

Previous Year Questions (GATE CSE): Numerical Ability

Year: GATE CSE 2026 SET-2

Question 1: An unbiased six-faced dice whose faces are marked with numbers 1, 2, 3, 4, 5, and 6 is rolled twice in succession and the number on the top face is recorded each time. The probability that the sum of the two recorded numbers is a prime number is _____

A: $\frac{3}{36}$

B: $\frac{13}{36}$

C: $\frac{15}{36}$

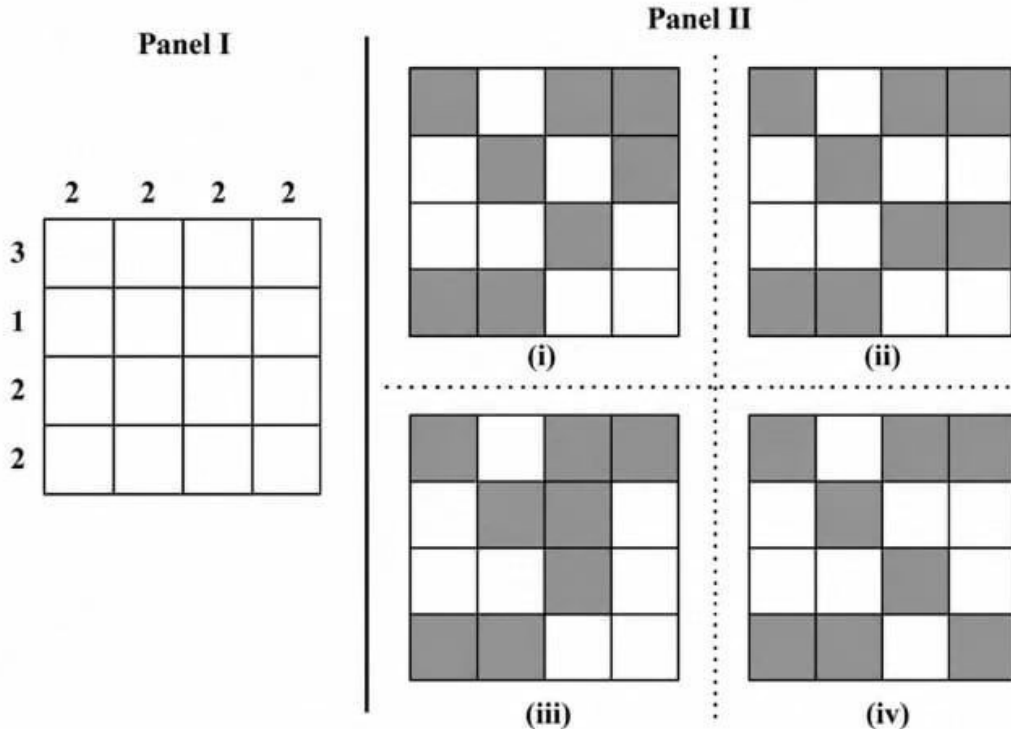
D: $\frac{19}{36}$

Answer: C

Year: GATE CSE 2026 SET-2

Question 2: The figure in Panel I below is a grid of cells with four rows and four columns. The numbers on the top and on the left represent the number of cells that are to be shaded in that

column and row, respectively. Which one of the options shown in Panel II below represents the grid shaded correctly?



A: (i)

B: (ii)

C: (iii)

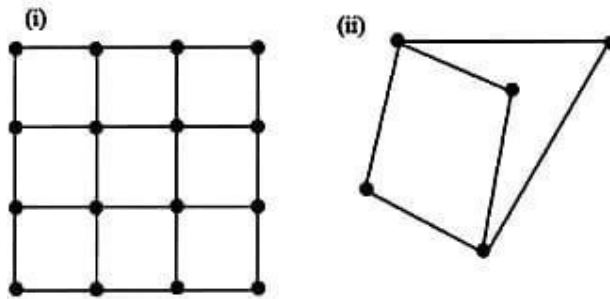
D: (iv)

Answer: B

Year: GATE CSE 2026 SET-2

Question 3: Figures (i) and (ii) represent intercity highway systems. The black dots represent cities and the line segments between them represent intercity highways. A salesperson needs to make a trip. She needs to start from a city, visit each of the remaining cities exactly once, and finally return to the same city from which she started.

Which one of the following options is then true?

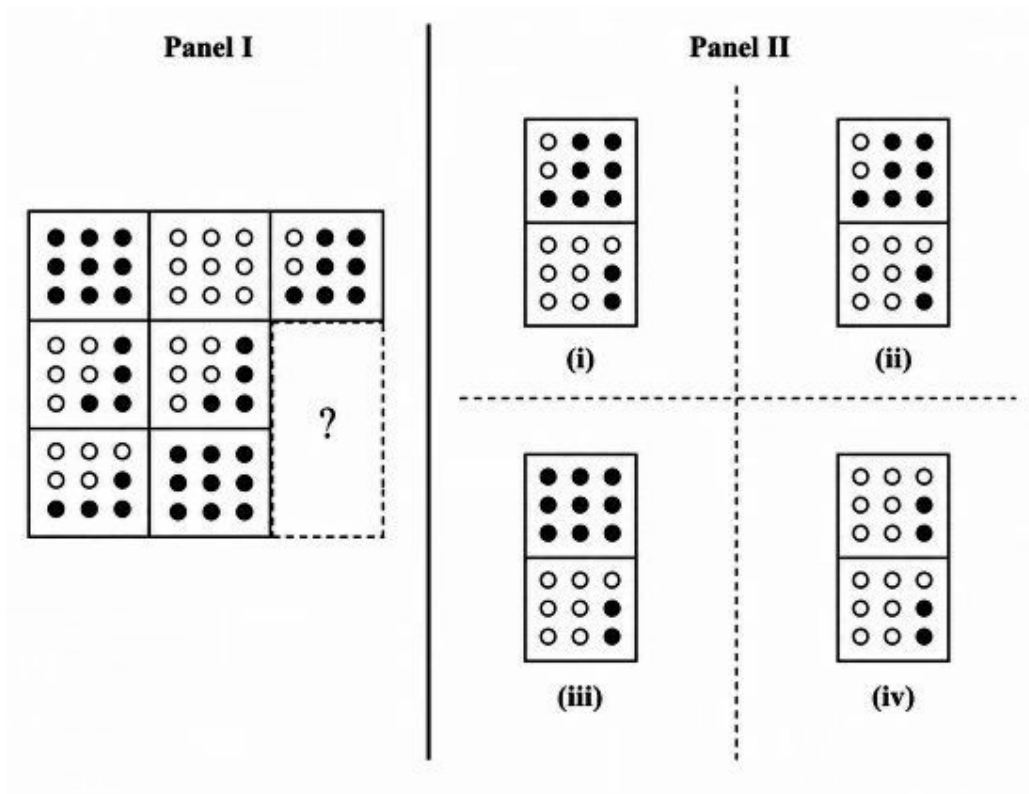


- A: Such a trip is possible for (i), but not for (ii).**
- B: Such a trip is possible for (ii), but not for (i).**
- C: Such a trip is possible for both (i) and (ii).**
- D: Such a trip is possible neither for (i) nor for (ii).**

Answer: A

Year: GATE CSE 2026 SET-2

Question 4: Two tiles are missing in Panel I. Which one of the options in Panel II is the appropriate choice for the missing tiles?



A: (i)

B: (ii)

C: (iii)

D: (iv)

Answer: A

Year: GATE CSE 2026 SET-2

Question 5: The values of Stock A and Stock B on a particular day are Rs. 50 and Rs. 80, respectively. An investor invests Rs. 100 in Stock A and Rs. 80 in Stock B. He sells all the stocks the next day when the value of Stock A is Rs. 55 and Stock B is Rs. 70. The profit made by the investor is Rs. _____

A: 0

B: 5

C: 10

D: 20

Answer: A

Year: GATE CSE 2026 SET-2

Question 6: A day can only be cloudy or sunny. The probability of a day being cloudy is 0.5, independent of the condition on other days. What is the probability that in any given four days, there will be three cloudy days and one sunny day?

