. allied C. assented
D. opined E. identified

7. Mr. Sharma's shop was _____from all the others in the street.
A. indistinguishable B. inalienable C. akin
D. disreputable E. impregnable

8. The only _____with the proposal is that it is a little expensive
A. glitch B. blunder C. hardship
D. dilemma E. snag

9. The cabinet has _____a proposal to change the way private educational institutions are funded and managed
A. acceded B. actualize C. endorsed
D. approve E. franchised

10. The committee was in favor of the proposal but the president _____it.
A. vetoed B. countenance C. sanctioned
D. condoned E. assented

11. The tsunami _____ left a great impact on anyone who even remotely heard about it
A. incident B. anguish C. rejoice
D. languor E. mark

12. The boy was injured when he met with an____
A. unwarranted B. restrains C. accident
D. viable E. bail

13. It was very _____in the church
A. silence B. quiet C. calm
D. reject E. thunder

14. The president has _____to the demands to release secret documents related to the army
A. acceded B. refused C. endorsed
D. vetoed E. incited

15. The usage of a word like thou is _____in common conversation
A. obsolete B. acquit C. accuse
D. enervate E. discharge

16. Some courses are optional but maths and English are _____
A. compulsion B. compulsory C. essential
D. referential E. important

17. Wearing a safety helmet is _____in this area.
A. obligatory B. option C. compulsion
D. resolved E. contented

18. Ram The Prince Of Ajodhya_____ His Siblings.
A. Adorned B. Adored C. Vitiated
D. Endangered E. Abhorred

19. Rahul _____the offer given to him
A. aberrant B. harsh C. common
D. accepted E. ratified

20. The coffee is _____good
A. quiet B. inscribe C. quite
D. invalidate E. fine

21. The teacher _____to arrange for extra classes for weak students
A. extract B. distract C. delayed
D. defund E. agreed

22. The disciplinary committee has _____the use of detention after classes as a punishment for bad behavior
A. extended B. authorized C. clamped
D. embargo E. intended

23. The generals from the opposing armies declared a/an_____
A. armistice B. treaty C. truce
D. accord E. summit

24. Tony offered his most he artful _____for having offended everyone
A. sorry B. pardon C. excuse
D. apology E. application

25. The two sides in the civil war signed a peace_____
A. truce B. accord C. alibi
D. pretext E. review

26. Jaya knew that to apologies would be _____to admitting she had failed
A. equate B. assumed C. an amount
D. abrogate E. about

27. The judge _____the use of capital Punishment for serious crimes
A. franchised B. endorse C. agreed
D. condoned E. endured

28. Before The _____ Of The Europeans In India, India Was A Free Country.
A. Entry B. Amalgamation C. Emigration
D. Advent E. Immigration

29. At first there were some _____with the software but it's okay now
A. pitfalls B. impediments C. ordeal
D. snags E. condoned

30. To use a sporting _____middle age is like half-time at a hockey match
A. device B. analogy C. antonym
D. synonym E. acronym

SENTENCE CORRECTION

Direction from 1 to 30: Each question consists of four statements. Identify the one or more incorrect sentence from the following questions.

1. (A) The whole point of a risotto is that the creaminess comes from the rice's own starch
(B) you should never wash the rice you use for risotto (to preserve the starch) but should add it straight to the pan.
(C) Then you need to add stock, one ladleful at a time, and stir, stir, stir
(D) It is the stirring that persuades the grains of rice to surrender to their starch
a. A and D b. B and C c. C and D
d. D only e. Only A and C

2. (A) In the long history of the world, only a few generations have been granted the role of defending freedom in his hour of maximum danger
(B) I do not believe that any of us would exchange places with any other people or any other generation
(C) The energy, the faith, the devotion which we bring to this endeavor will light our country and all who serve it
(D) The glow from that fire can truly light the world
1) a 2) b c) 3 d) 4

3. (A) Soaring oil prices have raised the stakes in Chinas game of brinkmanship over the hotly disputed spritely island, with the Philippines this week becoming the first rival claimant to break ranks.
(B) In a separate development, Beijing reacted with unusual restraint to Vietnams announced plans to begin regular services to another sparkly atoll within months, indicating that the feuding neighbors may have reached an accommodation on the issue.
(C) Philippine President Gloria Macapagal-Arroyo and her Chinese counterpart Hu Jinan agreed at talks in Begging jointly to study potential oil deposits in the South China Sea a tools as part of a three years research project involving two state energy firms.
(D) A communiqué by the Philippine government went to great pains to emphasize that the pact did not imply that the two countries, whose naval forces have clashed over the contested reefs, would proceed past the drilling stage.
(a) A and B (b) B and D (c) A, C, and D
(d) D only (e) All of the above

