Workbook

1. Number system

Q.1 Number of factors of 1800

(a) 48   (b) 36
(c) 54   (d) 72

Q.2 Number of prime factors of $(30)^7 \times (22)^5 \times (34)^{11}$

(a) 4   (b) 3
(c) 5   (d) 7

Q.3 The highest power of 3 in 80!

(a) 36   (b) 34
(c) 23   (d) 24

Q.4 How many numbers between 300 and 700 are divisible by all of 2, 3 and 7 together?

(a) 10   (b) 9
(c) 11   (d) 8

Q.5 if 10001-2222=4446, then value of 2342-1656=

(a) 453   (b) 353

(c) 893   (d) 686

Q.6 $40!^{40!}$ end with how many zeros?

(a) 40!   (b) 8 x 40!
(c) 9 X 40!   (d) $8^{40!}$

Q.7 How many zeroes will be there at end of product of $2!^{2!} \times 4!^{4!} \times 6!^{6!} \times 8!^{8!} \times 10!^{10!}$?

(a) 10! +8! +6!   (b) 2 x 10!
(c) 10! + 8!   (d) 6! + 8! + 2(10!)

Q.8 50! ends with how many trailing zeroes

(a) 16   (b) 11
(c) 12   (d) 14

Q.9 A = 4^{86}-2^{171}. How many digits would be there in binary notation of A

(a) 172   (b) 86
(c) 87   (d) None of these

Q.10 If 7^{84} divided by 342 then find the remainder is

(a) 0   (b) 49
(c) 1   (d) 341

Q.11 Remainder when $15^{23} + 23^{23}$ is divided by 19 is

A) 4   B) 18
C) 15   D) 0

Directions (Q.12 – Q.13): If N = 10800

Q.12 Then number of total factors of N is

(a) 32   (b) 64
(c) 60   (d) 120

Q. 13 Number of even factors of N

(a) 48   (b) 60
(c) 36   (d) 12

Q. 14 What is the remainder when

$(16^3 + 17^3 + 18^3 + 19^3)$ is divided by 70?

(a) 16   (b) 17
(c) 19   (d) 0

Q. 15 1.2 + 2.3 + 3.4+…. sum of n terms =

(a) $\frac{n(n+1)^2}{2}$ (b) $\frac{n(n+1)(n+2)}{2n+1}$

(c) $\frac{n(n+1)(n+2)}{3}$ (d) $\frac{n(n+1)^2}{4}$

2. Time and Work

Q. 1 A and B can do a work in 3 days. B and C can do it in 4 days, A and C can do it in 6 days. How long will it take A alone to do it?

(a) 8 days   (b) 6 days
(c) 4 days   (d) 12 days

Q. 2 A and B can do a work in 25 days and 20 days respectively. A worked on it for 10 days and then B joins him, in how many days work will be completed?

(a) $16\frac{2}{3}$ (b) $12\frac{1}{2}$
(c) $20\frac{2}{3}$ (d) $15\frac{2}{3}$

Q. 3 4 men or 7 women can do a work in 40 days. In how many days 8 men and 6 women can do that work?

(a) 18   (b) 14
(c) 20   (d) 12

Q. 4 If A is 20% less efficient than B. if B alone can do the work in 40 days. In how many days can A and B together complete the same work?

(a) $22\frac{2}{9}$ (b) $20\frac{1}{9}$
(c) $21\frac{2}{9}$ (d) $32\frac{2}{9}$

Q. 5 A and B earn Rs 320 in 4 days. B and C earn Rs 450 in 10 days. A, B and C earn Rs 600 in 5 days. Find the daily earning of B.

(a) Rs 15   (b) Rs 5
(c) Rs 25   (d) Rs 40

Q. 6 If 4 Men and 3 Women can do a work in 8 days. 6 men and 9 women can do the work in 4 days. In how many days can 20 men and 6 women do the same work?

(a) 2   (b) 4
(c) 5   (d) 6

Q. 7 A, B and C can do a work in 20, 15 and 12 days respectively. A is assisted by B on first day and by C on the next day, alternatively. How long the work would take to finish?

(a) 8 days   (b) 6 days
(c) 10 days   (d) 4 days

Q. 8 A and B can do a work respectively in 10 days and 12 days. If they work on alternate days beginning with A. Then when will the work will be completed?

(a) 11 days   (b) $10\frac{5}{6} days$
(c) 12 days   (d) $12\frac{2}{3} days$

Q. 9 A can finish a piece of work in 15 days of 8 hours each and B finishes it in $6\frac{2}{3}$ days of 9 hours each. Find in how many days can they finish the work, if they work together for 10 hours each day.

(a) 2   (b) 4
(c) 50   (d) 6

Q. 10 A and B together can do a piece of work in 12 days which B and C together can finish in 16 days. After A has worked on it for 5 days, and B for 7 days, C finishes remaining work in 13 days. In how many days can A finish the work alone?

(a)16   (b) 14
(c) 48   (d) 24

Q. 11 A and B can do a work in 24 days and 36 days respectively. A starts the work and B joins him after some days and they do the remaining work in 6 days. After how many days did B joined A?

(a) 12 days   (b) 14 days
(c) 15 days   (d) 10 days

Q. 12 A alone can do a work in 40 days. Along with B he finishes the work and earns Rs 2000 for himself. If B earns Rs 4000, then in how many days can he do the same work individually?

(a) 20   (b) 30
(c) 40   (d) 50

Q.13 P and Q can do a work in 30 and 60 days respectively. They agreed to work together and finish the work for Rs 1000. But they worked only for 10 days. How much money should they together get?

(a) 500   (b) 100
(c) 800   (d) 200

Q. 14 5 men and 7 boys can do a work in 24 days working 10 hrs per day. 9 men and 18 boys can do the same work in 15 days working 8 hrs

per day. In how many days 3 men and 6 boys can do that work working 8 hrs per day?

(a) 40 days   (b) 36 days
(c) 45 Days   (d) 48 days

Q. 15 A man and a boy received Rs 800 as wages for 5 days for the work they did together. The man's efficiency in the work was three times that of the boy. What are the daily wages of the boy?

(a) Rs 76   (b) Rs 56
(c) Rs 44   (d) Rs 40

3. Set Theory

Q. 1 25 Person are in a room. 15 of them play hockey, 17 of them play football and 10 of them play both hockey and football. Then the number of persons playing neither hockey nor football is
(a) 2   (b) 17
(c) 13   (d) 3

Direction (Q. 2-Q4): A TV survey gives this data for TV viewing. 60% see programme A, 50% see programme B, 30% See programme C. 30% see programme A and B, 20% see programmes B and C and 10% see programmes A and C. 10% see all programmes A, B, C. then answer the following Questions

Q. 2 What percent view A and B but not C
(a) 20   (b) 10
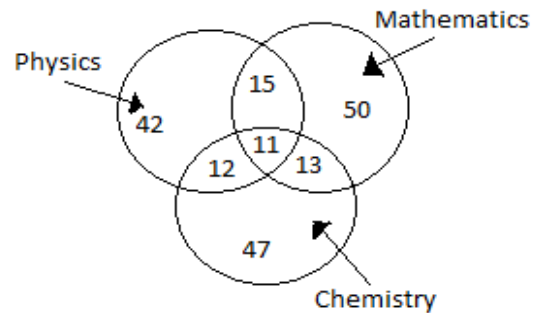(c) 30   (d) 7

Q. 3 what percent do not view any of the three programmes?
(a) 30   (b) 10
(c) 15   (d) 17

Q. 4 What percent view exactly two programmes?

(a) 20   (b) 30

(c) 50   (d) 24

Direction (Q. 5-Q.9): The diagram given below shows the number of students who got distinction in 3 subjects out of 500 students. Study the diagram and answer the following:

Q. 5 What is the percentage of the student who got distinction in exactly two subjects?

(a) 8%   (b) 9%
(c) 10%   (d) 12%

Q.6 What is the percentage of students who got distinction?

(a) 28%   (b) 30%
(c) 38%   (d) 40%

Q. 7 The percentage of students with distinctions in mathematics is

(a) 17.8 %   (b) 18.6%
(c) 19.2 %   (d) 20.36%

Q.8 In a certain school 30 students play football, 15 play hockey and 25 take part in athletics. 8 play both football and hockey, 6 play hockey and athletics, 12 play football and athletics. 4 take part in all three games. How many students in all are involved in any of the three games?

(a) 50   (b) 48
(c) 46   (d) 66

Q. 9 In a certain locality of Delhi, there are 1000 families. A survey indicated of 300 subscribes to the Hindustan times Daily news paper and 250 subscribe to statesman daily news paper and of these two categories 100 subscribe both. find the number of families which do not subscribe to any of these news papers

(a) 550   (b) 450
(c) 600   (d) 650

Direction (Q. 10 – Q. 13): In an organization 500 employees are working. Among them 200 are technicians, 220 are managers and 120 are supervisors. 100 employees are managers who are also technicians but not supervisors. There are 10 employees who are supervisors, Technicians and also managers. There are 50 employees who are only technicians. 40 employees are only supervisors. Then answer the following questions.

Q. 10 How many employees are only managers?

(a) 80   (b) 120
(c) 140   (d) 160

Q. 11 How many employees do exactly one type of job?

(a) 160   (b) 150
(c) 170   (d) 180

Q. 12 How many employees are neither technicians nor managers nor supervisors?

(a) 100   (b) 250
(c) 150   (d) 200

Q. 13 How many employees are managers and supervisors but not technicians?

(a) 30   (b) 70
(c) 10   (d) 80

4. Ratio and Proportion

Q. 1 if A : B = 3 : 4 and B : C = 2 : 5, then A : B : C

(a) 4 : 10 : 3   (b) 3: 4: 10
(c) 4: 3: 10   (d) 10: 3: 4

Q. 2 If A: B = 3: 2, B: C = 5: 4, C: D = 3: 7, then A: B: C:D

(a) 45 : 30 : 24 : 56   (b) 45: 24: 30: 56
(c) 45 : 56 : 30 : 24   (d) 45 : 30 : 56 : 24

Q. 3 Two numbers are in the ratio 4 : 7. If 4 is added to each number then the ratio becomes 3 : 5 then the smallest numbers

(a) 42   (b) 32
(c) 56   (d) 24

Q. 4 In a bag number of 25 p coins, 20 p coins and 10 p coins are in the ratio 3 : 7 : 9 and together worth of Rs 61. Find the number of 20 p coins

(a) 180   (b) 60
(c) 140   (d) 90

Q. 5 The ratio of the ages of a man and his wife is 6 : 5. After 16 years, the ratio becomes 10 : 9 find the husband's age when the wife was born

(a) 3   (b) 4

(c) 24   (d) 6

Q. 6 There are peacocks and deers in a park. If the total number of their heads is 150 and that of legs is 400. The number of deers is

(a) 50   (b) 100
(c) 60   (d) 90

Q. 7 Find the fourth proportion of 1.75, 5.25, 3.5

(a) 10.5   (b) 6.5
(c) 12.5   (d) 4.5

Q. 8 Find the third proportion of 36 and 48

(a) 64   (b) 48

(c) 60   (d) 72

Q. 9 75 men can dig a canal in 90 days. How many more men are required to dig the canal in only 18 days?

(a) 250   (b) 300
(c) 375   (d) 275

Q. 10 15 men working 10 days earn Rs 500 how much will 12 men earn working 14 days?

(a) Rs 480   (b) Rs 560
(c) Rs 750   (d) Rs 600

Q. 11 if 3 men or 6 women can do a work in 16 days. in how many days can 12 men and 8 women do the same work

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

Q. 12 5 chairs cost as much as 12 stools, 7 stools as much as 2 tables, 3 tables as much as 2 sofas. If the cost of 5 sofas is Rs 875. Then find the cost of a chair

(a) Rs 60   (b) Rs 80
(c) Rs 75   (d) Rs 90

Q. 13 A mixture contains milk and water in the ratio 4 : 3 when 5 liters of water is added, then ratio becomes 1 : 1. Then find the amount of milk in the mixture

(a) 15 liters   (b) 20 liters

(c) 25 liters   (d) 30 liters

Q. 14 Find the mean proportion of 0.7 and 2.8

(a) 0.7   (b) 2.8

(c) 1.4   (d) 0.4

Q. 15 A and B enter into a partnership with capitals of ratio 5: 8, at the of 8 months A with draw from the business, if their profit are in the ratio 1 : 2. How long B invest his capital

(a) 8 months   (b) 10 months
(c) 9 months   (d) 6 months

Q. 16 In a hostel there is enough food for 25 days for 40 students. After 5 days 10 students left from the hostel. Find the number of days for which the remaining food will be sufficient for remaining students.

(a) $13\frac{1}{3}$ (b) $16\frac{2}{3}$
(c) $26\frac{2}{3}$ (d) $24\frac{2}{3}$

Q. 17 In what ratio must tea at Rs 62 per kg are mixed with tea at Rs 72 per kg so that the mixture must be worth Rs 64.50 per kg?