A: $\frac{1}{4}$

B: $\frac{3}{4}$

C: $\frac{2}{3}$

D: $\frac{3}{8}$

Answer: A

Year: GATE CSE 2026 SET-1

Question 7: An unbiased six-faced dice whose faces are marked with numbers 1, 2, 3, 4, 5, and 6 is rolled twice in succession and the number on the top face is recorded each time. The probability that the number appearing in the second roll is an integer multiple of the number appearing in the first roll is _____

A: $\frac{1}{6}$

B: $\frac{5}{18}$

C: $\frac{7}{18}$

D: $\frac{5}{6}$

Answer: C

Year: GATE CSE 2026 SET-1

Question 8: In the 2020 summer Olympics' Javelin throw finals, Neeraj Chopra exhibited a spectacular performance to win the gold medal. The silver medal was won by Jakub Vadlejch and the bronze medal was won by Vitezlav Vesely. There were six rounds of throws with each athlete having one throw per round. The best of all the throws of each athlete is considered for the medal. Following were the observations about the throws:

i.) The first and second rounds were dominated by Neeraj Chopra with a gold medal performance in his second throw, while the other two athletes did not have any medal winning throws in these rounds.

ii.) The throws in the last round by both Jakub Vadlejch and Vitezlav Vesely were fouls and were not considered for scoring.

iii.) After four rounds, Vitezlav Vesely was in the second position and could not improve upon his best throw in the succeeding rounds.

iv.) In the fourth round, the throw by Jakub Vadlejch was the best in that round.

In which round did Vitezlav Vesely have his best throw?

A: Third

B: Fourth

C: Fifth

D: Sixth

Answer: A

Year: GATE CSE 2026 SET-1

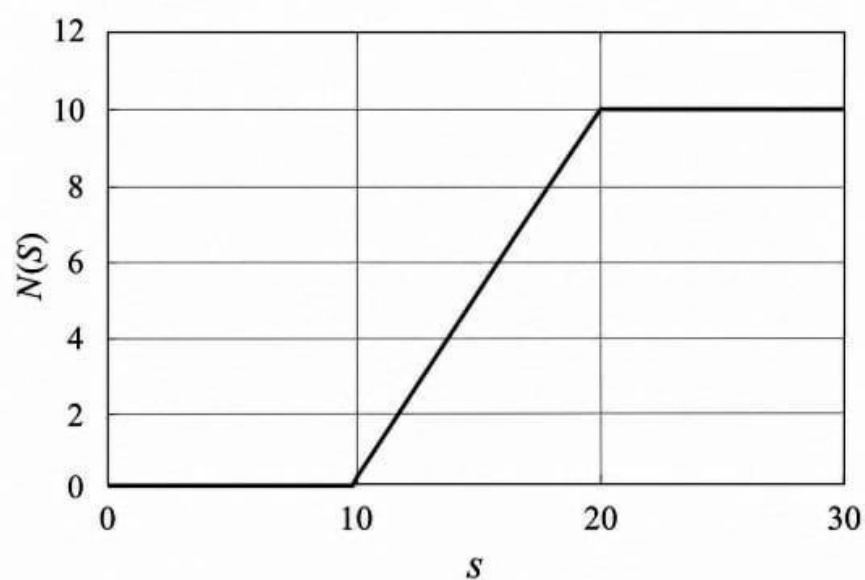
Question 9: For positive real numbers S and K , the function $H_K(S)$ is defined as:

$H_K(S) = \max(S - K, 0)$. The max function is defined as:

$$\max(a, b) = \begin{cases} a, & \text{when } a > b \\ b, & \text{when } a \leq b \end{cases}$$

The graph below shows the plot of a function $N(S)$ versus S .

$N(S)$ can be expressed as ____ _.



A: $H_{10}(S) - H_{20}(S)$

B: $H_{10}(S) - 2H_{20}(S)$

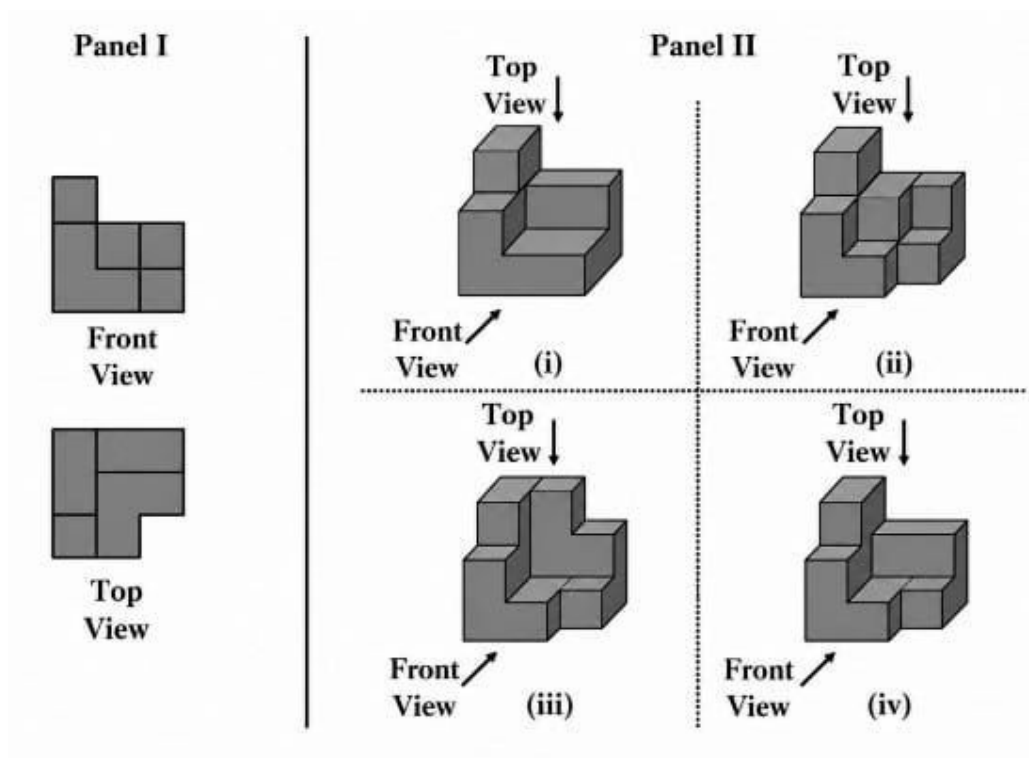
C: $-H_{10}(S) + H_{20}(S)$

D: $H_{15}(S) - H_{20}(S)$

Answer: A

Year: GATE CSE 2026 SET-1

Question 10: In Panel I of the figure below, the front view and top view of a structure are shown. Which one of the 3D structures shown in Panel II possesses the views shown in Panel I?



A: (i)

B: (ii)

C: (iii)

D: (iv)

Answer: D

Year: GATE CSE 2026 SET-1

Question 11: A student needs to enroll for a minimum of 60 credits. A student cannot enroll for more than 70 credits. The credits are divided amongst project and three distinct sets of courses namely, core courses, specialization courses, and elective courses. It is compulsory for a student to enroll for exactly 15 credits of core courses and exactly 20 credits of project. In addition, a student has to enroll for a minimum of 10 credits of specialization courses. The maximum credits of elective courses that a student can enroll for is _____

A: 10

B: 15

C: 20

D: 25

Answer: D

Year: GATE CSE 2026 SET-1

Question 12: Consider a knock-out women's badminton singles tournament where there are no ties. The loser in each game is eliminated from the tournament. Every player plays until she is defeated or remains the last undefeated player. The last undefeated player is declared the winner of the tournament. If there are 64 players in the beginning of the tournament, how many games should be played in total to declare the winner of the tournament?