4. (A) the reason I like risotto has nothing to do with taste.
(B) Most rice dishes, pula for instance-require you to cover the rice with water and then go away and do something else while it cooks
(C)It requires very constant attention
(D) Take your eye away from the pan and you will soon have an ex-risotto or a risotto that has failed its exam
(a) A only (b) C only (c) B and C
(d) D only (e) B only

5. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A) As the growing economy makes increasing demands on infrastructure inputs,
these problems could worsen in the coming year.
B) Therefore, addressing infrastructure gaps need to do our topmost priority
next year.
C) The second risk lies in the global macroeconomic imbalances, reflected in
the twin deficits of the US and rising surplus of Asia.
D) The longer these imbalances have persisted, the greater has become the risk
of a disruptive correction.
(a) B only (b) A only (c) D only
(d) C only (e) None of these

6. In archeological terms the university was a latecomer to the town, which was already centuries old by the time we first hear of the establishment of a community of scholars and teachers in the late 12th Century.
A. which was already centuries old by the time we first hear of the establishment of
B. already centuries old by the time we first hear of its establishment of
C. which was centuries old already when we first hear of the establishment of
D. that was already centuries old by the time we first are hearing of the establishing of
E. that was already centuries old by the time we first hear that they had established
(a) A (b) B (c) C
(d)D (e) E

7. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A) in an economy heady with its success in Information Technology, it is easy. To forget that industrially advanced regions like California or countries like France are also leading agriculture producers.
B) But politicians have not been particularly helpful in the process.
C) The situation there is almost alarming.
D) The spread of these activities to the south is a clear matter of worry.
a) B only b) A only c) D only
d) No error e) C only

8. (A) The phone rang horribly late at night fall but, for reasons I cannot fathom
(B) Normally the hour and tone of the conversation would undoubtedly have put me off
(C) I am a regular reader of your columnar and I notice that you are always criticizing everything
(D) The bold and blunt query took me aback
(a) A only (b) B only (c) C only
(d) D only (e) all of the above

9. (A) We observe today not a victory of party but a celebration of freedom
(B) Symbolizing an end as well as a beginning
(C) I have sworn before you and Almighty God the same solemn oath our forbears will prescribed nearly a century and three-quarters ago
(D) The word was very different now
(a) A, C and D (b) A and B (c)A, B and C
(d) All the above (e) B and C

10. In the given question, one or more sentences is/are incorrect. Identify the incorrect sentence.
(A) I am probably the world's worst cook.
(B) I am fine when it comes to appreciating this cuisines of great chefs but, left to myself, I could not even fry an egg.
(C) It is not that I don't know how to do all these.
(D) I can tell you how a kakori kebab is made, how the flavor of a coq au vin is directly related to the wine you should use.
(a) A only (b) B only (c) B and D
(d) No error (e) C only

11. Inertia-gravity waves cause characteristic stripy patterns in the clouds in the lower atmosphere but they are disregarded by conventional weather forecasts because they are thought to be too small to interact with larger systems such as warm and cold fronts.
A. they are disregarded by conventional weather forecasts because they are thought to be too small
B. they are disregarded by conventional weather forecasts because these waves are thought to be too small
C. conventional weather forecasts disregard them because they think they are too small
D. conventional weather forecasts disregard these waves because they are thought to be too small E. conventional weather forecasts think them too small
(a) A (b)B (c)C (d)D (e)E

12. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A. When they want to, Indians have an amazing way of telling the truth
B. At the most surprising of moments they exactly blurt it out.
C. It's said without artifice and without care for political correctness.
D. Unvarnished it no doubt is but it's also refreshingly unalloyed.
(a) A only (b) B only (c) C only
(d) D only (e) A and D

13. In the given question, one or more sentences is/are incorrect. Identify the incorrect sentence.
(A) At an incentive level, however, we do recognize that there are many illegal migrants in India.
(B) The border between India and Bangladesh is porous and there is little that anyone can do to check migration.
(C) Moreover, many people in the border villages do not recognize that an international boundary exists.
(D) It is not uncommon for a man to cycle from a Bangladeshi village to a town in India to buy something and for him to then cycle back home on the same day.
(a) A only (b) B only (c) D
(d) C and D (e) C only

14. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A. where there are wills there's always a way.
B. This is an old saying, but so true.
C. All these years we have been hearing from BCCI officials that if players don't play domestic cricket, they will not be considered for selection to the national team.
D. That was only talk and nothing else, for most of the top players stayed away from Ranji, Duleep or challenger Trophy games.
(a) A only (b) A and C (c) B and A
(d) D (e) B and C

15. (A) Finally, television stars had came into their own
(B) They are big enough to be 'celebrity contestant' on KBC
(C) Of course, there are also endorsements, charity causes and ribbon-cuttings that were hitherto reserved for the big screen idols
(D) These goals of boll wood clutter as the preferred professionals for festivals in Navarre and Dewily meals
(a) A (b)B (c)C (d)D (e)E

16. A) A reflective calm seemed to have released the earlier impatience
(B) Why don't you write about what you like about India?
(C) Give me three good reasons on a Sunday morning to feel happy and satisfied
(D) Instead, you often leave me feeling the opposite other way
(a)A and C (b) B and D (c) A and D
(d) C and D (e) Only B

17. (A) Do you know how many illegal Bangladeshi immigrants there are in India?
(B) i ask because this truth is that nobody knows how many illegal Bangladeshi migrants have made India their home
(C) Every figure you read will be an approximation
(D) The 30 million figure, for instance, is usually quoted by people who want to claim that the problem of migration has now veered dangerously out of control
(a) A and B (b) A and C (c) B, C and D
(d) A, B and D (e) All of the above

18. In the given question, one or more sentences is/are incorrect. Identify the incorrect sentence.
A. In my view, the police should have better thing to do
B. I don't to think it is possible for anybody to support the manner in which alleged Bangladeshis are being deported
C. I have been reading a pamphlet produced by the Citizen's for Preserving Democracy
D. Member's of this group studied the way in which the police rounded up Bangladeshis
(a) A only (b) B only (c) C only
(d) D only (e) B and C

19. A) A reflective calm seemed to have released the earlier impatience
(B) Why don't you write about what you like about India?
(C) Give me three good reasons on a Sunday morning to feel happy and satisfied

(D) Instead, you often leave me feeling the opposite other way
(a) A and C (b) B and D (c) A and D
(d) C and D (e) Only B

20. (A) In fact, no other country seems to have this incredible quality
(B) The Brits are too phlegmatic, the French too Loquacious, the Germans far too upright and the Italians simply muddleheaded
(C) The Americans wouldn't know enough and the Chinese races would be horrified at anything approximates to the blunt truth
(D) That's not their way of doing things
(a) A only (b) B only (c) C only
(d) D only (e) None of these

21. (A) They don't ever care if they end up making a spectacle of themselves
(B) They do it because they feel they have to do
(C) The passion that moves them cannot be diffused by etiquette or politesse or even lack of opportunity
(D) So, this morning, I want to compliment my late night interlocutor for helping me appreciate a quality I had not properly think before
(a) A and B (b) C and D (c) A, B and D
(d) None of these (e) A and C

22. (A) Those not under the confluence with the mask is much more concerned with the things at hand.
(B) They see no reason of building castles in the air and certainly no reason to go live in them
(C) They will not dare to dream and will like things to be as they appear or seem to appear
(D) They do not question and certainly do not venture to know more than what is let known to them by their predecessors
(a) A and B (b) A, C and D (c) A, B and C
(d) None of these (e) A only

23. (A) A new year is a good will time for a reality check on your love life
(B) If we have attached any much importance to specific days, using those days to take specific decisions is a strategic approach
(C) Let go of memorabilia from old, failed relationships
(D) Bring all problems to the table in a spirit of give and take and thrash things out
(a) A and B (b) B and C (c) C and A
(d) D and B (e) A and D

24. (A) I just read in a news magazine that TV comprises 67 percent of the Indian entertainment industry
(B) Films and other things comprise the other 23 present
(C) Finally, television is at par with the film industry
(D) A TV actor is a bonfire star now and TV is not a poor cousin of Bellwood anymore
(a) A and C (b) B only (c) A, B and C
(d) A and D (e)C only

25. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A. As the growing economy makes increasing demands on infrastructure inputs,
these problems could worsen in the coming year.
B. Therefore, addressing infrastructure gaps needs to do our topmost priority next year.
C. The second risk lies in the global macroeconomic imbalances, reflect in the twin deficits of the US and rising surpluses of Asia.
D. The longer these imbalances have persisted, the greater has become the risk of a disruptive correction.
(a) B only (b) A only (c) D only
(d) C only (e) none of these