(a) 3 : 1   (b) 3: 2

(c) 4: 3   (d) 5: 3

5. Percentages

Q. 1 The length and breadth of a rectangle increased by 10% and 20%. What is the percentage increase in the area of the rectangle?
(a) 32%   (b) 40%
(c) 30%   (d) 38%

Q. 2 The population of a city increases by 20% every year. If the present population is 5,76,000. What was population of the city two years ago?
(a) 4, 00, 000   (b) 4, 40, 000
(c) 4, 20, 000   (c) 4, 10, 000

Q. 3 40 liters of mixture of milk and water contains 25% of water. When 10 liters of water is added, what will be percentage of milk in the final mixture?
(a) 40%   (b) 60%
(c) 80%   (d) 70%

Q. 4 If Rs 636 is divided between A, B, C such that A great 20% more than B and B gets 25% less than C. Find the share of C
(a) Rs 280   (b) Rs 240
(c) Rs 220   (d) Rs 200

Q. 5 The income of a person decreased by 20% and then again decreased by 20%. Find the total decrease in his income
(a) 36%   (b) 40%
(c) 28%   (d) 32%

Q. 6 A man spend 5% of his money and then after spending 75% of the remainder, then he had Rs 950 left with him. How much money he had at the beginning?
(a) Rs 9000   (b) Rs 6575
(c) Rs 4000   (d) Rs 6000

Q. 7 The ratio of two numbers is $\frac{5}{6}:\frac{2}{3}$. By what % is the second number more or less than the first number?
(a) 25% more   (b) 25% less
(c) 20% less   (d) 20% more

Q. 8 1000 students appeared for an examination. The boys and girls ratio is 6: 4. 60% of boys and 40% of girls passed the exam. The % of candidates failed the exam is
(a) 62%   (b) 48%
(c) 36%   (d) 24%

Q. 9 The value of a machine increases by 20% every year, and its present value is Rs 2,24,000. What will be its value after 2 years?
(a) Rs 2, 72,000   (b) Rs 3, 22, 560
(c) Rs 3, 32, 560   (d) Rs 3, 14, 460

Q. 10 if 5% of A = 20% of B and 10% of B = 15% of C. if income of C is Rs 1500. Find the income of A
(a) Rs 9000   (b) Rs 6000
 (c) Rs 8000   (d) Rs 3000

Q. 11 A shopkeeper increased the selling price of an article by 25% and then decreased by 25%. If the present selling is Rs 225. Then what was his original selling price?
(a) Rs 240   (b) Rs 300
(c) Rs 320   (d) Rs 225

Q. 12 In an exam 80% passed in English, 70% passed in science and 15% failed in both the subjects. If 195 passed in both the subjects. Find the total number of students.

(a) 250   (b) 300
(c) 400   (d) 350

Q. 13 In an election between two candidates, one got 52% of the total valid votes. If 25% of the total votes were invalid. The total number

of votes was 8400. How many valid votes did the other person get?

(a) 3276　　　　　　(b) 3196
(c) 3024　　　　　　(d) can't be determined

6. Profit and Loss

Q. 1 A shopkeeper sells two computers for Rs 24,000 each. On first he gained 20% and on the other he lost 20% what is the overall gain or loss percentage
(a) 4% gain　　　　　　(b) 4% loss
(c) 6% gain　　　　　　(d) 6% loss

Q. 2 Ravi purchases two TV's at Rs 3500 each. He sold one TV at 10% gain and the other at 10% loss. What is his total gain or loss percentage?
(a) 6 % gain　　　　　　(b) 6% loss
(c) No profit, no loss　　(d) None of these

Q. 3 By selling an article for Rs 110. The trader has a loss of 12%. At what price should be sell in order to gain 8%.
(a) Rs 150　　　　(b) Rs 135
(c) Rs 160　　　　(d) Rs 140

Q.4 By selling an article for Rs 3000, person losses by 20%. How much will he gain or loss, if he sells it for Rs 3900?
(a) 6% gain　　　　(b) 6% loss
(c) 4% gain　　　　(d) 4% loss

Q. 5 A man buys an article for Rs 7290 and sold at a loss of $\frac{2}{7}$ of selling price. Find the S.P.
(a) 5820　　　(b) 5670
(c) 6000　　　(d) 6120

Q. 6 A man bought 27 tables for Rs 5940 and sold them at a gain equal to the selling price of 5 tables. Find his gain percent
(a) $21\frac{8}{11}$%　　　(b) $22\frac{8}{11}$%
(c) $20\frac{8}{11}$%　　　(d) $24\frac{8}{11}$%

Q. 7 if the cost price of 15 tables is equal to the selling price of 12 tables. Find gain or loss percentage

(a) 25% loss　　　　(b) 25% gain
(c) 20% gain　　　　(d) 20% loss

Q. 8 Find the single discount equivalent to two successive discounts 10% and 20%
(a) 25%　　　　(b) 30%
(c) 28%　　　　(d) 35%

Q. 9 An article is marked at Rs 2500 and the shopkeeper allows successive discounts 10%, 20% and 10% then find the S.P
(a) Rs 1620　　　　(b) Rs 1840
(c) Rs 2000　　　　(d) Rs 2100

Q. 10 A person gives 25% discount on M.P and still gains 20%. How much percent is M.P above the C. P?
(a) 25 %　　　　(b) 60%
(c) 40%　　　　(d) 30%

Q. 11 After giving two successive discounts of 10% and 20%. The selling price of an article is Rs 216. Then find the marked price
(a) Rs 250　　　　(b) Rs 300
(c) Rs 290　　　　(d) Rs 400

Q. 12 A person marks a product of 50% over the cost price and then gives some discount. If he makes a profit of 5%. what is the percentage discount that he offered on the marked price?
(a) 10%　　　　(b) 20%
(c) 30%　　　　(d) 40%

Q. 13 A person bought an article and sold it at a loss of 10%. if he has bought at 20% less and sold it for Rs 55 more, he would be gained 40%. Find C.P.
(a) Rs 250　　　　(b) Rs 225
(c) Rs 275　　　　(d) Rs 300

Q.14 'A' sells a DVD to 'B' at a gain of 17% and 'B' again sells it to 'C' at a loss of 25%. If 'C' pays Rs 1053 to 'B' then what is the cost price of the DVD to 'A'

(a) Rs 1200   (b) Rs 1450
(c) Rs 1250   (d) Rs 1375

Q. 15 A fruit seller buys apples at the rate of Rs 12 per dozen and sells them at the rate of 15 apples for Rs 12. Find his percentage gain or loss.

(a) 20% gain   (b) 20% loss
(c) 25% gain   (d) 25% loss

Q. 16 An article is listed as Rs 800 and given two successive discounts. One of them is 10%. Find the other discount if its S.P.is Rs 576
(a) 10%   (b) 20%
(c) 25%   (d) 30%

7. Simple interest and compound interest

Q. 1 Find the simple interest for Rs 22,000 for 5 years at 8% per annum.
(a) Rs 8000   (b) Rs 8200
(c) Rs 8800   (d) Rs 8400

Q. 2 The simple interest on a sum of money is $1/25^{th}$ of the principal. If the rate of interest is 8% p.a what is the time period?
(a) 3 months   (b) 2 months
(c) 8 months   (d) 6 months

Q. 3 A certain sum of money amounts to Rs 3080 in 3 years and Rs 3400 in 5 years at S.I.. What is the sum?
(a) Rs 2600   (b) Rs 3600
(c) Rs 4600   (d) Rs 1700

Q. 4 In how many years will a sum of money become 5 times at 8% p.a. simple interest?
(a) 10 years   (b) 20 years
(c) 30 years   (d) 50 years

Q. 5 A sum of money Rs 15000 is lent in two parts one at 7% p.a and other at 4% p.a. if the annual interest received is Rs 900. What is the amount lent at 4% p.a?
(a) Rs 4000   (b) Rs 6000
(c) Rs 5000   (d) Rs 8000

Q. 6 What principal will amount to Rs 570 at 4% p.a in 3.5 years?
(a) Rs 800   (b) Rs 500
(c) Rs 400   (d) Rs 1000

Q. 7 Find the S.I. on Rs 500 for 8 months at 3 paisa per rupee per month?
(a) Rs 118.50   (b) Rs 120
(c) Rs 118.75   (d) Rs 125.40

Q. 8 Rs 1080 is divided into two parts such that if the first is lent at 6% for 5 years and second is lent at 10% for 4 years, the interest will be in the ratio 3: 5 find the first part.
(a) Rs 500   (b) Rs 480
(c) Rs 780   (d) Rs 680

Q. 9 Anil invested Rs 8000 for 3 years at 5% compound interest in a post office. If the interest is compounded once in a year. What sum will be get after 3 years
(a) Rs 10, 200   (b) Rs 11, 261
(c) Rs 9261   (d) Rs 12, 261

Q. 10 Find the amount in 2 years for a principal of Rs 25, 000. If the rate of interest being 5% for the first year and 10% for the second year.
(a) Rs 28, 475   (b) Rs 28, 875
(c) Rs 18, 875   (d) Rs 19, 875

Q. 11 Find the compound interest on Rs 2000 for 9 months at 40% p.a. compounded quarterly
(a) Rs 662   (b) Rs 362
(c) Rs 862   (d) Rs 962

Q. 12 Find the difference between C.I and S.I. on Rs 6400 for 2 years at 12.5% P.a.
(a) Rs 400   (b) Rs 300
(c) Rs 100   (d) Rs 200

Q. 13 The C.I. on a certain sum for 2 years at 10% p.a. is Rs 1260. What is the. S. I. on the same sum at the same rate for 2 years.

(a) Rs 1100   (b) Rs 1200
(c) Rs 600   (d) Rs 1400

Q. 14 The value of a building is Rs 2,66,200 and that of a land is Rs 1,45,800. After how many years will the values of both will be same. Given that the value of the building decreases at 10% p.a and that of land increases at 10% p.a
(a) 2   (b) 3
(c) 4   (d) 6

Q. 15 A sum of money amounts to Rs 4840 in 2 years and Rs 5324 in 3 years at C.I what is the rate percent?
(a) 9%   (b) 8%
(c) 4%   (d) 10%

Q. 16 The S. I. on a certain sum of money for 2 year at 5% P.a is Rs 600. What is the C. I. on the same sum at the same rate and for the same time?
(a) Rs 415   (b) Rs 615
(c) Rs 815   (d) Rs 960

Q. 17 At C.I. a certain sum becomes twice itself in 7 years. In how many years will it becomes 32 times?
(a) 45   (b) 40
(c) 35   (d) 30

Q. 18 Find the difference between C. I. and S. I on Rs 32, 000 for 3 years at rate 5% p.a.
(a) Rs 244   (b) Rs 304
(c) Rs 444   (d) Rs 344

8. Time, Speed and Distance

Q. 1 In a 200 m race 'A' beats 'B' by 20 m. 'B' beats C by 10 m in a 250 race. By how many meters will 'A' beat C in a 1 km race.
(a) 146 m   (b) 164 m
(c) 136 m   (d) 144 m

Q. 2 If a boat with speed 20 m/s in still water take 1/3 hr and ½ hr in order to cover same distance downstream and upstream respectively. Then the speed of the current is
(a) 6 m/s   (b) 8 m/s
(c) 3 m/s   (d) 4 m/s

Q. 3 Vijay goes Delhi to Bhopal at a uniform speed of 40 km/hr and comes back at a uniform speed of 60 km/hr. then his average speed over the entire journey
(a) 50   (b) 52.5
(c) 48   (d) 51.5

Q. 4 Ravi and Gautama are heading towards each other. If they meet at 45 m from Ravi's stating point. Now after meeting they move towards the other's starting point in 16 hrs and 25 hrs respectively, then initial separation between Ravi and Gautama.

(A) 81 m   (b) 100 m
(c) 90 m   (d) 110 m

Q. 5 A, B, C are running on a circular track of 100 m circumference with speeds 10 m/s, 20 m/s, 25 m/s respectively. If they started from common starting point at the same time then they will again meet at starting point after how much time.
(a) 100 sec   (b) 25 sec
(c) 20 sec   (d) 200 sec

Q. 6 Two trains separated by 480 kms are approaching each other with speeds 70 kmph and 50 kmph respectively. A bird with speed 100 km/hr started from the front of first train goes to front of second train and comes back to first train and continues to and fro so on till the trains collide. What is the total distance travelled by the bird?
(a) 500 km   (b) 400 km
(c) 480 km   (d) 600 km

Q. 7 Two trains are approaching each other from opposite sides and crosses each other in 14 seconds. What is the speed of second train if speed of first train is 7 km/hr and the length of the trains is 126 m and 240 m respectively?

(a) 67.14 kmph   (b) 87.11 kmph
(c) 77.14 kmph   (d) 97. 11 kmph

Q. 8 A bus has to go a distance of 80 km in 10 hrs. if it covers first half of journey in 3/5 of time, what should be its speed to cover the remaining distance in the assigned time
(a) 20 km/hr   (b) 10 km/hr
(c) 5 km/hr   (d) 8 km/hr

Q. 9 A train's average speed including stoppages in 45 km/hr while excluding stoppages it is 54 km/hr. what is the stoppage time per hour?
(a) 12 min   (b) 9 min
(c) 15 min   (d) 10 min

Q. 10 Dalbir and Asim are approaching from opposite ends of a linear race track of 100 m. After passing each other the rich end points of the track and turn back. They now meet at 35 m from where Dalbir started after 45 seconds. Find the speed of Asim
(a) 3 m/s   (b) 3.5 m/s
(c) 4.5 m/s   (d) 5 m/s

Q. 11 A boy covers a certain distance between his house and school on a cycle. Having an average speed of 15 kmph, he is late by 10 min. however with an average speed of 20 kmph. He reaches the school 5 min earlier. Find the distance between his house and school.
(a) 15 km   (b) 20 km
(c) 25 km   (d) 30 km

Q. 12 Two trains are moving in the same direction at the speeds of 70 kmph and 90 kmph respectively. The faster train crosses a man sitting in the slower train in 36 sec. find the length of the faster train.
(a) 200 m   (b) 225 m
(c) 250 m   (d) Can't be determined

Q.13 If A and B run at 6 km/hr and 12 km/hr on a circular track 6 km long when will they meet for the first time if they are running in opposite direction
(a) 20 min   (b) 28 min
(c) 29 min   (d) 10 min

Q. 14 A and B run around a circular track of length 600 m at the respective speeds of 15 m/sec and 20 m/sec starting from the same point and at the same time travelling in the same direction. When will they meet each other at the starting point for the first time?
(a) 2 min   (b) 4 min
(c) 6 min   (d) 7 min

Q. 15 A car travels a distance 840 km at a uniform speed if the speed of the car is 10 km/hr more, it takes 2 hours less to cover the same distance then the original speed of the car was
(a) 80 km/hr   (b) 70 km/hr
(c) 60 km/hr   (d) 40 km/hr

9. Permutation, Combination and Probability

Q. 1 In a party every one handshakes with each presentees exactly once. If total number of handshakes made were 153. Then the number of people present in the party.
(a) 17   (b) 18
(c) 19   (d) 36

Q. 2 If number of diagonals of an 'n' sided polygon is 50% higher than its number of sides. Then the polygon is a
(a) Quadrilateral   (b) Hexagon
(c) Octagon   (d) None of these

Q. 3 Total number of ways of distributing 10 identical balls among three kids such that each of the kid gets at least one ball
(a) 66   (b) 36
(c) 28   (d) 42