A: 127

B: 64

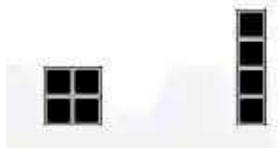
C: 63

D: 32

Answer: C

Year: GATE CSE 2026 SET-1

Question 13: The figure shows two 4-tile patterns.



Either one or both of the patterns can be used any number of times and in any orientation to construct a new pattern. Which one of the options below cannot be constructed by using only these two 4-tile patterns assuming there are no overlaps among them?

- (A)
-
- (B)
-
- (C)
-
- (D)

A: A

B: B

C: C

D: D

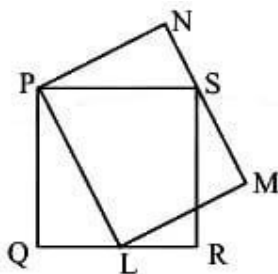
Answer: C

Year: GATE CSE 2025 SET-2

Question 14: In the given figure, PQRS is a square of side 2 cm and PLMN is a rectangle. The corner L of the rectangle is on the side QR. Side MN of the rectangle passes through the corner S of the square.

What is the area (in cm^2) of the rectangle PLMN?

Note: The figure shown is representative.



A: $2\sqrt{2}$

B: 2

C: 8

D: 4

Answer: D

Year: GATE CSE 2025 SET-2

Question 15: Which one of the following options is correct for the given data in the table?

Iteration(i)	0	1	2	3
Input(I)	20	-4	10	15
Output(X)	20	16	26	41
Output(Y)	20	-80	-800	-12000

A: $X(i) = X(i - 1) + I(i); Y(i) = Y(i - 1)I(i); i > 0$

B: $X(i) = X(i - 1)I(i); Y(i) = Y(i - 1) + I(i); i > 0$

C: $X(i) = X(i - 1)I(i); Y(i) = Y(i - 1)I(i); i > 0$

D: $X(i) = X(i - 1) + I(i); Y(i) = Y(i - 1)I(i + 1); i > 0$

Answer: A

Year: GATE CSE 2025 SET-2

Question 16: If IMAGE and FIELD are coded as FHBNJ and EMFJG respectively then, which one among the given options is the most appropriate code for BEACH?

A: CEADP

B: IDBFC

C: JGIBC

D: IBCEC

Answer: B

Year: GATE CSE 2025 SET-2

Question 17: Let p_1 and p_2 denote two arbitrary prime numbers. Which one of the following statements is correct for all values of p_1 and p_2 ?

A: $p_1 + p_2$ is not a prime number.

B: $p_1 p_2$ is not a prime number.

C: $p_1 + p_2 + 1$ is a prime number.

D: $p_1 p_2 + 1$ is a prime number.

Answer: B

Year: GATE CSE 2025 SET-2

Question 18: If $Pe^x = Qe^{-x}$ for all real values of x , which one of the following statements is true?

A: $P = Q = 0$

B: $P = Q = 1$

C: $P = 1; Q = -1$

D: $\frac{P}{Q} = 0$

Answer: A

Year: GATE CSE 2025 SET-1

Question 19: A shop has 4 distinct flavors of ice-cream. One can purchase any number of scoops of any flavor. The order in which the scoops are purchased is inconsequential. If one wants to purchase 3 scoops of ice-cream, in how many ways can one make that purchase?

A: 4

B: 20

C: 24

D: 48

Answer: B

Year: GATE CSE 2025 SET-1

Question 20: A fair six-faced dice, with the faces labelled '1', '2', '3', '4', '5', and '6', is rolled thrice. What is the probability of rolling '6' exactly once?

A: $\frac{75}{216}$

B: $\frac{1}{6}$

C: $\frac{1}{18}$

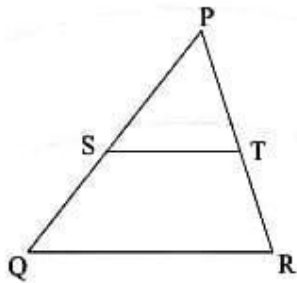
D: $\frac{25}{216}$

Answer: A

Year: GATE CSE 2025 SET-1

Question 21: In the diagram, the lines QR and ST are parallel to each other. The shortest distance between these two lines is half the shortest distance between the point P and line QR. What is the ratio of the area of the triangle PST to the area of the trapezium SQRT?

Note: The figure shown is representative.



- A:** $\frac{1}{3}$
B: $\frac{1}{4}$
C: $\frac{2}{5}$
D: $\frac{1}{2}$

Answer: A

Year: GATE CSE 2025 SET-1

Question 22: The average marks obtained by a class in an examination were calculated as 30.8. However, while checking the marks entered, the teacher found that the marks of one student were entered incorrectly as 24 instead of 42. After correcting the marks, the average becomes 31.4. How many students does the class have?

A: 25

B: 28

C: 30

D: 32

Answer: C

Year: GATE CSE 2024 SET-2

Question 23: In the 4 x 4 array shown below, each cell of the first three rows has either a cross (X) or a number.

1	X	4	3
X	5	5	4
3	X	6	X

The number in a cell represents the count of the immediate neighboring cells (left, right, top, bottom, diagonals) NOT having a cross (X). Given that the last row has no crosses (X), the sum of the four numbers to be filled in the last row is

A: 11

B: 10

C: 12

D: 9

Answer: A

Year: GATE CSE 2024 SET-2

Question 24: A cube is to be cut into 8 pieces of equal size and shape. Here, each cut should be straight and it should not stop till it reaches the other end of the cube.

The minimum number of such cuts required is

A: 3

B: 4

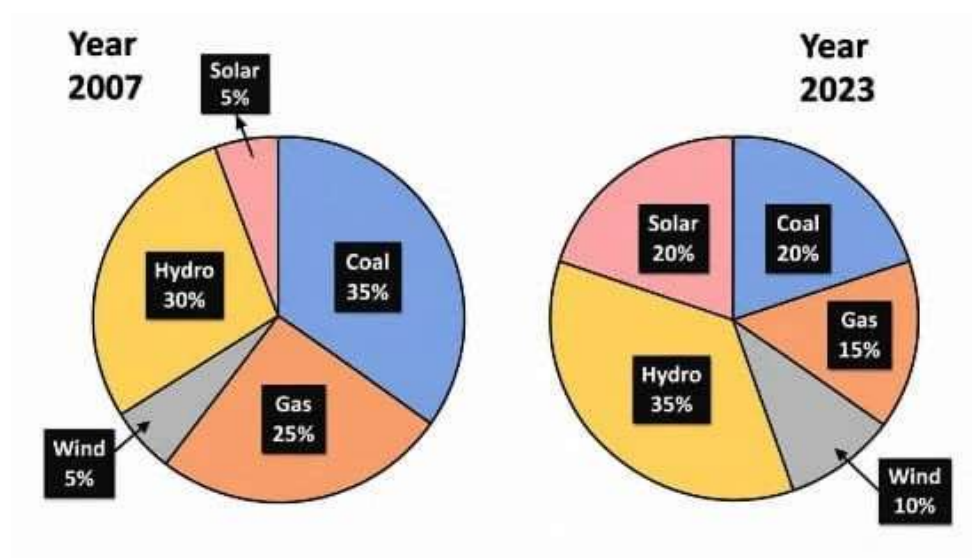
C: 7

D: 8

Answer: A

Year: GATE CSE 2024 SET-2

Question 25: The pie charts depict the shares of various power generation technologies in the total electricity generation of a country for the years 2007 and 2023.



The renewable sources of electricity generation consist of Hydro, Solar and Wind. Assuming that the total electricity generated remains the same from 2007 to 2023, what is the percentage increase in the share of the renewable sources of electricity generation over this period?