26. In the given question, one or more sentences is/are incorrect. Identify the incorrect sentence.
(A) First of all, there are supposed to be too many of them.
(B) Secondary, there is a danger that some of them will have terrorist links.
(C) There is simply not enough jobs to go around.
(D) If you think about it, no of this makes much sense.
(a) A, C and D (b) B, C and D (c) C and D
(d) A and D (e) All the above

27. In given questions, one or more of the sentences is/are incorrect. Identify the incorrect sentence
A) A day after a controversy broke out over medicines manufactured by the guru
the Health ministry said they would put the medicines to the rest.
B) The government will not scrap the Delhi-Mumbai airport modernization plan.
C) In the district town, the children told the committee would served by the schools.
D) The committee would keep watch on the quality of grain.
(a) B only (b) A only (c) D only
(d) C only (e) C and D

28. In the given question, one or more sentences is/are incorrect. Identify the incorrect sentence.
A. In effect, this means that the authorities can decide that anybody is an legal
immigrant and can throw him out of the money
B. There is nothing a victim can do by way of protest
C. There is no appeal at all
D. Anybody who does not keep them happy will be deported unless he then
pays off the local police
(a) A only (b) B only (c) C only
(d) D only (e)None of these

29. The recent photographs of the giant squid are remarkable because they show these enormous living creatures as moving around in their natural environment, whereas previous pictures have been of only dead animals.
A. because they show these living creatures as moving around in their
B. in that they show this most enormous of living creatures moving around in its
C. in that they show this enormous living creature moving around in its
D. because these enormous living creatures are shown to be moving around in their
E. because they show this enormous living creature moving around in a
(a) A (b) B (c) C (d)D (e) E

30. (A) Let the world go forth from this time and place would be to friend and foe alike
(B) The torch has been passed to a new generation of Americans
(C) Born in this century, tempered by war disciplined by a hard and bitter peace, proud of which our ancient heritage
(D) Unwilling to witness or permit the slow undoing of those human rights to which this nation has always been committed
a. A and C b. A, B and C c. A, C and D
d. A only e. No error

FACT - INFERENCE - JUDGEMENT

Each question has a set of four sequentially ordered statements. Each statement can be classified as one of the following:
Facts, which deal with pieces of information that one has heard, seen or read, and which are open to discovery or verification the answer option indicates such a statement with an F.

Inferences, which are conclusions drawn about the unknown, on the basis of the known (the answer option indicates such a statement with an I.

Judgements, which are opinions that imply approval or disapproval of persons, objects, situations and occurrences in the past, the present or the future(the answer option indicates such a statement with a J

Directions from 1 to 20: Select the answer option that best describes the set of four statements

1. A. Where justice is denied, where poverty is enforced, where ignorance prevails, and where any one class is made to feel that society is an organized conspiracy to oppress, rob and degrade them, neither persons nor property will be safe.
B. These words of Frederick Douglass, a leading light of the Abolitionist movement, who fought to end slavery long before the American Civil War, are very relevant in today's global context.
C. First, there are strong similarities between the world today and that of Douglass time, when blacks were slaves in the US, and again, the era of apartheid in South Africa.
D. Secondly, Douglass statement about neither person nor property will be safe in the context of the current confusions and controversary around the international negotiations on climate change, could very well relate to the earth the common property that human and other sentient beings own and share.
(a) IJIJ (b) JJJJ (c) JIJI (d) IJJI (e) JJII

2. A. According to all statistical indications, the Sarva Shiksha Abhiyan has managed o keep pace with its ambitious goals
B. The Mid-day Meal Scheme has been a significant incentive for the poor to send their little ones to school, thus establishing the vital link between healthy bodies and healthy minds
C. Only about 13 million children in the age group of 16 to 14 years are out of school
D. The goal of universalisation of elementary education has to be a pre-requisite for the evolution and development of our country
a) IIFJ b) JIIJ c) IJFJ d) IJFI e) JIFT