Q. 4 In the adjoining figure, total number of shortest routes from A to C. if moving along only straight lines is allowed
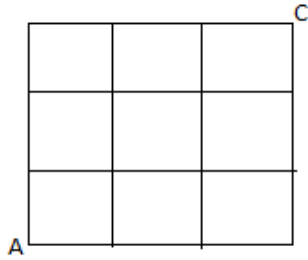
(a) 9   (b) 720
(c) 120   (d) 20

Q. 5 Line 'l' has 6 points on it and 'm' has five points lying on it. If $l \parallel m$, then how many triangles can we get from these 11 points
(a) 60   (b) 75
(c) 135   (d) 125

For (Q. 6 – Q.7): Consider the word 'GATEWAY'

Q. 6 In how many ways can 4 letters are selected from the word
(a) 26   (b) 28
(c) 27   (d) 20

Q. 7 How many arrangements can be made by taking these 4 letters from the word
(a) 360   (b) 600
(c) 1020   (d) 366

Q. 8 Four different pens (A, B, C, D) are to be distributed at random in four pen stands marked as 1, 2, 3, 4. what is the probability that none of the pen occupies the place corresponding to its number
(a) $\frac{17}{24}$ (b) $\frac{3}{8}$
(c) $\frac{1}{2}$ (d) $\frac{5}{8}$

Q. 9 Total number of squares in a chessboard
(a) 1024   (b) 64
(c) 1296   (d) 204

Q. 10 How many four digit numbers can be formed using digits 1, 2, 3, 4, 5, 6, 7, 8, 9 with repetition such that digit 5 appears exactly once.
(a) 1024   (b) 2048
(c) 4096   (d) none of these

Q. 11 what is the probability of getting 53 Sundays in a leap year
(a) $\frac{1}{7}$ (b) $\frac{2}{7}$
(c) $\frac{3}{7}$ (d) $\frac{1}{2}$

Q. 12 In a theatre, seven seats are vacant in a row. Three persons take seats at random. Find the probability that middle seat is always occupied and no two consecutive seats are occupied
(a) $\frac{9}{70}$ (b) $\frac{9}{35}$
(c) $\frac{4}{35}$ (d) $\frac{3}{5}$

Q. 13 A problem is given to four students A, B, C, D. their respective individual probabilities of the Problem solving are $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$. find the probability that the problem will be solved
(a) $\frac{1}{3}$ (b) $\frac{2}{3}$
(c) $\frac{4}{5}$ (d) None of these

Q. 14 If a fair coin is tossed four times. What is the probability that two heads and two tails will result
(a) $\frac{3}{8}$ (b) $\frac{1}{2}$
(c) $\frac{5}{8}$ (d) $\frac{3}{4}$

Q. 15 A speaks truth in 60% cases and B in 75% cases. While stating a same fact in either 'yes' or 'no' only, they are likely to contradict in what percentage cases
(a) 25   (b) 35
(c) 45   (d) 55

10. Calendar

Q. 1 How many odd days are there in first 75 years?
(a) 2   (b) 1
(c) 3   (d) 4

Q.2 How many odd days are there till 1947?
(a) 1   (b) 2
(c) 3   (d) 4

Q. 3 What was the day on 22nd July 1992?
(a) Friday   (b) Saturday
(c) Wednesday   (d) Sunday

Q. 4 What was the day on 26th January 1950?
(a) Thursday   (b) Monday
(c) Tuesday   (d) Friday

Q. 5 If 11th August 2010 was Wednesday, then what day 11th August 2001 was?
(a) Sunday   (b) Saturday
(c) Friday   (d) Monday

Q. 6 If 5th January 1991 was Saturday, what day was on 3rd March 1992?
(a) Monday   (b) Tuesday
(c) Thursday   (d) Friday

Q. 7 On which dates of August 1988 Friday were there?
(a) 6, 13, 20, 27   (b) 4, 11, 18, 25
(c) 5, 12, 19, 26   (d) 3, 10, 17, 24

Q. 8 Which year will have the same calendar as that 1991?
(a) 1996   (b) 2001
(c) 1998   (d) 2002

Q. 9 If 16th July 2000 was Sunday then what will be the day on 20th December 2000?
(a) Monday   (b) Saturday
(c) Wednesday   (d) Friday

Q. 10 If any calendar consists of 385 days and 8 days in a week, how many odd days will be there in that year?
(a) 4   (b) 3
(c) 2   (d) 1

Q. 11 if August 15th 2010 was Sunday, on which day of the week would be 15th August in 2025?
(a) Sunday   (b) Saturday
(c) Friday   (d) Monday

Q. 12 In a leap year January 26th is Friday, what is the day of August 15th in the same year?
(a) Monday   (b) Tuesday
(c) Thursday   (d) Friday

11. Clocks

Q. 1 At what time between 3'O clock and 4'O clock, hands of the clock are together?
(a) $3 : 15\frac{4}{11}$ (b) $3 : 16\frac{4}{11}$
(c) $3 : 17\frac{4}{11}$ (d) $3 : 16\frac{11}{4}$

Q. 2 At what time between 11'O clock and 12'O clock, hands of the clock coincide?
(a) $11 : 55\frac{2}{11}$ (b) $11 : 56\frac{2}{11}$
(c) $11 : 55\frac{4}{11}$ (d) None of these

Q. 3 At what time between 4'O clock and 5'O clock, hands of the clock are at right angle?
(a) $4 : 5\frac{5}{11}$ b) $4 : 38\frac{2}{11}$
(c) $4: 5\frac{5}{11}$, $4: 38\frac{2}{11}$ (d)None of these

Q. 4 At what time between 2'O clock and 3' O clock, hands of the clock are at right angle?
(a) $2 : 27\frac{3}{11}$ (b) 3.00
(c) $2 : 27\frac{11}{3}$ (d) $2 : 26\frac{11}{3}$

Q. 5 At what time between 8'O clock and 9'O clock, hands of the clock opposite to each other?

(a) $8 : 10\frac{10}{11}$ (b) $8 : 10\frac{9}{10}$

(c) $8 : 10\frac{11}{14}$ (d) $8 : 10\frac{2}{11}$

Q. 6 What is the angle between the two hands of a clock when the clock shows 5 hours 20 minutes?

(a) 40^0 (b) 60^0

(c) 30^0 (d) 70^0

Q. 7 What is the angle between the two hands of a clock, when the time is 3 hours 40 minutes?

(a) 130^0 (b) 140^0

(c) 170^0 (d) 120^0

Q. 8 At what angle are the two hands of a clock inclined at 9 hours 45 minutes?

(a) $23\frac{1}{2}o$ (b) $25\frac{1}{2}o$

(c) $22\frac{1}{2}o$ (d) $2\frac{1}{2}0$

Q. 9 if the time in a watch is 9 hours 30 minutes. What time does it show on the mirror?

(a) 2 : 30   (b) 2 : 45

(c) 3 : 30   (d) 2 : 15

Q. 10 How many degrees will the minute hand move in 7 minutes?

(a) 14^0 (b) 42^0

(c) 35^0 (d) 63^0

Q. 11 At what time between 2' O clock and 3'O clock, the angle between the hands will be 40^0?

(a) $2 : 3\frac{7}{11}$ (b) $2 : 5\frac{6}{11}$

(c) $2 : 10\frac{5}{12}$ (d) $2 : 16\frac{4}{11}$

Q. 12 How many degrees will the second hand move, in the same time in which minute hand move 6^0?

(a) 340^0 (b) 360^0

(c) 150^0 (d) 180^0

Q. 13 A clock is set right at 9 A.M. and the clock will gain 5 min in 12 hrs. What is the correct time when it shows 3 P.M. on the next day?

(a) $2 : 47\frac{17}{29}P.M$ (b) $2 : 48\frac{17}{29}P.M$

(c) $2 : 47\frac{17}{28}P.M$ (d) None of these

Q. 14 A clock is set right at 7 AM and the clock loses 15 min in 24 hrs. What is the correct time when it shows 4 PM. after 2 Days?

(a) 4 : 32 PM   (b) 4 : 30 PM

(c) 4 : 36 PM   (d) 4 : 35 PM

12. Cubes, Dice and Directions

Direction (Q.1-Q4): Large cube after painting it from all faces was divided into 125 smaller equal cubes. Answer the following.

Q. 1 How many cubes are not painted at all

(a) 8   (b) 27

(c) 64   (d) 12

Q. 2 How many cubes are pained from 3 sides

(a) 8   (b) 12

(c) 24   (d) 4

Q. 3 How many cubes are painted from exactly 2 sides

(a) 48   (b) 24

(c) 12   (d) 36

Q. 4 How many cubes are painted from only one side

(a) 54   (b) 64

(c) 48   (d) 36

Direction (Q.5-Q7): A cube of side 8 cm has been painted black, red and blue on pair of opposite faces. Then it is divided into smaller equal cubes of side 2 cm each. Answer the following:

Q. 5 How many cubes will be having two face painted black

(a) 2   (b) 4

(c) 8   (d) None of these
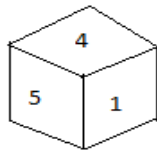
Q. 6 How many cubes will have one face painted blue and one face painted red? (The other faces many or may not be painted)
(a) 16   (b) 8
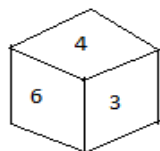(c) 0   (d) None of these

Q. 7 How many cubes will have exactly one face painted and that too red color
(a) 8   (b) 16
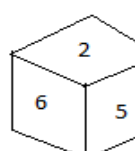(c) 12   (d) None of these

Direction (Q.8-Q11): A dice having face numbered from 1 to 6 is shown from three different orientations (I, II, III)

(i)   (ii)   (iii)

Q. 8 Which number is just opposite to 6?
(a) 1   (b) 4
(c) 2   (d) 5

Q. 9 Which will be number at the bottom in orientation (i)?
(a) 2   (b) 3
(c) 5   (d) Can't be determined

Q. 10 Which number is opposite to 5?
(a) 3   (b) 2
(c) 1   (d) 6

Q. 11 Which number is at the bottom of orientation (II)
(a) 6   (b) 5
(c) 2   (d) 1

Direction (Q. 12 – Q21): Answer the following:
Q.12 Dalbir is facing south. He turns 135^0 in the anticlockwise direction and then 180^0 in the clockwise direction. Which direction is he facing now?

(a) North – east   (b) North – west
(c) South – east   (d) South – west

Q.13 Rahul a college student is facing north-west he turns 90^0 in the clockwise direction and then 135^0 in the anticlockwise direction. Which direction is he facing now?
(a) East   (b) West
(c) North   (d) South

Q.14 Rakesh 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?
(a) 25 meters   (b) 50 meters
(c) 140 meters   (d) None of these

Q.15 I am facing south. I turn right and walk 20 m. then I turn right again and walk 10m. Then I turn left and walk 10 m and then turning right walk 20 m. then I turn right again and walk 60 m. In which direction am I from the starting point?
(A) North   (B) North – west
(C) East   (D) North – east

Q.16 A man walks 1 km towards east and then he turns to south and walks 5 km. Again he turns to east and walks 2 km. after this he turns to north and walks 9 km. now far is he from his starting point?
(A) 3 km   (B) 4 km
(C) 5 km   (D) 7 km

Q. 17 From his house sanjay went 15 kms to the north. Then he turned west and covered 10 kms. Then, he turned south and covered 5 kms. Finally, turning to east he covered 10 kms. in which direction is he from his house?
(A) East   (B) West
(C) North   (D) South

Q.18 Going 50 m to the south of her house, Radhika turns left and goes another 20 m. then turning to the north, she goes 30 m and then

starts wailing to her house. In which direction is she walking now?
(a) North – west   (b) North
(c) South-east   (d) East

Q.19 Michael walks 20 m North. Then he turns right and walks 30 m. then he turns right and walks 35 m. then he turns left and walks 15 m. then he again turns left and walks 15 m. in which direction and how many meters away is he from his original position?
(a) 15 meters west   (b) 30 meters east
(c) 30 meters west   (d) 45 meters east

Q.20 A child is looking for his father. He went 90 meters is the east before Turing to his right. He went 20 meters before Turing to his right again to look for his uncle's place 30 meters from this point. His father was not there. From here he went 100 meters to the north before meeting his father in a street. How far did the son meet his father from the starting point?
(a) 80 meters   (b) 100 meters
(c) 140 meters   (d) 260 meters

13. Data interpretation

Directions (Q. 1-Q.5): The pie-chart drawn here shows the spending of a country at various sports during particular years.
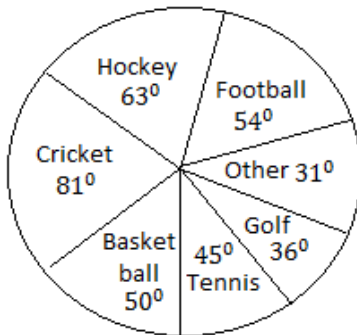
Q. 1 How much percent of the total spending is spent on tennis?
(A) 45%   (B) $22\frac{1}{2}$%
(C) $12\frac{1}{2}$%   (d) 25%

Q. 2 How much percent more is spent on hockey then that on Golf?
(a) 27%   (b) 35%
(c) 37.5%   (d) 75%

Q.3 How much percent less is spent on Football than that on Cricket?
(a) 27%   (b) $33\frac{1}{3}$%
(c) $33\frac{1}{6}$%   (d) $22\frac{2}{9}$%

Q. 4 if the total amount spent on sports during the year was Rs 2 crores then the amount spent on cricket and hockey together was
(a) Rs 800,000   (b) Rs 80, 00,000
(c) Rs 16, 000   (d) Rs 16, 00, 000

Q. 5 If the total amount spent on sports during the year is Rs 18,00,00,00. The amount spent on basketball exceeds tennis by
(a) Rs 250,000   (b) Rs 360,000
(c) Rs 375,000   (d) Rs 40,10,000