A: 25%

B: 50%

C: 77.50%

D: 62.50%

Answer: D

Year: GATE CSE 2024 SET-2

Question 26: A person sold two different items at the same price. He made 10% profit in one item, and 10% loss in the other item. In selling these two items, the person made a total of

A: 1% profit

B: 2% profit

C: 1% loss

D: 2% loss

Answer: C

Year: GATE CSE 2024 SET-2

Question 27: In the sequence 6, 9, 14, x, 30, 41, a possible value of x is

A: 25

B: 21

C: 18

D: 20

Answer: B

Year: GATE CSE 2024 SET-2

Question 28: For positive non-zero real variables x and y , if

$$\ln\left(\frac{x+y}{2}\right) = \frac{1}{2}[\ln(x) + \ln(y)]$$

then, the value of $\frac{x}{y} + \frac{y}{x}$ is

A: 1

B: 1/2

C: 2

D: 4

Answer: C

Year: GATE CSE 2024 SET-2

Question 29: In an engineering college of 10,000 students, 1,500 like neither their core branches nor other branches. The number of students who like their core branches is $\frac{1}{4}$ th of the number of students who like other branches. The number of students who like both their core and other branches is 500.

The number of students who like their core branches is

A: 1,800

B: 3,500

C: 1,600

D: 1,500

Answer: A

Year: GATE CSE 2024 SET-2

Question 30: Two wizards try to create a spell using all the four elements, water, air, fire, and earth. For this, they decide to mix all these elements in all possible orders. They also decide to work independently. After trying all possible combination of elements, they conclude that the spell does not work.

How many attempts does each wizard make before coming to this conclusion, independently?

A: 24

B: 48

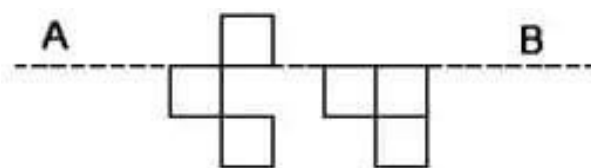
C: 16

D: 12

Answer: A

Year: GATE CSE 2024 SET-1

Question 31: The least number of squares to be added in the figure to make AB a line of symmetry is



A: 6

B: 4

C: 5

D: 7

Answer: A

Year: GATE CSE 2024 SET-1

Question 32: A rectangular paper of 20cm x 8cm is folded 3 times. Each fold is made along the line of symmetry, which is perpendicular to its long edge. The perimeter of the final folded sheet (in cm) is

A: 18

B: 24

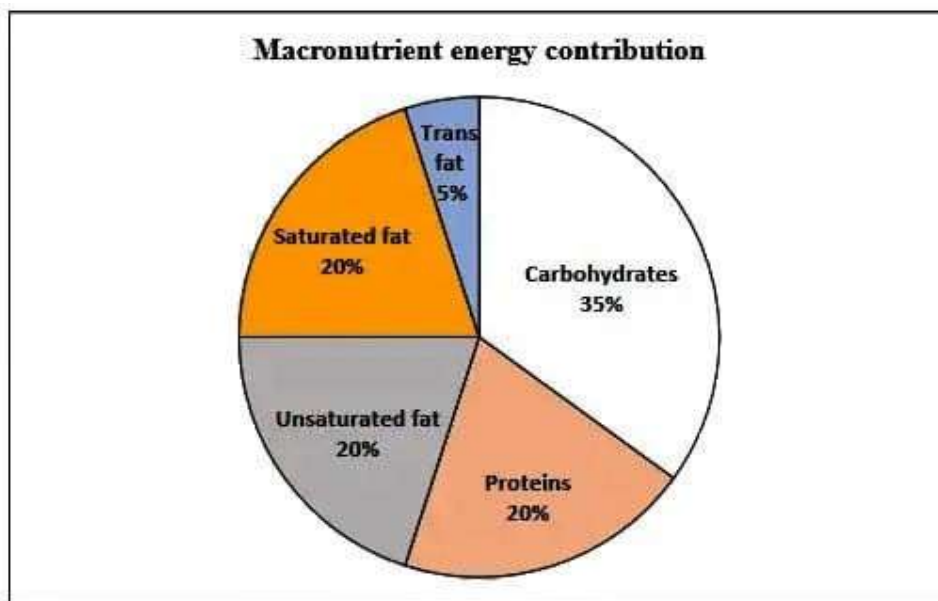
C: 20

D: 21

Answer: A

Year: GATE CSE 2024 SET-1

Question 33: The pie chart presents the percentage contribution of different macronutrients to a typical 2,000 kcal diet of a person.



The typical energy density (kcal/g) of these macronutrients is given in the table.

Macronutrient	Energy density(kcal/g)
Carbohydrates	4
Proteins	4
Unsaturated fat	9
Saturated fat	9
Trans fat	9

The total fat (all three types), in grams, this person consumes is

A: 44.4

B: 77.8

C: 100

D: 3600

Answer: C

Year: GATE CSE 2024 SET-1

Question 34: A rectangular paper sheet of dimensions 54cm x 4cm is taken. The two longer edges of the sheet are joined together to create a cylindrical tube. A cube whose surface area is equal to the area of the sheet is also taken.

Then, the ratio of the volume of the cylindrical tube to the volume of the cube is

A: $\frac{1}{\pi}$

B: $2/\pi$

C: $3/\pi$

D: $4/\pi$

Answer: A

Year: GATE CSE 2024 SET-1

Question 35: For positive non-zero real variables p and q , if

$$\log(p^2 + q^2) = \log p + \log q + 2\log 3,$$

then, the value of $\frac{p^4 + q^4}{p^2 q^2}$ is

A: 79

B: 81

C: 9

D: 83

Answer: A

Year: GATE CSE 2024 SET-1

Question 36: The number of coins of Rs. 1, Rs. 5, and Rs. 10 denominations that a person has are in the ratio 5:3:13. Of the total amount, the percentage of money in Rs. 5 coins is

A: 21%

B: $14\frac{2}{7}\%$

C: 10%

D: 30%

Answer: C

Year: GATE CSE 2024 SET-1

Question 37: Consider the following sample of numbers:

9, 18, 11, 14, 15, 17, 10, 69, 11, 13

The median of the sample is

A: 13.5

B: 14

C: 11

D: 18.7

Answer: A

Year: GATE CSE 2024 SET-1

Question 38: If two distinct non-zero real variables x and y are such that $(x + y)$ is proportional to $(x - y)$ then the value of $\frac{x}{y}$

A: depends on xy

B: depends only on x and not on y

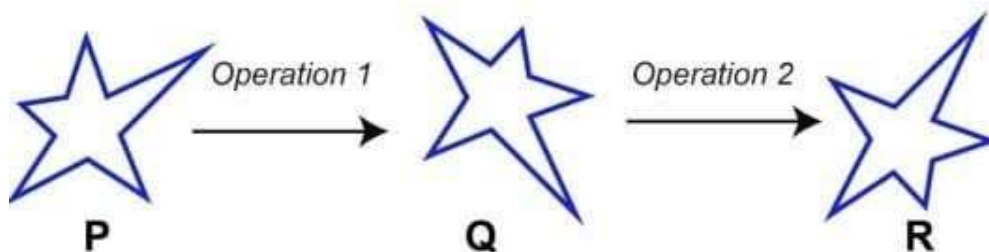
C: depends only on y and not on x

D: is a constant

Answer: D

Year: GATE CSE 2023

Question 39: Which one of the options best describes the transformation of the 2-dimensional figure P to Q, and then to R, as shown?



A: Operation 1: A clockwise rotation by 90° about an axis perpendicular to the plane of the figure

Operation 2: A reflection along a horizontal line

B: Operation 1: A counter clockwise rotation by 90° about an axis perpendicular to the plane of the figure

Operation 2: A reflection along a horizontal line

C: Operation 1: A clockwise rotation by 90° about an axis perpendicular to the plane of the

figure

Operation 2: A reflection along a vertical line

D: Operation 1: A counter clockwise rotation by 180° about an axis perpendicular to the plane of the figure

Operation 2: A reflection along a vertical line

Answer: A

Year: GATE CSE 2023

Question 40: $f(x)$ and $g(y)$ are functions of x and y , respectively, and $f(x) = g(y)$ for all real values of x and y . Which one of the following options is necessarily TRUE for all x and y ?