3. A. After being off the radar of public attention for long, the mining industry in India is now in focus.
B. For example the controversies surrounding the Posco and Vedanta projects in Orissa, involving the acquisition of large tracts of land for mining purposes, have drawn attention to the damage that could result to livelihood and the ecology from mining.
C. More recently, in distant Karnataka allegations of collusions between mining interests and politicians in power, leading to large and not always legitimate profits garnered at the expense of the local people and the state exchequer, have led to the resignation of the state's ombudsman.
D. The mining sector is increasingly seen as one which the worst features of capitalism as a profit machine combine with illegality and corruption to provide a site for primitive accumulation based on blunder and unequal exchange.
(a) IFFJ (b) JIFJ (c) IJFF (d) FIFJ (e) FFIJ

4. A. A global ad Spend of over $7 bn in 2009 makes Unilever the second largest advertiser in the world, after P & G.
B. One of the immediate mandates for Weed is to bring a larger marketing focus at Unilever.
C. And so far, Weed is pleased with the progress.
D. We have good momentum now, says Weed.
(a) IJIF (b) FJIF (c) JFIJ (d) JFJF (e) IFIF

5. A. From what one has been able to gather, the Golden Quadrilateral, the very first of the projects to have been undertaken by the NDA government, is still to be completed.
B. There is a stretch of some 10 miles or so in Bihar where land acquisition has still not been done or where there is some impediment to the work.
C. Explanations are given, for example, that 97.6 percent of the work has been completed.
D. The disturbing fact is that the project is not completed.
(a) IJJF (b) JFFI (c) JFFJ (d) FFFJ (e) IFFJ

6. A. Inequitable distribution of all kinds of resources is certainly one of the strongest and most sinister sources of conflict
B. Even without war, we know that conflicts continues to trouble us they only change in character
C. Extensive disarmament is the only insurance for our future; imagine the amount of resources that can be related and redeployed
D. The economies of the industrialized western world derive 20% of their income from the sale of all kinds of arms
a) IJJI b) JII c) IIJF d) JIIF d) IJIF

7. A. As one keeps getting stronger, ones problems also keep growing.
B. Mr. Monks said that there were more fundamental forces at work- such as the rise of modern financial capitalism and the single market.
C. The only remedy for improvement in relations between India and Pakistan is to open up the investigation to look beyond Pakistan; recognize the attacks as a conspiracy hatched by an international terrorist network of non-state actors; stop pointing fingers at Pakistan and its primary intelligence agency, the ISI, and restore diplomatic relations.
D. The white house announced on Tuesday February 17 th that 17000 more soldiers would join the existing 65000 western troops.
(a)JFJF (b) FFJJ (c) IIFF (d) FFJI (e) JJII

8. A. There are certain cognitive and emotional disorders that are caused by inherited defects.
B. A class of such disorders is known as fragile X syndrome (FXS), which includes a range of physical and cognitive disabilities as well as emotional and behavioral features many of which have an overlap with autism or have autism-like characteristics.
C. FXS is said to be the most common cause of inherited mental retardation.
D. This is an X chromosome-linked disorder and hence affects males more severely than females because the second normal X chromosome present in females lessens the effect of the chromosome with the disorder.
(a) FFFF (b) FFII (c) IIFF (d) FIFI (e) IFIF

9. A. And then the realization that tells you never to think that you are the master of your life.
B. Because just when you start thinking that own the world there comes a strong blow from somewhere up there.
C. It makes you realize your place in the universe.
D. We lose our humility and we start believing we are above all else; in reality, we are not.
(a) JJJJ (b) FFFF (c) IIII (d) JIJI (e) JJJF

10. A. In 1987, Anthony Satin published Florence Nightingale's letters from Egypt, written in her late 20s during the winter of 1849-50, before the Crimean war turned her into the lady with the Lamp.
B. Florence was simply a troublesome daughter who took an unseemly interest in hospitals and refused to marry.
C. When old family friends, the Brace bridges, offered to take the girl to Egypt with them, her parents hoped a change would break the

impasse.
D. They misjudged.
(a) FIFI (b) FJFJ (c) JIJI (d) FIJI (e) FIIF

11. A. According to all statistical indications, the Sarva Shiksha Abhiyan has managed o keep pace with its ambitious goals
B. The Mid-day Meal Scheme has been a significant incentive for the poor to send their little ones to school, thus establishing the vital link between healthy bodies and healthy minds
C. Only about 13 million children in the age group of 16 to 14 years are out of school
D. The goal of universalisation of elementary education has to be a pre-requisite for the evolution and development of our country
a) IIFJ b) JIIJ c) IJFJ d) IJFI d) JIFT