Directions (Q.6-Q.10): The pie chart given below shows the expenditure incurred in bringing out a book by a publisher.
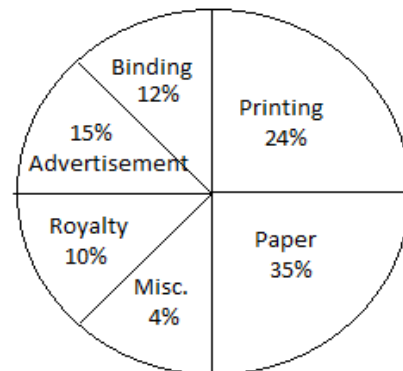
Q. 6 What is the central angle of the sector of the cost of the paper?
(a) 140^0 (b) 105^0
(c) 122.5^0 (d) 126^0

Q. 7 If the cost of printing is Rs 94380 the royalty is
(a) Rs 47190   (b) Rs 39325
(c) Rs 31460   (d) Rs 40960

Q. 8 If the miscellaneous charges are Rs 15730, the advertisement charges are
(a) Rs 47190   (b) Rs 37637.50
(c) Rs 58987.50   (d) Rs 68,190

**Q. 9** Royalty on the book is less than the advertisement charges by
(a) 50%   (b) $33\frac{1}{3}\%$
(c) $26\frac{1}{4}\%$ (d) 5%

Q. 10 if 5500 copies are published and miscellaneous expenditure on them amount Rs 15,730 and the publisher earns a profit of 30%. Then market price of each copy is
(a) Rs 71.50   (b) Rs 55
(c) Rs 74.36   (d) Rs 92.95

Directions (Q.11-Q.14)
The following bar diagram shows the production of food grains of a country in different years
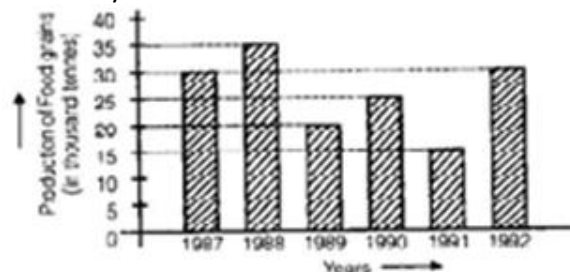
Q. 11 The percentage increase in production from 1991 to 1992 was
(a) 15%   (b) 30%
(c) 50%   (d) 100%

Q. 12 The sum of the production of food grains in the years 1989 and 1991 is same as that in the year
(a) 1987   (b) 1988
(c) 1990   (d) 1992

Q. 13 The two consecutive years in which rate of change of production of foodgrains is minimum are
(a) 1987 and 1988   (b) 1989 and 1990
(c) 1990 and 1991   (d) 1991 and 1992

Q. 14 The difference of the production food grains for the years 1988 and 1992 is
(a) 500 tones   (b) 1000 tones
(c) 5000 tones   (d) 10,000 tones

Direction (Q. 15-Q. 17): Study the following bar graph and answer the following
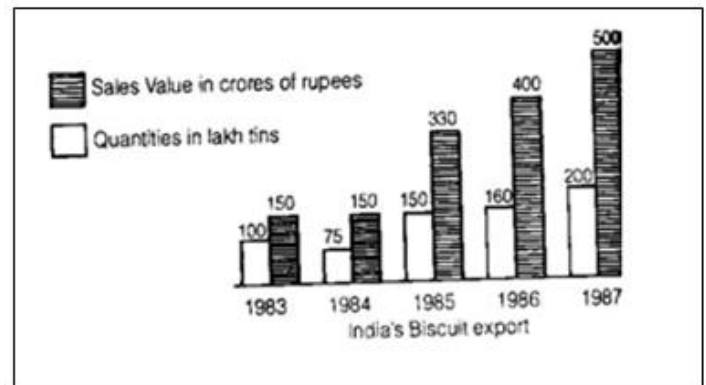
Q. 15 In which year the sales value per tin was minimum?
(a) 1983   (b) 1984
(c) 1985   (d) 1986

Q. 16 What was the approximate percent increase in sales value from 1983 to 1987?
(a) 350   (b) 233.33
(c) 133.33   (d) 96

Q. 17 if in 1986 the tins were exported at the same rate per tin as that in 1985. What would be the sales value in crores of rupees of export in 1986?
(a) 400   (b) 352
(c) 375   (d) 360

Directions (Q. 18-Q.21): Study the following table and answer the following
Income of employees from different heads in different categories of a company

Source of income	Employees				
	K	**L**	**M**	**N**	**O**
Salary	12000	6000	21000	9000	12000
Bonus	2400	1200	4500	2400	3000
Over Time	5400	2100	6000	5100	6000
Arrears	6000	5400	12000	4200	7500
Miscellan eous	1200	300	1500	300	1500
Total	27000	15000	45000	21000	30000

Q. 18 How many employees have their salary less than four times of their bonus?
(a) 0 (b) 1
(c) 2 (d) 3

Q. 19 The income from overtime is what percent of income from arrears in case of employees in category O?
(a) 80 (b) 25
(c) 70 (d) 60

Q.20 Who among the following employees earns maximum bonus in comparison to his total income?
(a) K (b) L
(c) M (d) N

Q. 21 who among the following employees has maximum percentage of his salary out of the total income?
(a) K (b) L
(c) M (d) N

Q. 22 Refer to the following pie charts

Year – 2005
(Total number of employes -1800)

Year - 2006
(Total number of employes – 20000)

In which department is the percentage change (from 2005 to 2006) in number of employees maximum?
(a) A (b) D
(c) B (d) E

14. Seating Arrangement

Q. 1 There are five different houses A to E in a row. A is the right of B. E is the left of C and right of A. B is the right of D. which of the house is in the middle
(a) A (b) B
(c) D (d) E

Direction (Q. 2-Q. 3): six friends A, B, C, D, E, F are sitting in a close circle facing the centre. E is the left of D. C is between A and B. F is between E and A
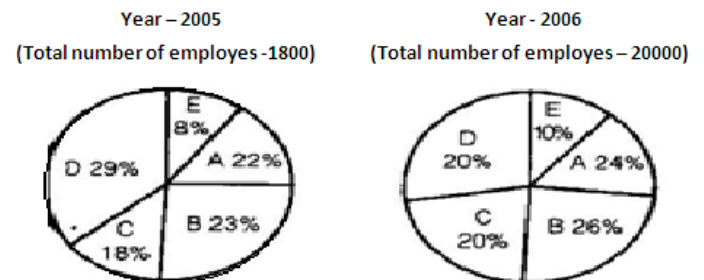
Q. 2 Who is the left of B?
(a) C (b) A
(c) D (d) E

Q. 3 Who is the right of C?
(a) E (b) B
(c) A (d) F

Directions (Q. 4-Q.6): Eight boys P, Q, R, S, T, U, V, W are sitting around a circular table facing the centre. further information as follows:
(i). W sits between T and Q while Q sits opposite to U

(ii) P sits to the immediate right of T and opposite to R

(iii) S does not sit next to R

Q. 4 Who sits opposite to V?
(a) Q (b) R
(c) S (d) T

Q. 5 Who sit two places left of S?
(a) P (b) T
(c) R (d) Q

Q. 6 If S and Q interchange their places then who sits opposite to Q?
(a) W (b) U
(c) R (d) T

Direction (Q. 7-Q. 8): 6 Persons A, B, C, D, E, F are sitting in two rows, three in each row. E is not at the end of any row. D is the second to the left of F, C is the neighbor of E is sitting diagonally opposite to D. B is the neighbor of F.

Q. 7 Which of the following are in one of the two rows?
(a) FBC (b) CEB
(c) DBF (d) AEF

Q. 8 Who is facing B?
(a) A (b) C
(c) D (d) E

Directions (Q. 9-Q. 10): A, B, C, D, E, F are sitting in a closed circle facing the centre. D is between F and B, A is the second to the left of D and second to the right of E.

Q. 9 Who is facing D?
(a) A (b) C
(c) F (d) can't be determined

Q. 10 Who is facing A?
(a) B (b) D
(c) A (d) Can't be determined

15. Number Series, Analogy and Number Odd man out

Direction (Q. 1-Q 17): Find out the missing term in each of the following:

Q. 1 113, 85, 61, 41 ……….13, 5
(a) 24 (b) 23
(c) 25 (d) 22

Q. 2 2, 5, 16, 65……
(a) 131 (b) 326
(c) 325 (d) 327

Q. 3 15, 10, 5, 150, 16, 12, 4, 192, 20, 15, 5………….
(a) 400 (b) 300
(c) 600 (d) 700

Q. 4 3, 10, 33, 104, ………………
(a) 318 (b) 319
(c) 320 (d) 321

Q. 5 55, 66, 187, 200, 369, 386, …………………………
(a) 675 (b) 575
(c) 475 (d) 875

Q. 6 20, 141, 310, 599, 960, 1489,…………….
(a) 2430 (b) 2330
(c) 2230 (d) 2130

Q. 7 1900, 939,………….,377, 376
(a) 398 (b) 698
(c) 498 (d) 598

Q. 8 1, 3, 11, 47……1439
(a) 187 (b) 239
(c) 339 (d) 259

Q. 9 2, 12, 56, 182, 462,…………….
(a) 870 (b) 990
(c) 992 (d) 982

Q. 10 2, 20, 110………………992
(a) 280 (b) 380
(c) 480 (d) 580

Q. 11   2, 12, 36, 80, 150,.......................
(a) 242   (b) 262
(c) 252   (d) 232

Q. 12   992, 552 …. 132, 30, 6
(a) 305   (b) 306
(c) 312   (d) 326

Q. 13   1695, 1700, 1710, 1727,
1753,……………….
(a) 1760   (b) 1790
(c) 1780   (d) 1770

Q. 14   4 : 9 : 25 : ……………….
(a) 36   (b) 72
(c) 78   (d) None

Q.15   196:169:81:……………………
(a) 64   (b) 72
(c) 78   (d) None

Q. 16   6 : 30 : ……………… :992
(a) 552   (b) 532
(c) 522   (d) 562

Q. 17   23: 125 :: 34 : ………………

(a) 343   (b) 216
(c) 162   (d) 600

Directions (Q. 18-Q.23): All of these terms have same relationship except one of the terms which is different, identify the odd one which is different.

Q. 18   (a) 43   (b) 47
            (c) 53   (d) 64

Q. 19 (a) 100   (b) 125

        (c) 196   (d) 225

Q. 20   19, 23, 32, 57, 106, 187
(a) 19   (b) 57
(c) 187   (d) 106

Q. 21   2, 8, 20, 44, 92, 184, 380
(a) 92   (b) 184
(c) 380   (d) 44

Q. 22 (a) 121   (b) 100
            (c) 11   (d) 111

Q. 23 (a) 12   (b) 22
            (c) 56   (d) 132

16. Letter Series, analogy, Letter odd man out and coding decoding

Directions (Q. 1 – Q. 8): All of these have same relationship, while one is different. Identify the odd, Which is different?

Q. 1 (a) PQR   (b) XYZ
     (c) ABC   (d) MLN

Q. 2 (a) DB   (b) GC
      (C) HD   (d) JF

Q.3 (a) ABD   (b) EFH
     (c) IJK   (d) PQS

Q. 4 (a) OA   (b) IU
     (c) EB   (d) AI

Q. 5 (a) AB = E   (b) CD = Y
      (c) EA = Y   (d) BC = M

Q. 6 (a) GJ   (b) MP
      (c) KR   (d) CF

Q. 7 (a) BE   (b) EG
      (c) MO   (d) GI

Q. 8 (a) CAT = 24   (b) MAT = 34

      (c) RAT = 39   (d) COT = 39

Directions (Q. 9-Q. 17): Fill in the blanks.
Q. 9 CGKO: AEIM: DHLP: …………………..
(a) BFJN   (b) GJFN
(c) FNJI   (d) BJNF

Q. 10 876: FGH:: 345: ………………….
(a) CDE
(b) EDC
(c) DEC
(d) CED

Q. 11 BARODA: CBSPEB:: ………………….
CPNCBZ
(a) MADRAS
(b) BOMBAY
(c) BANGURU
(d) BANGLA

Q. 12 CARPET: TCEAPR : : …………
LNAANTOI
(A) NATIONPL
(B) NATIONAL
(C) NATIOLNL
(D) NATERANL

Q. 13 RANCHI : SZOBIH : : …………………..
LNMJBSB
(A) KOLKATA
(B) KOLTAKA
(C) KOLKACS
(D) KALMADI

Q. 14 AEI : LPT : : CGK : …………….
(A) CSV
(B) RUY
(C) TXC
(D) NRV

Q. 15 OST : NQQ : : KFO : ………
(A) LEQ
(B) JDL
(C) DEL
(D) LDJ

Q.16 ABK : V : : BCD : ………….
(A) N
(B) I
(C) X
(D) Y

Directions (Q. 17 – Q. 19): fill in the blanks.
Q. 17 XUW, TQS, PMO, ……………..HEG
(a) LKI
(b) LIK
(c) LQR
(d) LOB

Q. 18 A, CD, GHI, …………………..UVWXY
(a) LMNO
(b) MIVO
(c) NOPQ
(d) MNOP

Q. 19 AB9, BC25, CD49, DE81, ………………
(a) EF100
(b) EF64
(c) EF121
(d) EF144

Direction (Q. 20 – Q. 24): choose the correct answer for the following:
Q. 20 if code of BOARD is CPBSE then code of CHAIR
(a) DIJBS
(b) DIBJS
(c) DIJSB
(d) DISJB

Q. 21 if code BHOPAL is EERMDI then code of NAGPUR
(A) QXJMXO
(B) QXJMXQ
(C) QXMJXO
(D) QXJMXP

Q. 22 MONKEY is coded as XDJMNL, then code of TIGER
(a) QDFHS
(b) SDFHS
(c) SHFDS
(d) UJFHS

Q. 23 Code of APPLE is 50. Then code of ORANGE is
(a) 60
(b) 70
(c) 80
(d) 50

Q. 24 if CIRCLE is coded as DKUFNF, then code of SQURAE
(a) TSXDFT
(b) TSXDTF
(c) TXSDFT
(d) TXDTFS

17. Logical Venn diagram

Directions (Q. 1-Q 4): These questions are based on the diagram given below.
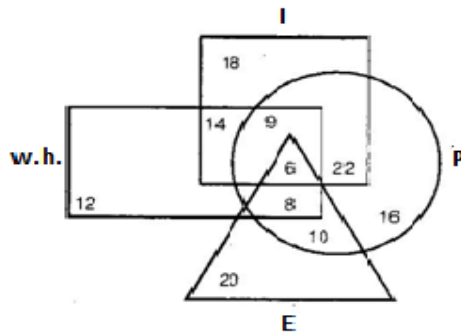
Square represents the people who are intelligent; rectangle represent the people who work hard, triangle represents the people who are employees. Circle represents the people who are professors.