A: $f(x) = 0$ and $g(y) = 0$

B: $f(x) = g(y) = \text{constant}$

C: $f(x) \neq \text{constant}$ and $g(y) \neq \text{constant}$

D: $f(x) + g(y) = f(x) - g(y)$

Answer: B

Year: GATE CSE 2023

Question 41: Consider two functions of time (t),

$$f(t) = 0.01t^2$$

$$g(t) = 4t$$

where

$$0 < t < \infty$$

Now consider the following two statements:

(i) For some $t > 0$, $g(t) > f(t)$.

(ii) There exists a T , such that $f(t) > g(t)$ for all $t > T$.

Which one of the following options is TRUE?

A: only (i) is correct

B: only (ii) is correct

C: both (i) and (ii) are correct

D: neither (i) nor (ii) is correct

Answer: C

Year: GATE CSE 2023

Question 42: The country of Zombieland is in distress since more than 75% of its working population is suffering from serious health issues. Studies conducted by competent health experts concluded that a complete lack of physical exercise among its working population was one of the leading causes of their health issues. As one of the measures to address the problem, the Government of Zombieland has decided to provide monetary incentives to those who ride bicycles to work.

Based only on the information provided above, which one of the following statements can be logically inferred with certainty?

A: All the working population of Zombieland will henceforth ride bicycles to work.

B: Riding bicycles will ensure that all of the working population of Zombieland is free of health issues.

C: The health experts suggested to the Government of Zombieland to declare riding bicycles as mandatory.

D: The Government of Zombieland believes that riding bicycles is a form of physical exercise.

Answer: D

Year: GATE CSE 2023

Question 43: Looking at the surface of a smooth 3-dimensional object from the outside, which one of the following options is TRUE?

A: The surface of the object must be concave everywhere.

B: The surface of the object must be convex everywhere.

C: The surface of the object may be concave in some places and convex in other places.

D: The object can have edges, but no corners.

Answer: C

Year: GATE CSE 2023

Question 44: A survey for a certain year found that 90% of pregnant women received medical care at least once before giving birth. Of these women, 60% received medical care from doctors, while 40% received medical care from other healthcare providers.

Given this information, which one of the following statements can be inferred with certainty?

A: More than half of the pregnant women received medical care at least once from a doctor.

B: Less than half of the pregnant women received medical care at least once from a doctor.

C: More than half of the pregnant women received medical care at most once from a doctor.

D: Less than half of the pregnant women received medical care at most once from a doctor.

Answer: A

Year: GATE CSE 2023

Question 45: A series of natural numbers $F_1, F_2, F_3, F_4, F_5, F_6, F_7, \dots$ obeys

$$F_{n+1} = F_n + F_{n-1} \text{ for all integers } n \geq 2.$$

If $F_6 = 37$, and $F_7 = 60$, then what is F_1 ?

A: 4

B: 5

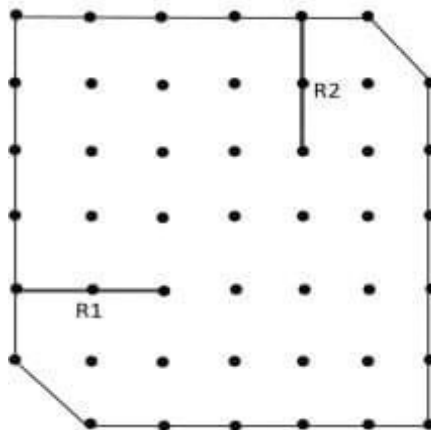
C: 8

D: 9

Answer: A

Year: GATE CSE 2022

Question 46: A plot of land must be divided between four families. They want their individual plots to be similar in shape, not necessarily equal in area. The land has equally spaced poles, marked as dots in the below figure. Two ropes, R1 and R2, are already present and cannot be moved. What is the least number of additional straight ropes needed to create the desired plots? A single rope can pass through three poles that are aligned in a straight line.



A: 2

B: 4

C: 5

D: 3

Answer: D

Year: GATE CSE 2022

Question 47: A box contains five balls of same size and shape. Three of them are green coloured balls and two of them are orange coloured balls. Balls are drawn from the box one at a time. If a green ball is drawn, it is not replaced. If an orange ball is drawn, it is replaced with another orange ball.

First ball is drawn. What is the probability of getting an orange ball in the next draw?

A: $\frac{1}{2}$

B: $\frac{8}{25}$

C: $\frac{19}{50}$

D: $\frac{23}{50}$

Answer: D

Year: GATE CSE 2022

Question 48: In a recently conducted national entrance test, boys constituted 65% of those who appeared for the test. Girls constituted the remaining candidates and they accounted for 60% of the qualified candidates.

Which one of the following is the correct logical inference based on the information provided in the above passage?

A: Equal number of boys and girls qualified

B: Equal number of boys and girls appeared for the test

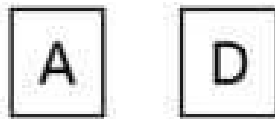
C: The number of boys who appeared for the test is less than the number of girls who appeared

D: The number of boys who qualified the test is less than the number of girls who qualified

Answer: D

Year: GATE CSE 2022

Question 49: A palindrome is a word that reads the same forwards and backwards. In a game of words, a player has the following two plates painted with letters.



From the additional plates given in the options, which one of the combinations of additional plates would allow the player to construct a five-letter palindrome. The player should use all the five plates exactly once. The plates can be rotated in their plane.

- (A)   
- (B)   
- (C)   
- (D)   

A: A

B: B

C: C

D: D

Answer: B

Year: GATE CSE 2022

Question 50: Let r be a root of the equation $x^2 + 2x + 6 = 0$

Then the value of the expression $(r + 2)(r + 3)(r + 4)(r + 5)$ is

A: 51

B: -51

C: 126

D: -126

Answer: D

Year: GATE CSE 2022

Question 51: A function $y(x)$ is defined in the interval $[0, 1]$ on the x - axis as

$$y(x) = \begin{cases} 2 & \text{if } 0 \leq x \leq \frac{1}{3} \\ 3 & \text{if } \frac{1}{3} \leq x \leq \frac{3}{4} \\ 1 & \text{if } \frac{3}{4} \leq x \leq 1 \end{cases}$$

Which one of the following is the area under the curve for the interval $[0, 1]$ on the x - axis?

A: $\frac{5}{6}$

B: $\frac{6}{5}$

C: $\frac{1}{6}$

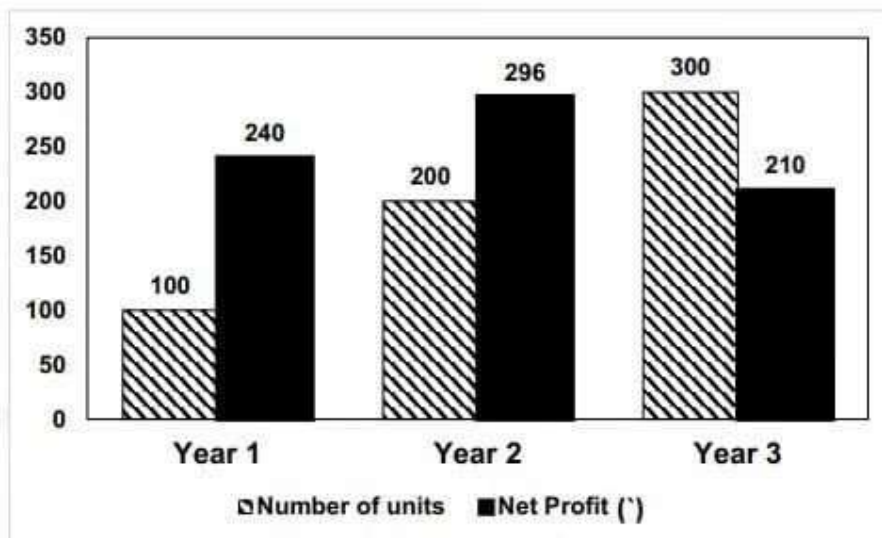
D: $\frac{6}{13}$

Answer: C

Answer: C

Year: GATE CSE 2021 SET-2

Question 52:



The number of units of a product sold in three different years and the respective net profits are presented in the figure above. The cost/unit in Year 3 was Re. 1, which was half the cost/unit in Year 2. The cost/unit in Year 3 was one-third of the cost/unit in Year 1. Taxes were paid on the selling price at 10%, 13%, and 15% respectively for the three years. Net profit is calculated as the difference between the selling price and the sum of cost and taxes paid in that year.