12. A. Prayer-meeting of Mahatma Gandhi is world famous.
B. Gandhi found time in his busiest schedule and participated in these meetings where people sang bhajans, meditated and listened to religious discourses.
C. Gandhi's most favorite song was Vaishnava janato.
D. This song was composed by Narasi Mehta, foremost Saint-poet of 15th century Gujarat.
(a) JFJF (b) FFIJ (c) IIFF (d) FFIF (e) FJFJ

13. A. So much of our day-to-day focus seems to be on getting things done, truding our way through the tasks of living; it can feel like a treadmill that gets you nowhere; where is the childlike joy
B. We are not doing the thing that make us happy; that which bring us joy; the thing that we cannot wait to do because we enjoy them so much
C. This is the stuff that joyful living is made of identifying your calling and committing yourself wholeheartedly to it .
D. When this happens, each moment becomes a celebration of you; there is a ruche of energy that comes with feeling completely immersed in doing what you love most
(a) IIIJ (b)IFIJ (c)JFJJ (d) JJJJ (e) JFII

14. A. Ancient Sarawat Brahmins who lived in Saraswati valley migrated to adjoining regions when river Saraswati dried up.
B. One group made its way to Kushasthali in Sourashtra in Gujarat and then to Goa via Sea.
C. One is tempted to believe that these Saraswats have retained in their names their ancient identity long after they had settled down in Goa.
D. A small village is still known as Kushasthali or Kutral in Goa.
(a) FFJF (b) IIJI (c) FIJJ (d) JIFF (e) FFIF

15. A. Even for the world's largest advertiser, with an estimated $9 in spends in 2009, acquiring some new lessons is critical.
B. According to Pritchard, the world is heading towards Marketing 3.0 and that means marketing as a function needs to overhaul itself.
C. We are not there yet, but we are moving towards an inflection point.
D. We are shifting purpose inspired brand building, a shift from marketing to serving, Pritchard states.
(a) FJFJ (b) JFJF (c) IFJF (d) JIJF (e) IFJI

16. A. Given the poor quality of survive in the public sector; the HIV/AIDS affected should be switching to private initiatives that supply antiretroviral dirge (ARVs) at a low cost
B. The government has been supplying free drugs since 2004, and up to now 35000 has benefited, through the size of the affected population is 150 times this number
C. The recent initiatives of network and companies like AIDS Care Network, Emu cure, Reliance-Cipla-CII, would lead to availability of much-needed drugs to a larger number of affected people
D. But how ironic it is that we should face perennial shortages of drugs when India is one of the world's largest suppliers of generic drugs to the developing world
(a) JFIJ (b) JIIJ (c) IJFJ (d) IJFI (e) JIFT

17. A. According to the bank for International settlements a staggering 40 percent of American mortgages originated in the first quarter of 2007 were interest only or negative amortization loans.
B. Banks have already sold a sizeable chunk of their Alt-A holdings to hedge funds and other asset-management firms, often at large discounts. USB's exposure has fallen from $26.6 billion to just $2.3 billion, for instance.
C. His enthusiasm for the free movement of labour is tempered by fear that it could undermine national wage agreements.
D. Vadiraja approves of the way German and Italian banks support small and medium sized companies.
(a) FFJF (b) JJFF (c) FIIF (d) JFFF (e)IIJJ

18. A. When you came into this world, you came with no investment.
B. So whatever happens in your life, anyway you are in profit.
C. But the reason people are in various levels of distress is because there is no life-sense, only ego-sense.
D. If you are miserable, it is because life is not happening the way you think it should happen.
(a) JIJI (b) IJII (c) JJIJ (d) JFIF (e) JJJJ

19. A. When his firm announced its annual results on Jan 29th, he went so far as to declare that it definitely does not? need a merger or significant acquisition?.
B .But in truth the relationship has never been happy.
C. Mr.Wardak says that is the wrong way to look at the problem. He suggests that Building, equipping and training the Afghan army is much more economical than the deployment of foreign troops?.
D. Wondering at the rate at which demand is slumping, a big, and sustained, fiscal boost is the panacea for America's economy.
(a) FFJJ (b) FFFI (c) FJFJ (d) FFII (e) JJFI

20. A. Molecular biology has provided excellent tools to address health, environmental, and food problems such as those seen in Kenya.
B. The question is whether decision-makers are prepared to use them.
C. Obviously, most EU countries governments are not willing to promote GM foods.
D. GM foods have now been on the market in the US for more than 12years.
(a) JIJF (b) IJJF (c) IJIF (d) FIJF (e) FJIF