Q. 1 How many intelligent people, who work hard, are neither employees nor professors?
(a) 14   (b) 18
(c) 30   (d) 20

Q. 2 which of the following numbers represents people who are only intelligent?
(a) 14   (b) 1
(c) 12   (d) 18

Q. 3 How many professors are intelligent and work hard but are not employees?
(a) 6   (b) 9
(c) 10   (d) 16

Q. 4 What does number 10 represent in the above diagram?
(a) Only employees
(b) Only intelligent
(c) Only employees who are professors
(d) Only hard worker

Direction (Q. 5-Q.14): In the following figure, the circle stands for employed, the square stands for hard working, the triangle stands for rural and the rectangle stands for intelligent. study the figure carefully and answer the questions that follow.
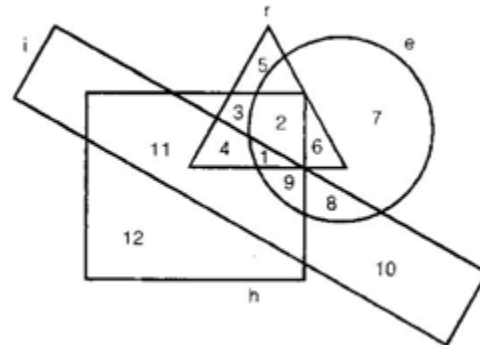
Q. 5 Non – rural, employed, hard working and intelligent people are indicated by region
(a) 8   (b) 9
(c) 10   (d) 11

Q. 6 Non – rural, employed people who are neither intelligent nor hard working are represented by region
(a) 12   (b) 11
(c) 10   (d) 7

Q. 7 Intelligent, employed and hard working non rural people are indicated by region
(a) 11   (b) 6
(c) 9   (d) 4

Q. 8 Hard working non-rural people who are neither employed nor intelligent are shown in region
(a) 8   (b) 7
(c) 6   (d) 12

Q. 9 Employed, hard working and intelligent rural people are indicated by region
(a) 1   (b) 2
(c) 3   (d) 4

Q. 10 Rural hard working people who are neither employed nor-intelligent are indicated by region
(a) 6   (b) 5
(c) 4   (d) 3

Q. 11 Rural employed people who are neither intelligent nor hard working are indicated by region
(a) 2   (b) 4

(c) 6   (d) 9

Q. 12 Rural people who are hard working and employed but intelligent are indicated by region
(a) 1   (b) 2
(c) 3   (d) 4

Q. 13 Unemployed rural hard working and intelligent people are indicated by region

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

Q. 14 Rural employed people who are neither intelligent nor hard working are indicated by region
(a) 10   (b) 9
(c) 6   (d) 4

18. Previous Years GATE Questions

GATE – 2010

Q. 1 25 persons are in a room. 15 of them play hockey, 17 of them play football and 10 of them play both hockey and football. Then the number of persons playing neither hockey nor football is
(a) 2   (b) 17
(c) 13   (d) 3

Q. 2 If 137 + 276 = 435 how much is 731 + 672?
(a) 534   (b) 1403
(c) 1623   (d) 1531

Q. 3 5 skilled workers can build a wall in 20 days; 8 semiskilled workers can build a wall in 25 days 10 unskilled workers can build a wall in 30 days, if a team has 2 skilled, 6 semiskilled and 5 unskilled workers, how long will it take to build the wall?
(a) 20 days   (b) 18 days
(c) 16 days   (d) 15 days

GATE – 2011

Q. 6 If Log (P) = (1/2)Log (Q) = (1/3) LogR, then which of the following options is TRUE?
(a) $P^2 = Q^3 R^2$ (b) $Q^2 = PR$
(c) $Q^2 = R^3 P$ (d) $R = P^2 Q^2$

Q. 7 A container originally contains 10 liters of pure spirit. From container 1 liter of spirit is replaced with 1 liter of water. Subsequently, 1

Q. 4 Given digit 2, 2, 3, 3, 3, 4, 4, 4, 4 how many distinct 4 digit numbers greater than 3000 can be domed?
(a) 50   (b) 51
(c) 52   (d) 54

Q. 5 Hari (H), Gita (G), Irfan (I) and Saira (S) are siblings (i. e. brothers and sisters). All were born on 1st January. The age difference between any two successive siblings (that is born one after another) is less than 3 years. Given the following facts:
1. Hari's age + Gita's age > Irfan's age + saira's age.
2. The age difference between Gita and Saira is 1 year. However, Gita is not the oldest and Saira is not the youngest.
3. There are no twins.
In what order were they born (oldest first)?
(a) HSIG   (b) SGHI
(C) IGSH   (d) IHSG

liter of the mixture is again replaced with 1 liter of water and this process is repeated one more time. How much spirit is now in the container?
(a) 7.58 liters   (b) 7.84 liters
(c) 7 liters   (d) 7.29 liters

Q. 8 The variable cost (V) of manufacturing a product varies according to the equation V = 4q. Where q is the quantity produced. The fixed cost (F) of production of same product reduces

with q according to the equation $F = 100/q$. How many units should be produced to minimize the total cost (V + F)?
(a) 5 　　　　　　　　(b) 4
(c) 7 　　　　　　　　(d) 6

Q. 9 P, Q, R and S four types of dangerous microbes recently found in a human habitat. The area of each circle with its diameter printed in brackets represents the growth of a single microbe surviving human immunity system within 24 hours of entering the body. The danger to human beings varies proportionately with the toxicity, potency and growth attributed to a microbe shown in the figure below:

(Probability that microbe will overcome human immunity system)
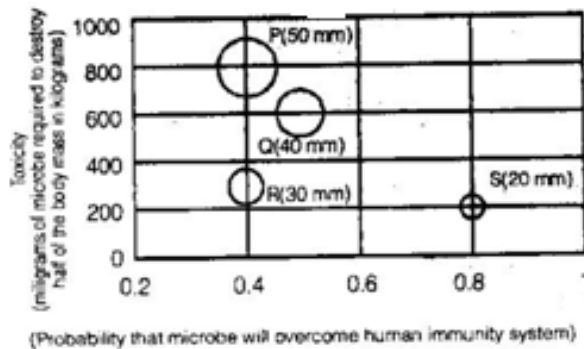
A pharmaceutical company is contemplating the development of a vaccine against the most dangerous microbe. Which microbe should the company target in its first attempt?
(a) P 　　　　　　　　(b) Q
(c) R 　　　　　　　　(d) S

Q. 10 A transporters receives the same number of orders each day. Currently, he has some pending orders (backlog) to be shipped. If he uses 7 trucks, then at the end of the 4th day he can clear all the orders. Alternatively, if he uses only 3 trucks, then all the order are cleared at the end of the 10th day. What is the minimum number of trucks required so that there will be no pending order at the end of the 5th day?
(a) 4 　　　　　　　　(b) 5
(c) 6 　　　　　　　　(d) 7

Q. 11 There are two candidates P and Q in an election. During the campaign 40% of the voters promised to vote for P and rest for Q. However, on the day of election 15% of the voters went back on their promise to vote for P and instead voted for Q. 25% of the voters went back on their promise to vote for Q and instead voted for P. suppose, P lost by 2 votes, then what was the total number of voters?
(a) 100 　　　　　　　(b) 110
(c) 90 　　　　　　　(d) 95

Q. 12 Three friends, R, S and T shared toffee from a bowl. R took 1/3rd of the toffees, but returned four to the bowl. S took 1/4th of what was left but returned three toffees to the bowl. T took half of the remainder but returned two back into the bowl. if the bowl has 17 toffees left, how many toffees were originally there in the bowl?
(a) 38 　　　　　　　(b) 31
(c) 48 　　　　　　　(d) 41

Q. 13 The sum of n terms of the series 4 + 44+ 444+ ...is
(a) $(4/81) [10^{n+1} - 9n - 1]$
(b) $(4/81) [10^{n-1} - 9n - 1]$
(c) $(4/81) [10^{n+1} - 9n - 10]$
(d) $(4/81) [10^n - 9n - 10]$

Q. 14 The fuel consumed by a motorcycle during a journey while travelling at various speeds is indicated in the graph below:
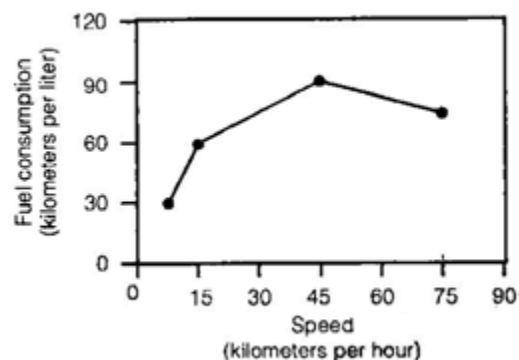
The distance covered during four laps of the journey is listed in the table below:

Lap	Distance (Kilometers)	Average speed (kilometers per hour)
P	15	15
Q	75	45

R	40	75
S	10	10

From the given data, we can conclude that the fuel consumed per kilometer was least during the lap

(a) P   (b) Q
(c) R   (d) S

Q. 15 given that f(y) = l y l /y, and q is any non-zero real number, the value of lf(q) – f(-q)l is
(a) 0   (b) -1
(c) 1   (d) 2

GATE – 2012

Q. 16 The cost function for a product in firm is given by $5q^2$, where q is the amount of production. The firm can sell the product at a market price of Rs 50 per unit. The number of units to be produced by the firm such that the profit is maximized is
(a) 5   (b) 10
 (c) 15   (d) 25

Q. 17 A political party orders an arch for the entrance to the ground in which the annual conventions is being held. The profile of the arch follows the equation y = 2x -0.1 x^2 where y is the height of the arch in meters. The maximum possible height of the arch is
(a) 8 meters   (b) 10 meters
(c) 12 meters   (d) 14 meters

Q. 18 Given the sequence of terms, AD CG FK JP the next term is
(a) OV   (b) OW
(c) PV   (d) PW

Q. 19 Which of the following assertions are CORRECT?
P. Adding 7 to each entry in a list adds 7 to the mean of the list
Q: addling 7 to each entry in a list adds 7 to the standard deviation of the list
R: Doubling each entry in a list leaves the standard deviation of the list unchanged
(a) P, Q   (b) Q, R
 (c) P, R   (d) R, S

Q. 20 An automobile plant contracted to buy shock absorbers from two suppliers X and Y. X supplies 60% and Y supplies 40% of the shock absorbers. All shock absorbers are subjected to a quality test. The ones that pass the quality test are considered reliable. Of X's shock absorbers, 96% are reliable. Of Y's shock absorbers, 72% are reliable.
The probability that a randomly chosen shock absorber, which is found to be reliable, is made by Y is
(a) 0.288   (b) 0.334
(c) 0.667   (d) 0.720

Q. 21 If $(1.001)^{1259} = 3.52 \; and \; (1.001)^{2062} =$ 7.85, then $(1.001)^{3321} =$
(a) 2.23   (b) 4.33
(c) 11.37   (d) 27.64

Q. 22 A and B are friends. They decide to meet between 1. P. M. and 2 P. M. on a given day. There is a condition that whoever arrives first will not wait for the other for more than 15 minutes. The probability that they will meet on that day is
(a) $\frac{1}{4}$ (b) $\frac{1}{16}$
(c) $\frac{7}{16}$ (d) $\frac{9}{16}$

Q. 23 Raju has 14 currency notes in his pocket consisting of only Rs 20 notes and Rs 10 notes. The total money value of the notes is Rs 230. The number of Rs 10 notes that Raju has is
(a) 5   (b) 6
(c) 9   (d) 10

Q. 24 There are eight bags of rice looking alike, seven of which have equal weight and one is slightly heavier. The weighing balance is of unlimited capacity. Using this balance, the minimum number of weighing required to identify the heavier bag is

(a) 2   (b) 3
(c) 4   (d) 8

Q. 25 The data given in the following table summarizes the monthly budget of an average household

Category	Amount
Food	4000
Clothing	1200
Rent	2000
Savings	1500
Others	1800

The approximate percentage of the monthly budget NOT spent on savings is
(a) 10%   (b) 14%
(c) 81%   (d) 86%

GATE – 2013

Q. 26 A number is as much greater than 75 as it is smaller than 117. Then the number is
(a) 91   (b) 93
(c) 89   (d) 96

Q. 27 A reduction of 5% in price of sugar enables a housewife to buy 3 kg more for Rs. 280. Find the reduce price.
(a) 4.67/kg   (b) 5.5/kg
(c) 3.33/kg   (d) 7.76/kg

Q. 28 X and Y are two positive real numbers, satisfying the equations
$2x + y \leq 6, \quad x + 2y \leq 8$
For which values of (x, y) the function f(x, y) = 3x + 6y will give maximum value
(a) 4/3, 10/3   (b) 8/3, 20/3
(c) 8/3, 10/3   (d) 4/3, 20/3

Q. 29 A firm is selling its product at Rs 60/unit. The total cost of production is Rs 100 and film is earning total profit of Rs 500, later the total cost increased by 30%. By what percentage selling price per unit should be increased to maintain the same profit percentage.
(a) 5   (b) 15
(c) 10   (d) 30

Q. 30 Abhishek is elder to Savan, Savan is younger to Anshul. The correct relations is
(a) Abhishek is elder to Anshul
(b) Anshul is elder to abhishek
(c) Abhishek and Anshul are of same age
(d) No conclusion can be drawn

Q. 31 From the data given below:

	2010	2011
Raw material	5200	6240
Power & fuel	7000	9450
Salary & wages	9000	12600
Plants & machinery	20000	25000
Advertising	15000	19500
Research & development	22000	26400

Which one of the following increased by same percentage in year 2010-2011?
(a) Raw material and salary & wages
(b) Salary & wages and advertising
(c) Power & fuel and Advertising
(d) Raw material and research & development

Q. 32 what will be the maximum sum of 44, 42, 40………
(a) 502   (b) 504
(c) 506   (d) 500

Q. 33 Out of all 2-digit integers between 1 and 100, a 2-digit number has to be selected at random. What is the probability that the selected number is not divisible by 7?
(a) 13/90   (b) 12/90
(c) 78/90   (d) 77/90

Q. 34 A tourist covers half of this journey by train at 60 km/hr, half of the remainder by bus at 30 km/hr and the rest by cycle at 10 km/hr. the average speed of the tourist in km/hr during his entire journey is

(a) 36   (b) 30
(c) 24   (d) 18

Q. 35 Find the sum of the expression

$$\frac{1}{\sqrt{1}+\sqrt{2}}+\frac{1}{\sqrt{2}+\sqrt{3}}+\frac{1}{\sqrt{3}+\sqrt{4}}+\cdots +\frac{1}{\sqrt{80}+\sqrt{81}}$$

(a) 7   (b) 8
(c) 9   (d) 10

Q. 36 The current erection cost of a structure is Rs 13,200. if the labour wages per day increase by 1/5 of the current wages and the working hours decrease by 1/24 of the current period then the new cost of erection in Rs, is
(a) 16,500   (b) 15,180
(c) 11,000   (d) 10,120

Q. 37 In the summer of 2012, in new Delhi, the mean temperature of Monday to Wednesday was 41^0C and of Tuesday to Thursday was 43^0C. If the temperature on Thursday was 15% higher than that of Monday, then the temperature in ^{0}C on Thursday was.