The ratio of the selling price in Year 2 to the selling price in Year 3 is _____.

A: 04:03

B: 01:0

C: 03:04

D: 01:02

Answer: A

Year: GATE CSE 2021 SET-2

Question 53: The number of students in three classes is in the ratio 3:13:6. If 18 students are added to each class, the ratio changes to 15:35:21.

The total number of students in all the three classes in the beginning was:

A: 22

B: 66

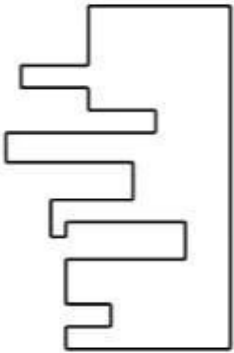
C: 88

D: 110

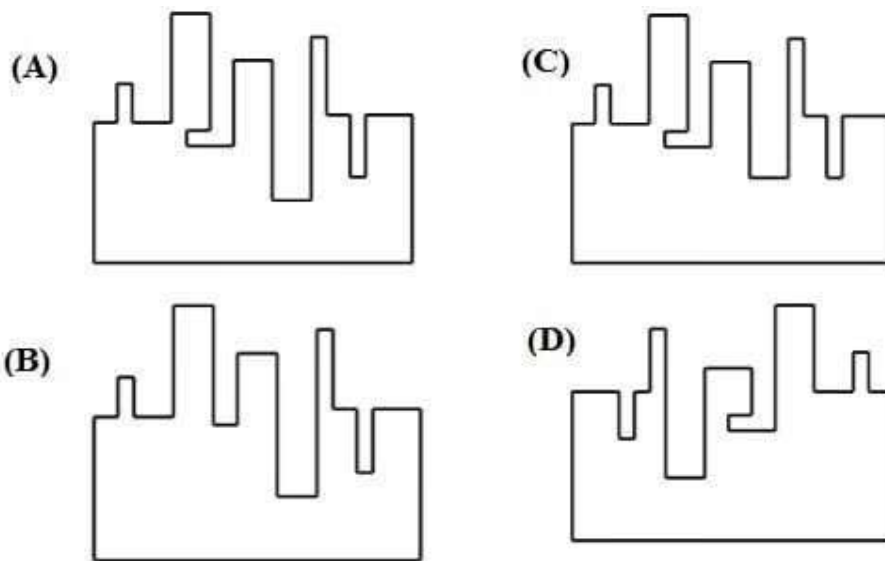
Answer: C

Year: GATE CSE 2021 SET-2

Question 54:



A jigsaw puzzle has 2 pieces. One of the pieces is shown above. Which one of the given options for the missing piece when assembled will form a rectangle? The piece can be moved, rotated or flipped to assemble with the above piece.



A: A

B: B

C: C

D: D

Answer: A

Year: GATE CSE 2021 SET-2

Question 55: If $(x - \frac{1}{2})^2 - (x - \frac{3}{2})^2 = x + 2$, then the value of x is:

A: 2

B: 4

C: 6

D: 8

Answer: B

Year: GATE CSE 2021 SET-2

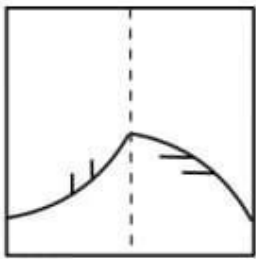
Question 56: If θ is the angle, in degrees, between the longest diagonal of the cube and any one of the edges of the cube, then, $\cos\theta =$

- A: $\frac{1}{2}$
 B: $\frac{1}{\sqrt{3}}$
 C: $\frac{1}{\sqrt{2}}$
 D: $\frac{\sqrt{3}}{2}$

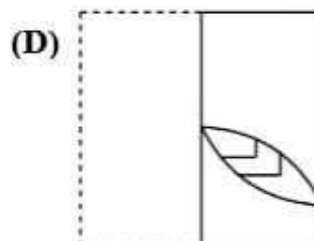
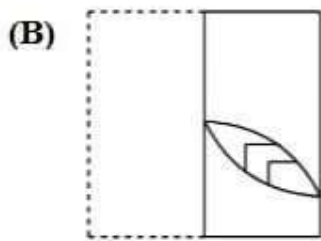
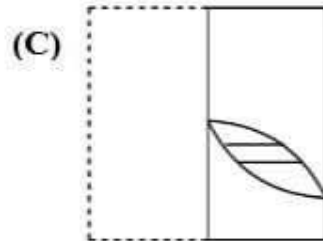
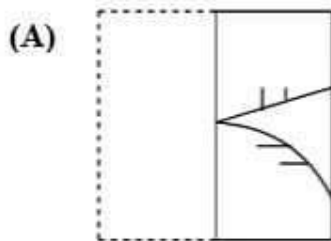
Answer: B

Year: GATE CSE 2021 SET-2

Question 57:



A transparent square sheet shown above is folded along the dotted line. The folded sheet will look like _____



A: A

B: B

C: C

D: D

Answer: B

Year: GATE CSE 2021 SET-1

	Items	Cost (Rs.)	Profit %	Marked Price (Rs.)
Question 58:				
	<i>P</i>	5,400	— — —	5,860
	<i>Q</i>	— — —	25	10,000

Details of prices of two items P and Q are presented in the above table. The ratio of cost of item P to cost of item Q is 3:4. Discount is calculated as the difference between the marked price and the selling price. The profit percentage is calculated as the ratio of the difference between selling price and cost, to the cost

$$(\text{Profit}\% = \frac{\text{Selling price} - \text{Cost}}{\text{Cost}} \times 100)$$

The discount on item Q, as a percentage of its marked price, is _____

A: 25

B: 12.5

C: 10

D: 5

Answer: C

Year: GATE CSE 2021 SET-1

Question 59: We have 2 rectangular sheets of paper, M and N, of dimensions 6 cm x 1 cm each. Sheet M is rolled to form an open cylinder by bringing the short edges of the sheet together. Sheet N is cut into equal square patches and assembled to form the largest possible closed cube. Assuming the ends of the cylinder are closed, the ratio of the volume of the cylinder to that of the cube is _____