GATE-2014

Q.42 Rajan was not happy that Sajan decided to do the project on his own. On observing his unhappiness, Sajan explained to Rajan that he preferred to work independently.
Which one of the statements below is logically valid and can be inferred from the above sentences?
(a) Rajan has decided to work only in a group.
(b) Rajan and sajan were formed into a group against their wishes.
(c) Sajan had decided to give in to rajan's request to work wishes.
(d) Rajan had believed that sajan and he would be working together.

Q.43 A foundry has a fixed daily cost of Rs. 50, 000 whenever it operates and a variable cost of Rs. 800Q, where Q is the daily production in

(a) 40   (b) 43
(c) 46   (d) 49

Q. 38 find the sum upto n terms of the series 10 + 84 + 734 + …..
(a) $\frac{9(9^n+1)}{10}+1$ (b) $\frac{9(9^n-1)}{8}+1$
(c) $\frac{9(9^n-1)}{8}+n$ (d) $\frac{9(9^n-1)}{8}+n^2$

Q. 39 The set of values of p for which the roots of the equation $3x^2+2x+p(p-1)=0$ are of opposite sign is
(a) $(-\infty,0)$ (b) $(0,1)$
(c) $(1,\infty)$ (d) $(0,\infty)$

Q. 40 A cars travels 8 km in the first quarter of an hour, 6 km in the second quarter and 16 km in the third quarter. The average speed of the car in km per hour over the entire journey is
(a) 30   (b) 36
(c) 40   (d) 24

Q. 41 What is the chance that a leap year, selected at random, will contain 53 Saturdays?
(a) 2/7   (b) 3/7
(c) 1/7   (d) 5/7

tones. What is the cost of production in Rs. per ton for a daily production of 100 tones?

Q.44 Find the odd one in the following group:
ALRVX, EPVZB, ITZDF, OYEIL
(a) ALRVX   (b) EPVZB
(c) ITZF   (d) OYEIK

Q.45 Anuj, bhola, chandan, dilip, eswar and Faisal live on different floors in a six-storeyed bylining (the ground floor is numbered 1, the floor above it 2 and so on). Anuj lives on an even-numbered floor. Bhola does not live on an odd numbered floor; bhola does not live on an odd numbered floor. Chandan does not live on any of the floors below Faisal's florr. Dilip does not live on floor number 2. Eswar does not live on a floor immediately above or immediately below bhola. Faisal lives three floors above

dilip. Which of the following floor- person combinations is correct?

	Anuj	Bhola	chandan	dilip	eswar	faisal
(a)	6	2	5	1	3	4
(b)	2	6	5	1	3	4
(c)	4	2	6	3	1	5
(d)	2	4	6	1	3	5

Q.46 The smallest angle of a triangle is equal to two thirds of the smallest angle of a quadrilateral. The ratio between the angles of the quadrilateral is 3:4:5:6. The largest angle of the triangle is twice its smallest angel. What is the sum, in degrees, of the second largest angle of the triangle and the largest angle of the quadrilateral?

Q.47 One percent of the people of country X are taller than 6 ft. two percent of the people of country Y are taller than 6 ft. there are thrice as many people in country X as in country. Taking both countries together, what is the percentage of people taller than 6 ft?
(a) 3.0   (b) 2.5
 (c) 1.5   (d) 1.25

Q.48 The monthly rainfall chart based on 50 years of rainfall in Agra is shown in the following figure. Which of the following are true? (K percentile is the value such that k percent of the data fall below that value)
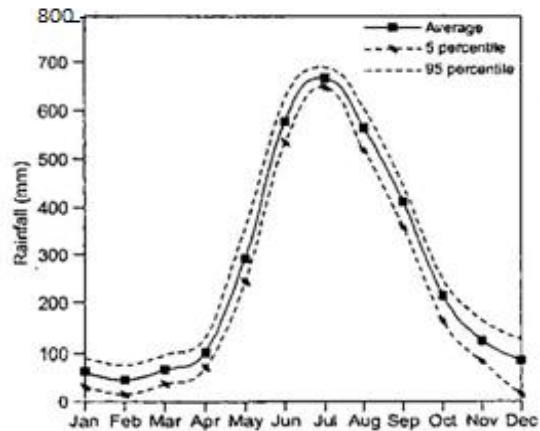
(i) On average, it rains more in July than in December
(ii) Every year, the amount of rainfall in august is more than that in January
(iii) July rainfall can be estimated with better confidence than February rainfall
(iv) In august, there is at least 500 mm of rainfall
(a) (i) and (ii)   (b) (i) and (iii)]
(c) (ii) and (iii)   (d) (iii) and (iv)

CE, IN (Online Exam) Set: II
Q. 49 Which of the following options is the closest in meaning to the sentence below?
'As a woman, I have no country."
(a) Woman have no country
(b) Woman is not citizens of any country.
(c) Women's solidarity knows no national boundaries.
(d) Women of all countries have equal legal rights.

Q.50 In any given year, the probability of an earthquake greater than magnitude 6 occurring in the Garhwali Himalayas is 0.04. The average time between successive occurrences of such earthquakes is …..Years.

Q.51 The population of a new city is 5 million and is growing at 20 % annually. How many years would it ake to double at this growth rate?
(a) 3-4 years   (b) 4-5 years
(c) 5-6 years   (d) 6-7 years

Q.52 In a group of four children, some is younger to raiz. Shiv is elder to ansu. ansu is youngest in the group. Which of the following statements is/are required to find the eldest child in the group?

Statements
1. Shiv is younger to riaz
2. Shiv is elder to Som.
(a) Statement 1 by itself determines the eldest child.
(b) Statement 2 by itself determines the eldest child.
(c) Statement 2 by and are both required determining the eldest child.
(d) Statements 1 and 2 are not sufficient to determine the eldest child.

Q.53 Moving into a world of big data will require us to change our thinking about the merits of exactitude. to apply the conventional mindset of measurement to the digital, connected world of the twenty-first century is to miss a crucial point. As mentioned earliear, the obsession with exactness is an artifact of the information deprived analog era. When data was sparse, every data point was critical, and thus great care was taken to avoid letting any point bias the analysis. From "BIG DATA " viktor mayer- schonberger and Kenneth cukier

The main point of the Kenneth cukier
() the twenty-first century is a digital world
(b) Big data is obsessed with exactness
(c) Exactitude is not critical in dealing with big data
(d) Sparse data leads to a bias in the analysis

Q.54 The total exports and revenues from the exports of the country are given in the two pie charts below. The pie chart for exports shows the quantity of each item as a percentage of the total quantity of exports, the pie chart for the revenues shows the percentage of the total revenue generated through export of each item. The total quantity of exports of all the items is 5 lakh tones and the total revenues ar 250 crore rupees. What is the ratio of the revenue generated through export of item 1 per

kilogram to the revenue generated through export of item 4 per kilogram?
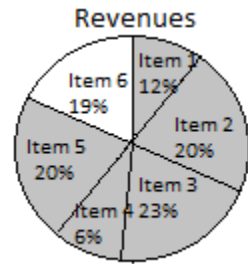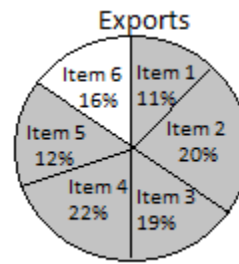
(a) 1 : 2   (b) 2 : 1
(c) 1 : 4   (d) 4 : 1

Q.55 X is 1 km northeast of Y. Y is 1 km southeast of Z. W is 1 km west of Z. P is 1 km south of W. Q is 1 km east of P. what is the distance between X and Q in km?
(a) 1   (b) $\sqrt{2}$
(c) $\sqrt{3}$ (d) 2

Q.56 10% of the population in a town is HIV$^+$. A new diagnostic kit for HIV detection is available; this kit correctly identifies HIV$^+$ individuals 95% of the time, and HIV$^-$ individuals 89% of the time. A particular patient is tested using this kit and is found to be positive. The probability that the individual is actually positive is………….

ME, EC (online Exam) set: I – IV
Q.57 Read the statement:
All women are entrepreneurs.
Some women are doctors.
Which of the following conclusions can be logically inferred from the above statements?
(a) All women are doctors
(b) All doctors are entrepreneurs
(c) All entrepreneurs are women
(d) Some entrepreneurs are doctors

Q.58 The statistics of runs scored in a series by four batsmen are provided in the following table.
Who is the most consistent batsman of these four?

Batsman	Average	Standard Deviation
K	31.2	5.21
L	46.0	6.35

M	54.4	6.22
N	17.9	5.90

(a) K   (b) L
(c) M   (d) N

Q.59 What is the next number in the series?
12 35 81 173 357...

Q.60 Regular die has six sides with numbers 1 to 6 marked on its sides. if a very large number of throes show the following frequencies of occurrence;
1->0.167; 2->0.167; 3->0.152:4->0.166:5->0.168:6->0.180.
We call this die
(a) irregular   (b) Biased
(c) Gaussian   (d) Insufficient

Q.61 Fill in the missing number in the series.
2   3   6   15   -?-   157.5   630

Q.62 "India is a country of rich heritage and cultural diversity". Which one of the following facts best supports the claim made in the above sentence?
(a) India is a union of 28 states and 7 union territories.
(b) India has a population of over 1.1 billion.
(c) India is home to 22 official languages and thousands of dialects.
(d) The Indian cricket team draws players from over ten states.

Q.63 The next term in the series 81, 54, 36, 24 ....is

Q.64 In which of the following options will the expression P < M be definitely true?
(a) M < R > P > S   (b) M > S < P < F
(c) Q < M < F = P   (d) P = A < R < M

Q.65 Let $f = (x, y) = x^n\, y^m = P$. if x is doubled and y is halved, the new value of f is
(a) $2^{n-m}P$ (b) $2^{m-n}P$
(c) 2 (n − m) P   (d) 2(m − n) P

Q.66 In a sequence of 12 consecutive odd numbers the sum of the first 5 numbers is 425, what is the sum of the last 5 number is the sequence?

Q.67 Find the odd one from the following group:
WEKO   IQWA   FNTX   NVBD
(a) WEKO   (b) IQWA
(c) FNTX   (d) NVBD

Q.68 For submitting tax returns, all resident males with annual income below Rs 10 lakh should fill up form P and all resident females with income below Rs 8 lakh should fill up form Q. All people with incomes above Rs 10 lakh should fill up form R, except non residents with income above Rs 15 lakhs, who should fill up Form S. All others should fill form T. An example of a person who should fill form T is
(a) a resident male with annual income Rs 9 lakh
(b) a resident female with annual income Rs 9 lakh
(c) a non – resident male with annual income Rs 16 lakh
(d) a non –resident female with annual income Rs 16 lakh

Q.69 A tain that is 280 metres long, travelling at a uniform speed, crosses a platform in 60 seconds and passes a man standing on the platform in 20 seconds. What is the length of the platform in metres?

Q.70 The exports and imports (in croes of Rs. of a country from 2000 to 2007 are given in the following bar chatt. if the trade deficit is defined as excess of imports over exports, in which year it is the trade deficit 1/5th of the exports?

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

Q.71 you are given three coins: one has heads on both faces, the second has tails on both faces, and the third has a head on one face and a tail on the other. You choose a coin at random and toss it, and it comes up heads. The probability that the other face is tails is
(a) 1/4   (b) 1/3
(c) 1/2   (d) 2/3

Q.72 Find the odd one in the following group
QWZB, BHKM, WCGJ, MSVX,
(a) QWZB   (b) BHKM
(c) WCGJ   (d) MSVX

Q.73 Lights of four colors (red, blue, green, yellow) are hung on a ladder. On every step of the ladder there are two lights, if one of the lights is red, the other light on that step will always be blue. If one of the lights on a step is green, the other light on that step will always be yellow. Which of the following statements is not necessarily correct?
(a) The number of red lights is equal to the number of blue lights
(b) The number of green lights is equal to the number of yellow lights
(c) The sum of the red green lights is equal to the sum of the yellow and blue lights
(d) The sum of the red and blue lights is equal to the sum of the green and yellow lights

Q.74 The sum of eight consecutive odd numbers is 656. The average of four consecutive even numbers is 87. What is the sum of the smallest odd number and second largest even number?