A: $\frac{\pi}{2}$

B: $\frac{3}{\pi}$

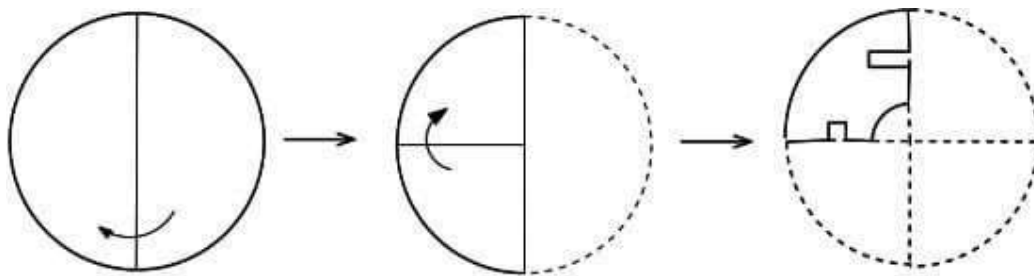
C: $\frac{9}{\pi}$

D: 3π

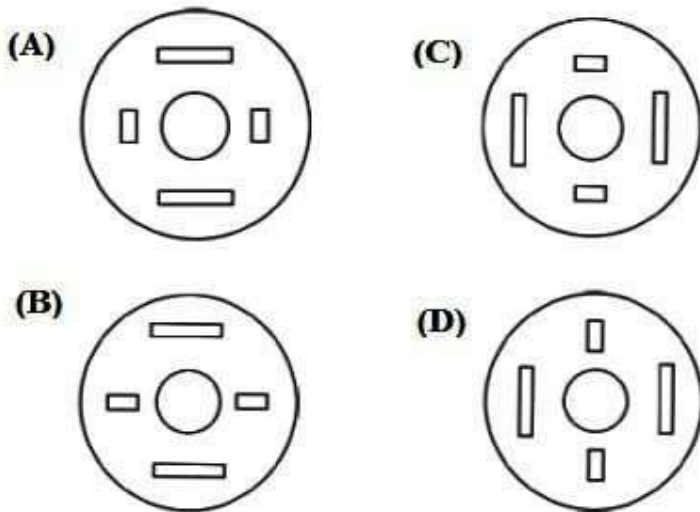
Answer: C

Year: GATE CSE 2021 SET-1

Question 60:



A circular sheet of paper is folded along the lines in the direction shown. The paper, after being punched in the final folded state as shown and unfolded in the reverse order of folding, will look like ____.



A: A

B: B

C: C

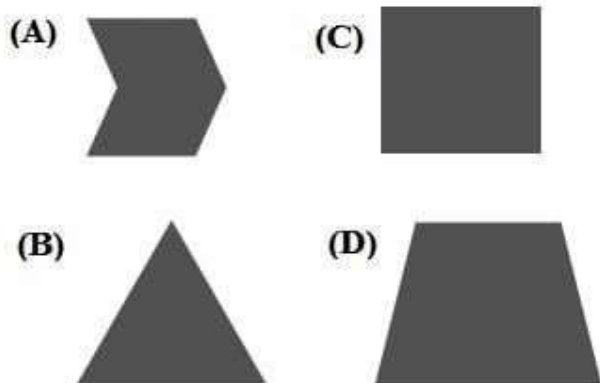
D: D

Answer: A

Year: GATE CSE 2021 SET-1

Question 61: A polygon is convex if, for every pair of points, P and Q belonging to the polygon, the line segment PQ lies completely inside or on the polygon.

Which one of the following is NOT a convex polygon?



A: A

B: B

C: C

D: D

Answer: A

Year: GATE CSE 2021 SET-1

Question 62: The ratio of boys to girls in a class is 7 to 3.

Among the options below, an acceptable value for the total number of students in the class is:

A: 21

B: 37

C: 50

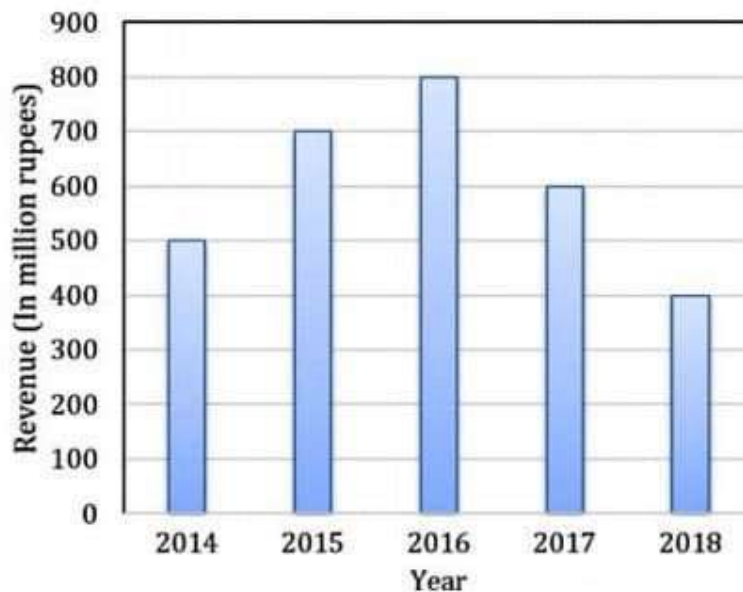
D: 73

Answer: C

Year: GATE CSE 2020

Question 63: The total revenue of a company during 2014 - 2018 is shown in the bar graph. If the total expenditure of the company in each year is 500 million rupees, then the aggregate

profit or loss (in percentage) on the total expenditure of the company during 2014 - 2018 is _____.



A: 16.67% profit

B: 16.67% loss

C: 20% profit

D: 20% loss

Answer: C

Year: GATE CSE 2020

Question 64: Two straight lines are drawn perpendicular to each other in X-Y plane. If α and β are the acute angles the straight lines make with the X-axis, then $\alpha + \beta$ is _.

A: 60°

B: 90°

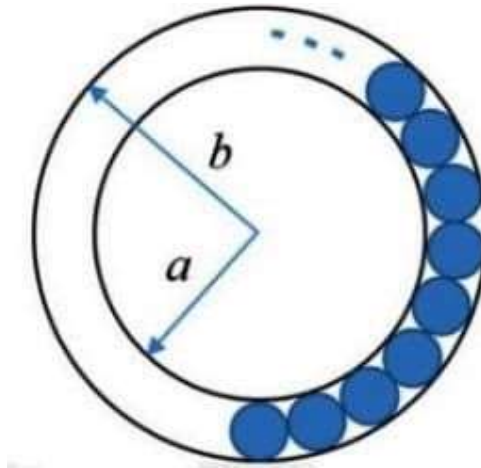
C: 120°

D: 180°

Answer: B

Year: GATE CSE 2020

Question 65: The figure below shows an annular ring with outer and inner as b and a , respectively. The annular space has been painted in the form of blue colour circles touching the outer and inner periphery of annular space. If maximum n number of circles can be painted, then the unpainted area available in annular space is _.



A: $\pi[(b^2 - a^2) - \frac{n(b-a)^2}{4}]$

B: $\pi[(b^2 - a^2) - n(b-a)^2]$

C: $\pi[(b^2 - a^2) + \frac{n(b-a)^2}{4}]$

D: $\pi[(b^2 - a^2) + n(b-a)^2]$

Answer: A

Year: GATE CSE 2020

Question 66: If $P=3$, $R=27$, $T=243$, then $Q + S =$ _____

A: 40

B: 80

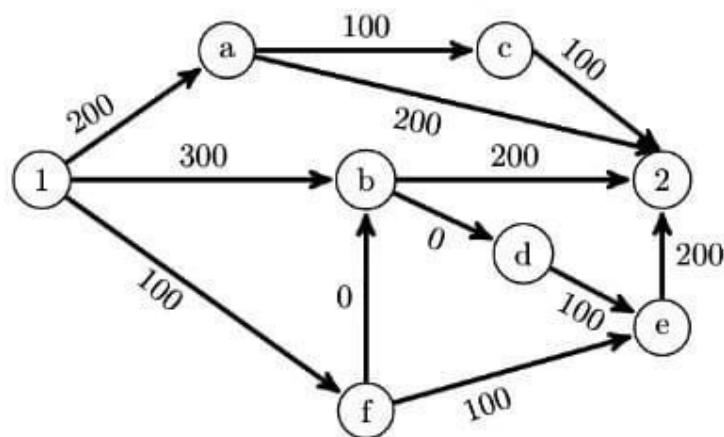
C: 90

D: 110

Answer: C

Year: GATE CSE 2020

Question 67: There are multiple routes to reach from node 1 to node 2, as shown in the network.



The cost of travel on an edge between two nodes is given in rupees. Nodes 'a', 'b', 'c', 'd', 'e', and 'f' are toll booths. The toll price at toll booths marked 'a' and 'e' is Rs. 200, and is Rs. 100 for the other toll booths. Which is the cheapest route from node 1 to node 2?