Q.75 The total exports and revenues from the exports of a country are given in the two charts shown below. The pie chart for exports shows the quantity of each item exported as a percentage of the total quantity of exports. The pie chart for the revenues shows the percentage of the total revenue generated through export of each item. The total quantity of exports of all the items is 500 thousand tones and the total revenues are 250 crore rupees. Which item among the following has generated the maximum revenues per kg?
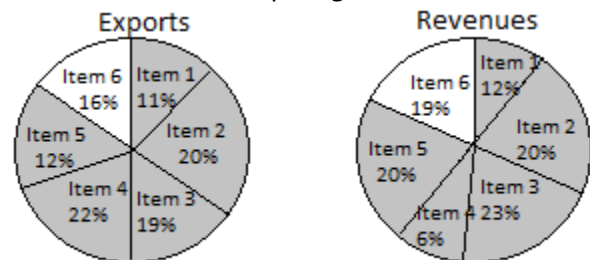

(a) Item 2   (b) Item 3
(c) Item 6   (d) Item 5

Q.76 It takes 30 minutes to empty a half – full tank by draining it at a constant rate. it is decided to simultaneously pump water into the half-full tank while draining it. What is the rate at which water has to be pumped is so that it gets fully filled in 10 minutes?
(a) 4 times the draining rate
(b) 3 times the draining rate
(c) 2.5 times the draining rate
(d) 2 times the draining rate

Q.77 Find the next tern in the sequence. 7G, 11K, 13M, ……….

Q.78 The multi-level hierarchical pie chart shows the population of animals in reserve forest. the correct conclusions from this information are:
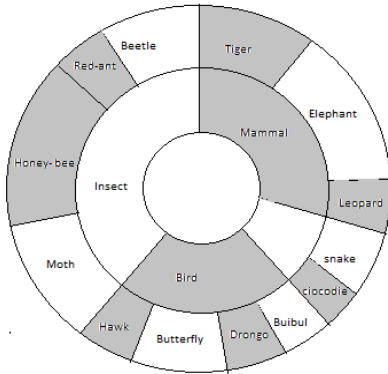
(i) Butterflies are birds
(ii) There are more tigers in this forest than red ants
(iii) All reptiles in this forest are either snakes or crocodiles
(iv) Elephants are the largest mammals in this forest
(a) (i) and (ii) only   (b) (i), (ii) ,(iii) and (iv)
(c) (i), (iii) and (iv) only   (d) (i), (ii) and (iii) only

Q.79 A man can row at 8 km per hour in still water, if it takes him thrice as long to row upstream, as to row downstream, then find the stream velocity in km per hour.

Q.80 A firm producing air purifiers sold 200 units in 2012. The following pie chart presents the share of raw material, labor, energy, plant& machinery, and transportation costs in the total manufacturing cost of the firm in 2012. The expenditure on labor in 2012 is Rs. 4, 50, 000. In 2013, the raw material expenses increased by 30% and all other expenses increased by 20%. If The Company registered a profit of Rs. 10 lakhs in 2012, at what price (in Rs) was each air purifier sold?
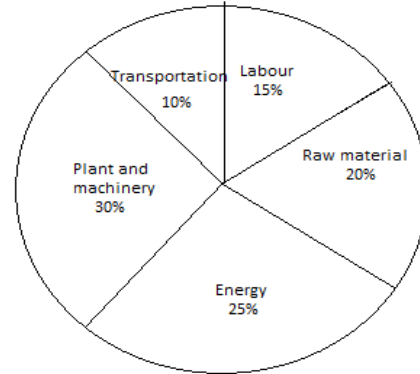
Q.81 A batch of one hundred bulbs is inspected by testing four randomly chosen bulbs. The batch is rejected if even one of the bulbs is defective. A batch typically has five defective bulbs. The probability that the current batch is accepted is ……….

Q.82 Find the next term in the sequence;
13M, 17Q, 19S, …
(a) 21W   (b) 21V
(c) 23W   (d) 23V

Q.83 if 'KCLFTSB' stands for 'best of luck' and 'SHSWDG' stands for 'good wishes', which of the following indicates 'ace the exam?
(a) MCHTX   (b) MXHTC
(c) XMHCT   (d) XMHTC

Q.84 Industrial consumption of power doubles from 2000-2001 to 2010-2011. Find the annual rate of increase in percent assuming it to be uniform over the years.
(a) 5.6   (b) 7.2
(c) 10.0   (d) 12.2

Q.85 A five digit number is formed using the digits 1,3,5,7 and 9 without repeating any of them what is the sum of all such possible five digit numbers?
(a) 6666660   (b) 6666600
(c) 6666666   (d) 6666606

Q. 86 if $\left(z + \frac{1}{z}\right)^2 = 98$, compute $\left(z^2 + \frac{1}{z^2}\right)$

Q.87 The roots of $ax^2 + bx + x = 0$ are real and positive a, b and c are real.
Then $ax^2 + b|x| + c = 0$ has.
(a) No roots
(b) 2 real roots
(c) 3 real roots
(d) 4 real roots

Q.88 What is the average of all multiples of 10 from 2 to 198?
(a) 90
(b) 100
(c) 110
(d) 120

Q.89 The value of $\sqrt{12 + \sqrt{12 + \sqrt{12 + \cdots}}}$ is
(a) 3.464
(b) 3.932
(c) 4.000
(d) 4.444

Q.90 Which number does not belong in the series below?
2, 5, 10, 17, 26, 37, 50, 64
(a) 17
(b) 37
(c) 64
(d) 26

Q.91 The table below has question wise data on the performance of students in an examination. The marks for each question are also listed. There is no negative or partial marking in the examination.

Q. No.	Marks	Answered Correctly	Answered Wrongly	Not Attempted
1	2	21	17	6
2	3	15	27	2
3	2	23	18	3

What is the average of the marks obtained by the class in the examination?
(a) 1.34
(b) 1.74
(c) 3.02
(d) 3.91

Q.92 Geneticists say that are very close to confirming the genetic roots of psychiatric illnesses such as depression and schizophrenia, and consequently, that doctors will be able to eradicate these diseases through early identification and gene therapy.
On which of the following assumptions dose the statements above rely?

(a) Strategies are now available for eliminating psychiatric illness.
(b) Certain psychiatric illness has a genetic basis.
(c) All human disease can be traced back to genes and how they are expressed.
(d) In the future, genetics will become the only relevant field for identifying psychiatric illness.

Q.93 Round – trip tickets to a tourist destination are eligible for a discount of 10% on the total fare. In addition, groups of 4 or more get a discount of 5% on the total fare. if the one way single person fare is Rs. 100, a group of 5 tourists purchasing round trip tickets will be charged Rs……..

Q.94 in a survey, 300 respondents were asked whether they own a vehicle or not. If yes, they were further asked to mention whether they own a car or scooter or both. Their responses are ablated below. What percent of respondents do not own a scooter?

		Men	Women
Own vehicle	Car	40	34
	Scooter	30	20
	Both	60	46
Do not own vehicle		20	50

Q.95 When a point inside of a tetrahedron (a solid with four triangular surfaces) is connected by straight lines to corners, how many (ne) internal planes are created with these lines?

Q.96 If x is real and $|x^2 - 2x + 3| = 11$, then possible values of $|-x^3 + x^2 - x|$ include
(a) 2, 4
(b) 2, 14
(c) 4, 52
(d) 14, 52

Q.97 The ratio of male to female students in a college for five years is plotted in the following line graph. If the number of female students doubled in 2009, by what percent did the number of male students increase in 2009?
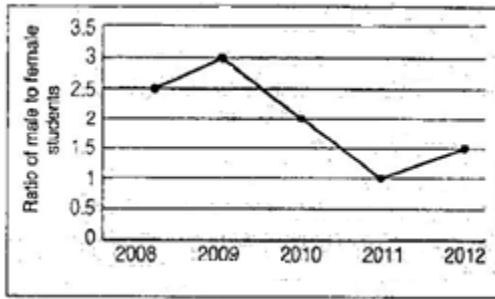
Q.98 At what time between 6 a.m. and 7 a.m. will the minute hand and hour hand of a clock make an angle hand of a clock make an angle closest to 60^0?
(a) 6.22 a.m.　　　　　　(b) 6.27 a. m.
(c) 6.38 a.m　　　　　　　(d) 6.45 a.m

Q.99 A dance program me is scheduled for 10, 00 a.m. some students are participating in the program me and they need to come an hour earlier than the start of the event. These students should be accompanied by a parent. Other students and parents should come in time for the program me. The instruction you think that is appropriate for is
(a) Students should come at 9.00 am and parents should come at 10.00 am.
(b) Participating students should come at 9.00 am accompanied by a parent, and other parents and students should come by 10.00 am.
(c) Students who are not participating should come by 10. Am they should not bring their parent. Participating students should come at 9.00 am.
(d) Participating students should come before 9.00 am. Parents who accompany them should come at 9.00 am. All other should come at 10.00 am.

Q.100 By the beginning of the 20th century, several hypotheses were being proposed, suggesting a paradigm shift in our understanding of the universe. However, the clinching evidence was provided by experimental measurements of the position of a star which was directly behind out sun.
Which of the follow inference (s) may be drawn from the above passage?
(i) Out understanding of the universe changes based on the positions of stars
(ii) Paradigm shifts usually occur at the beginning of centuries
(iii) Stars are important objects in the universe
(iv) Experimental evidence was important in confirming this paradigm shift
(a) (i), (ii) and (iv)　　　　(b) (iii) only
(c) (i) and (iv)　　　　　　(d) (iv) only

Q.101 The gross domestic product (GDP) in Rupees grew at 7% during 2012-2013. For international comparison, the GDP is compared in US Dollars (USD) after conversion based on the market exchange rate. During the period 2012-2013 the exchange rate for the USD increased from Rs. 50/USD to Rs. 60/USD. India's GDP in USD during the period 2012-2013.
(a) Increased by 5%
(b) Decreased by 13%
(c) Decreased by 20%
(d) Decreased by 11%

GATE-2015

102. An electric bus has onboard instruments that report the total electricity consumed since the start of the trip as well as the total distance covered. During a single day of operation, the bus travels on stretches M.N, O and P in that order. The cumulative distances travelled and the corresponding distances travelled and the corresponding electricity consumption are shown in the table below.

Stretch	Cumulative Distance	Electricity Used (kWh)

	(km)	)
M	20	12
N	45	25
O	75	45
P	100	57

The stretch where the electricity consumption: I per km is minimum

(a) M   (b) N

(c) O   (d) P

103. What is the adverb for the given word below?

Misogynous

(a) Misogynousness   (b) Misogynity

(c)Misogynously   (d) Misogynous

104. Choose the appropriate word/phrase, out of the four options given below to complete the following sentence:

Dhoni, as well as the other team members of Indian team ………………present on the occasion.

(a) Were   (b) Was

(c) Has   (d) Have

105. Choose the word most similar in meaning to the given word:

Awkward

(a) Inept   (b) Graceful

(c) Suitable   (d) Dreadful

106. Ram and Ramesh appeared in an interview for two vacancies in the same department. The probability of ram's selection is 1/6 and that of ramesh is 1/8 what is the probability that only one of them will be selected?

(a) $\frac{47}{48}$ (b) $\frac{1}{4}$

(c) $\frac{13}{48}$ (d) $\frac{35}{48}$

107. Choose the correct verb to fill in the blank below:

Let us………..

(a) Introvert   (b) Alternate

(c) Atheist   (d) Altruist

108. Choose the most appropriate word from the options given below to complete the following sentence.

The athlete had wanted to come first in the race, he…………………. several hours every day.

(a) Should practice

(b) Should have practiced

(c) Practiced

(d) Should be practicing

109. If x > y > 1, which of the following must be true?

I. lnx > lny   II. $e^x > e^y$

III. $y^x > x^y$ Iv. cos x > cos y

(a) I and ii   (b) I and iii

(c) iii and iv   (d) ii and iv

110. Choose the most suitable one word substitute for the following expression.

Connotation of a road or way

(a) Pertinacious   (b) Viaticum

(c) Clandestine   (d) Ravenous

111. Find the missing sequence in the letter series below:

A, CD, GHI, ? UVWXY

(a) LMN   (b) MNO

(c) MNOP   (d) NOPQ

112. Fill in the blank with the correct idiom/phrase.

That boy from the town was a …………….. in the sleepy village.

(a) Dog out of herd   (b) Sheep from the heap

(c) Fish out of water   (d) Bird from the flock

113. Choose the appropriate word/ phase, out of the four options given below, to complete the following sentence.

Apparent lifelessness…………dormant lite.

(a) Harbors   (b) Lead to

(c) Supports   (d) Affects

114. Five teams have to compete in a league, with every team playing every other team exactly once, before going to the next round.

How may matches will have to be held to complete the league round of matches?
(a) 20   (b) 10
(c) 8   (d) 5

115. Tanya is older than Eric.
Cliff is older than Tanya
Eric is older than cliff.
If the first two statements are true, then the third statement is:
(a) True   (b) False
(c) Uncertain   (d) Data insufficient

116. Choose the statements where underlined word is used correctly
(a) When the teacher alludes to different authors, he is being elusive
(b) When the thief keeps eluding the police, he is being elusive
(c) Matters that are difficult to understand, identify or remember are allusive
(d) Mirages can be allusive, but a better way to express them is illusory

117. Lamenting the gradual sidelining of the arts in school curricula, a group of prominent artists wrote to the chief minister last year, asking him to allocate more funds to support arts education in schools. However, no such increase has been announced in this year's budget. The artists expressed their deep anguish at their request not being approved, but many of them remain optimistic about funding in the future.
Which of the statement(s) below is/ logically valid and can be inferred from the above statements?
i. the artists expected funding for the arts to increase this year.
ii. The chief minister was receptive to the idea of increasing funding for the arts.
iii. The chief minister is a prominent artist.
iv. Schools are giving less importance to arts education nowadays.
(a) iii and iv   (b) I and iv
(c) I, ii and iv   (d) I and iii

118. A tiger in 50 leap of its own behind a deer. The tiger takes 5 leaps per minute to the deer's 4. If the tiger and the deer cover 8 metre and 5 meter per leap respectively, what distance in meters will the tiger have a run before it catches the deer? _____

119. Given below are two statements followed by two conclusions. Assuming these statements to be true, decide which one logically follows.
Statement:
i. All film stars are playback singers.
ii. All film directors are film stars.
Conclusions
i. All film directors are layback singers.
ii. Some film stars are film directors
(a) Only conclusion I follow
(b) Only conclusion II follows
(c) Neither conclusion I nor Ii follows
(d) Both conclusions I and II follow

120. IF $a^2 + b^2 + c^2 = 1,$ then ab + bc + ac lies in the interval
(a) $\left[1, \frac{2}{3}\right]$ (b) $\left[\frac{-1}{2}, 1\right]$
(c) $\left[-1, \frac{-1}{2}\right]$ (d) [2, -4]

121. In the following sentence certain parts are underlined and marked P, Q and R. one of the parts may contain certain error or may not be acceptable in standard written communication. Select the part containing an error. Choose D as your answer if there is no error.

$The\ student\ corrected\ \dfrac{all\ the\ errors}{P}$
$that\ \dfrac{the\ instructor\ marked}{Q}\ on\ the$
$\dfrac{answer\ boob}{R}$

(a) P   (b) Q
(c) R   (d) No Error

122. Ms. X will be in Bagdogra from 01/05/2014 to 20/05/2014 and from 22/05/2014 to 31/05/2014, on the morning of 21/05/2014 whe will reach Koch via Mumbai.

Which one of the statement below is logically valid and can be inferred from the above sentences?
(a) Ms. X will be in Kochi for one day, only in may.   (b) Ms. X will be in Kochi for only one day in May.
(c) Ms. X will be only in Kochi for one day in May.   (d) Only Ms. X will be in Kochi for one day in May.

123. Log tan 1^0 + log tan 2^0 + …+ log tan 89^0 is …
(a) 1   (b) $\frac{1}{\sqrt{2}}$
(c) 0   (d) -1

124. From a circular sheet of paper of radius 30 cm, a sector of 10% area is removed. If the remaining part is used to make a conical surface, then the ratio of the radius and height of the cone is _____

125. In the following questions, the first and the last sentence of the passage are in order and numbered 1 and 6. The rest of the passage is split into 4 parts and numbered as 2, 3, 4 and 5. These 4 parts are not arranged in proper order. Read the sentences and arrange them in a logical sequence to make a passage and choose the correct sequence from the given options.
1. On diwali, the family rises early in the Moring.
2. The whole family, including the youg and the old enjoy doing this
3. Children let off fireworks later in the night with their friends.
4. At sunset, the lamps are lit and the family performs various rituals.
5. Father, mother, and children visit relatives and exchanges gifts and sweets.
6. Houses look so pretty with lighted lamps all around
(a) 2, 5, 3, 4   (b) 5, 2, 4, 3
(c) 3, 5, 4, 2   (d) 4, 5, 2, 3

126. Ram and shy am shared a secret and promised to each other that it would remain between them. Ram expressed himself in one of the following ways as given in the choices below. Identify the correct way as per Standard English.
(a) It would remain between you and me
(b) It would remain between I and you
(c) It would remain between you and I
 (d) It would remain with me

127. Select the appropriate option in place of underlined part of the sentence.
Increased productivity necessary reflects greater efforts made by the employees.
(a) Increase in productivity necessary
(b) Increase productivity is necessary
(c) Increase productivity is necessary
(d) No improvement required

128. A coin is tossed thrice. Let X be the event that head occurs in each of the first two tosses, Let Y be the event that a tail occurs on the third toss. Let Z be the event that two tails occurs in three tosses. Based on the above information which one of the Based on the above information which one of the following statements is TRUE?
(a) X and Y are not independent   (b) Y and Z are dependent
(c) Y and Z are independent   (d) X and Z independent

129. Right triangle PQR is to be constructed in the xy-plane so that the right angle is at P and line PR is parallel to the –axis. The x and y coordinates of P, Q and R are to be integers that satisfy the inequities:
$-4 \le x \le 5 \; and \; 6 \le y \le 16$ How many different triangles could be constructed with these properties?
(a) 110   (b) 1,100
(c) 9,900   (d) 10,000

130. In the given figure angle Q is a right angle, PS: QS = 3:1, RT: QT = 5:2 and PU: UR = 1:1. If area of triangle QTS is 20 cm, then the area of triangle PQR in cm^2 is …
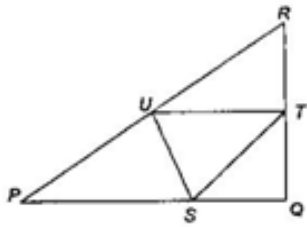
131. Given below are two statements followed by two conclusions. Assuming these statements to be true, decide which one logically follows.

Statements:
I. No manager is a leader
II. All leaders are executive.
Conclusions:
I. No manager is a executive.
II. All executive is a manager.
(a) Only conclusion I follow
(b) Only conclusion II follows.
(c) Neither conclusion I nor II follows
(d) Both conclusion I and II follow.

GATE-2016 (Chemical)

Q.132 The volume of a sphere of diameter 1 unit is -----than the volume of a cube of side 1 unit.
(a) Least
(b) less
(c) lesser
(d) low

Q.133 The unruly crowd demanded that the accused be---------------without trial.
(a) hanged
(c) hanging
(c) hankering
(d) hung

Q.134 choose the statement (s) where the underlined word is used correctly:
(i) A prone is a dried plum.
(ii) He was lying Prone on the floor.
(iii) People who eat a lot of fat are prone to heart disease.
(A) (i) and (iii) only
(B) (iii) only
(C) (i) and (ii) only
(D) (ii) and (iii) only

Q.135 Fact: if it rains, then the field is wet.
Read the following statements:
(i) It rains
(ii) The field is not wet
(iii) The field is wet
(iv) It did not rain
Which one of the options given below is NOT logically possible, based on the given fact?
(a) If (ii), then (iv)
(b) if (i), then (iii).
(c) If (i), then (ii)
(d) if (ii), then (iv).

Q.136 A window is made up of a square portion and an equilateral triangle portion above it. The base of the triangular portion coincides with the upper side of the square. If the perimeter of the window is 6 m, the area of the window in m^2 is-- ---------
(A) 1.43
(b) 2.06
(c) 2.68
(d) 2.88

Q.137 Students taking an exam are divided into two groups, P and Q such that each group has the same number of students. The performance of each of the students in a test was evaluated out of 200 marks. It was observed that the mean of group P was 105, while that of group Q was 85. The standard deviation of group P was 25, while that of group Q was 5. Assuming that the marks were distributed on a normal distribution, which of the following statements will have the highest probability of being TRUE?
(A) No student in group Q scored less marks than any student in group P.
(b) No student in group P scored less marks than any student in group Q.
(c) Most students of group Q scored marks in a narrower range than students in group P.
(d) The median of the marks of group P is 100.

Q.138 A smart city integrates all modes of transport, uses clean energy and promotes sustainable use of resources. It also used technology to ensure safety and security of the

city, something which critics argue, will lead to a surveillance state.

Which of the following can be logically inferred from the above paragraph?

(i) All smart cities encourage the formation of surveillance states.

(ii) Surveillance is an integral part of smart city.

(iii) Sustainability and surveillance go hand in hand in a smart city.

(iv) There is a perception that smart cities promote surveillance.

(A) (i) and (iv) only   (B) (ii) and (iii) only

(C) (iv) only   (D) (i) only

**Q.139** Find the missing sequence in the letter series.

B, FH, LNP, ----

(A) SUWY   (B) TUVW

(C) TVXZ   (D) TWXZ

Q.140 The binary operation $\square$ is defined as a $\square$ b = ab + (a + b) , where a and b are any two real numbers. The value of the identity element of this operation, defined as the number x such that a $\square$ x = a, for any a is ……….

(A) 0   (B) 1

(C) 2   (D) 10

Q. 141 Which of the following curves represent the function $y = \ln\left(|e^{[|\sin(|x|)|]}|\right)$ for $|x| < 2\pi$? Here, x represents the abscissa and y represents the ordinate.

(A)

(B)

(C)

(D)
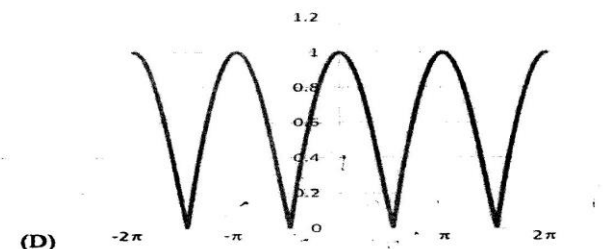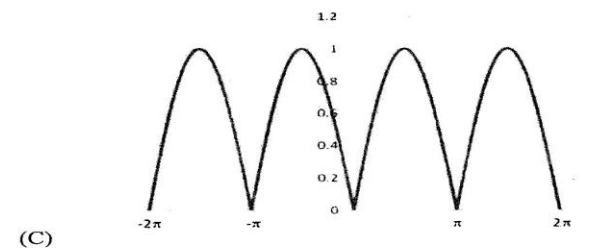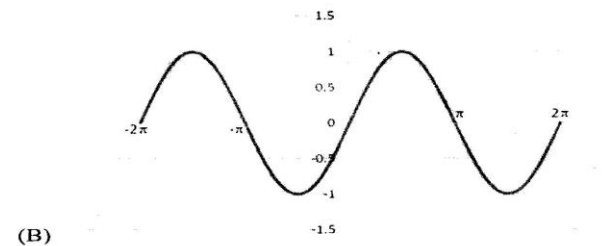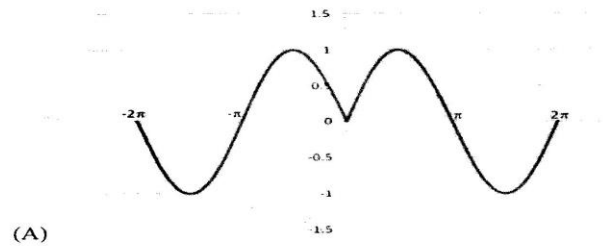
Answers

1. Number system

1. (b) 2. (c) 3. (a) 4. (b) 5. (b) 6. (c) 7. (d) 8. (c) 9. (d) 10. (c) 11. (d) 12. (c) 13. (a) 14. (d) 15. (c)

2. Time and work

1. (a) 2. (a) 3. (b) 4. (a) 5. (b) 6. (a) 7. (a) 8. (b) 9. (b) 10. (a) 11. (b) 12. (a) 12. (a) 14. (c) 15. (d)

3. Set theory

1. (d) 2. (a) 3. (b) 4. (b) 5. (a) 6. (c) 7. (a) 8. (b) 9. (a) 10. (a) 11. (c) 12. (c) 13. (a)

4. Ratio and proportional

1. (b) 2. (a) 3. (b) 4. (c) 5. (b) 6. (a) 7. (a) 8. (a) 9. (b) 10. (b) 11. (a) 12. (b) 13. (b) 14. (c) 15. (b) 16. (c) 17.(a)

5. Percentages

1. (a) 2. (a) 3. (b) 4. (b) 5. (a) 6. (c) 7. (c) 8. (b) 9. (b) 10. (a) 11. (a) 12. (b) 13. (c)

6. Profit and loss

1. (b) 2. (c) 3. (b) 4. (c) 5. (b) 6. (b) 7. (b) 8. (c) 9. (a) 10. (b) 11. (b) 12. (c) 13. (a) 14. (a) 15. (b) 16. (b)

7. Simple and compound interest

1. (c) 2. (d) 3. (a) 4. (d) 5. (c) 6. (b) 7. (b) 8. (b) 9. (c) 10. (b) 11. (a) 12. (c) 13. (b) 14. (b) 15. (d) 16. (b) 17.(c) 18. (a)

8. Time, speed and distance

1. (c) 2. (d) 3. (c) 4. (a) 5. (c) 6. (b) 7. (b) 8. (b) 9. (d) 10. (a) 11. (a) 12. (a) 13. (a) 14. (a) 15. (c)

9. Permutation, combination and probability

1.(b) 2.(b) 3.(b) 4.(d) 5.(c) 6.(a) 7.(c) 8.(b) 9.(d) 10.(b) 11.(b) 12.(c) 13.(b) 14.(a) 15.(c)

10. Calendar

1.(a) 2.(c) 3. (c) 4. (a) 5. (b) 6. (b) 7. (c) 8. (d) 9. (c) 10. (d) 11. (c) 12. (c)

11. Clocks

1. (b) 2. (d) 3. (c) 4. (a) 5. (a) 6. (a) 7. (a) 8. (c) 9. (a) 10. (b) 11. (a) 12. (b) 13. (a) 14. (c)

12. Cubes, dice and directions

1. (b) 2. (a) 3. (d) 4. (a) 5. (d) 6. (a) 7. (a) 8. (a) 9. (a) 10. (a) 11 (c) 12. (d) 13. (b) 14. (d) 15. (d) 16. (c) 17. (c) 18. (a) 19. (d) 20. (b)

13. Data interpretation

1.(c)2. (d) 3. (b) 4. (b) 5. (a) 6. (d) 7. (b) 8. (c) 9. (b) 10. (d) 11. (d) 12. (b) 13. (a) 14. (c) 15. (a) 16. (b) 17. (b) 18. (b) 19. (a) 20. (d) 21. (c) 22. (d)

14. Seating Arrangement

1. (a) 2. (c) 3. (c) 4. (d) 5. (a) 6. (a) 7. (c) 8. (d) 9. (b) 10. (d)

15. Number series, analogy and number odd man out

1. (c) 2. (b) 3. (b) 4. (b) 5. (a) 6. (b) 7. (c) 8. (b) 9. (c) 10. (b) 11. (c) 12. (b) 13. (b) 14. (b) 15. (a) 16. (a) 17. (b) 18. (d) 19. (b) 20. (c) 21. (b) 22. (c) 23. (b)

16. Letter series, analogy, letter odd man out and coding- decoding

1. (d) 2. (a) 3. (c) 4. (c) 5. (c) 6. (c) 7. (a) 8. (d) 9. (a) 10. (b) 11. (b) 12. (b) 13. (a) 14. (d) 15.(b) 16. (c)17.(b) 18. (d) 19. (c) 20.(b) 21. (b) 22. (a) 23. (a) 24. (b)

18. Previous Years GATE Questions
1. (d) 2. (c) 3. (d) 4. (b) 5. (b) 6. (b) 7. (d) 8. (a) 9. (d) 10. (c) 11. (a) 12. (c) 13. (c) 14. (b) 15. (d) 16. (a) 17. (b) 18. (a) 19. (c) 20. (b) 21. (d) 22. (c) 23. (a) 24. (a) 25. (d) 26. (d) 27. (a) 28. (a) 29. (d) 30. (d) 31. (d) 32. (c) 33. (d) 34. (c) 35. (b) 36. (b) 37. (c) 38. (d) 39. (b) 40. (c) 41. (a)