A: 1 - a - c - 2

B: 1 - f - b - 2

C: 1 - b - 2

D: 1 - f - e - 2

Answer: B

Year: GATE CSE 2019

Question 68: Three of the five students are allocated to a hostel put in special requests to the warden, Given the floor plan of the vacant rooms, select the allocation plan that will accommodate all their requests.

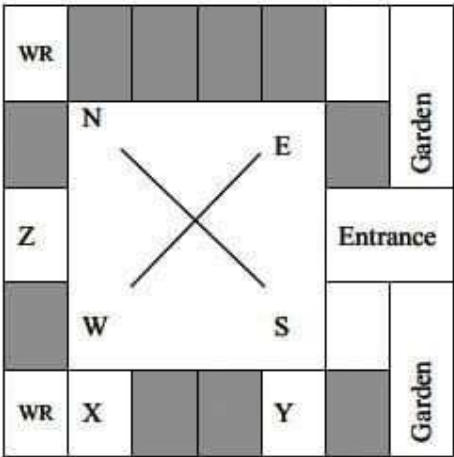
Request by X: Due to pollen allergy, I want to avoid a wing next to the garden.

Request by Y: I want to live as far from the washrooms as possible, since I am very much sensitive to smell.

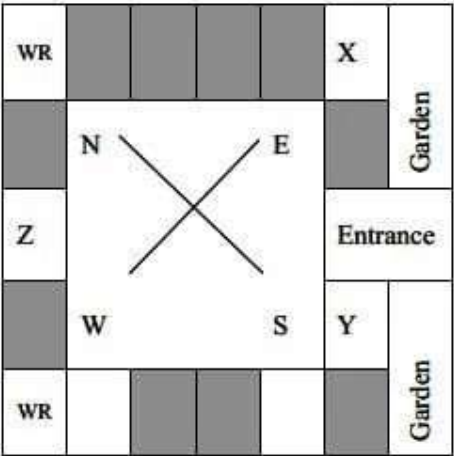
Request by Z: I believe in Vaastu and so I want to stay in South-West wing.

The shaded rooms are already occupied. WR is washroom

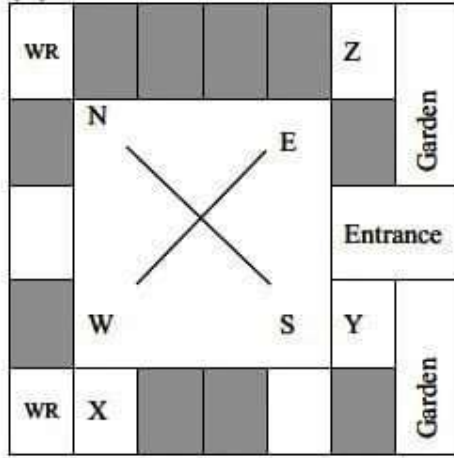
(A)



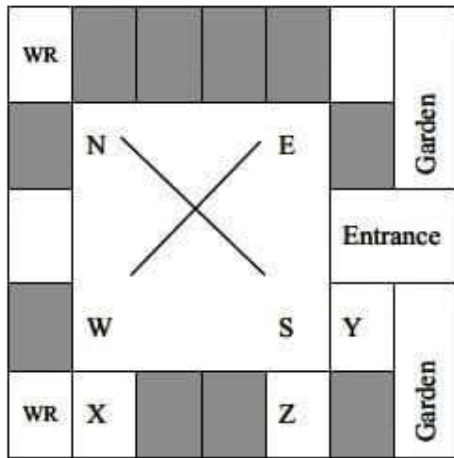
(B)



(C)



(D)



A: A

B: B

C: C

D: D

Answer: D

Year: GATE CSE 2019

Question 69: In a college, there are three student clubs, 60 students are only in the Drama club, 80 students are only in the Dance club, 30 students are only in Maths club, 40 students are in both Drama and Dance clubs, 12 students are in both Dance and Maths clubs, 7 students are in both Drama and Maths clubs, and 2 students are in all clubs. If 75% of the students in the college are not in any of these clubs, then the total number of students in the college is _ _.

A: 1000

B: 975

C: 900

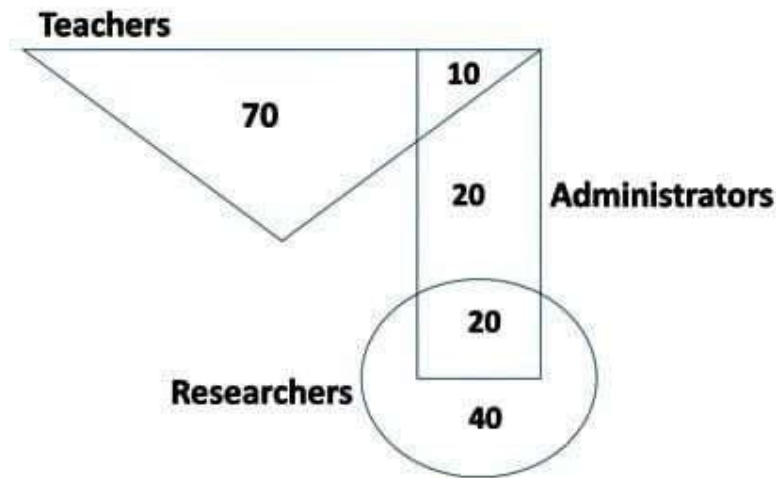
D: 225

Answer: C

Year: GATE CSE 2019

Question 70: In the given diagram, teachers are represented in the triangle, researchers in the circle and administrators in the rectangle. Out of the total number of the people, the

percentage of administrators shall be in the range of _____



A: 0 to 15

B: 16 to 30

C: 31 to 45

D: 46 to 60

Answer: C

Year: GATE CSE 2019

Question 71: The police arrested four criminals - P, Q, R and S. The criminals knew each other.

They made the following statements:

P says "Q committed the crime."

Q says "S committed the crime."

R says " I did not do it."

S says "What Q said about me is false".

Assume only one of the arrested four committed the crime and only one of the statements made above is true. Who committed the crime?

A: P

B: R

C: S

D: Q

Answer: B

Year: GATE CSE 2019

Question 72: Ten friends planned to share equally the cost of buying a gift for their teacher. When two of them decided not to contribute, each of the other friends had to pay Rs. 150 more. The cost of the gift was Rs. ____

A: 666

B: 3000

C: 6000

D: 12000

Answer: C

Year: GATE CSE 2019

Question 73: Two cars at the same time from the same location and go in the same direction. The speed of the first car is 50 km/h and the speed of the second car is 60 km/h. The number of hours it takes for the distance between the two cars to be 20 km is ____.

A: 1

B: 2

C: 3

D: 6

Answer: B

Year: GATE CSE 2018

Question 74: A six sided unbiased die with four green faces and two red faces is rolled seven times. Which of the following combinations is the most likely outcome of the experiment?

A: Three green faces and four red faces.

B: Four green faces and three red faces.

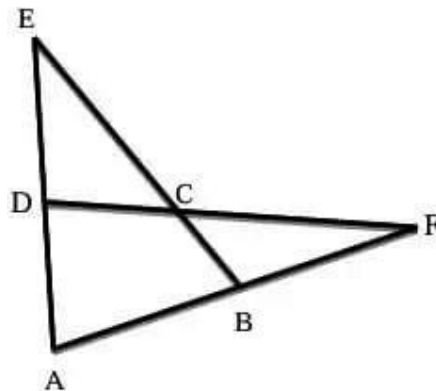
C: Five green faces and two red faces.

D: Six green faces and one red face

Answer: C

Year: GATE CSE 2018

Question 75: In the figure below, $\angle DEC + \angle BFC$ is equal to _____



A: $\angle BCD - \angle BAD$

B: $\angle BAD + \angle BCF$

C: $\angle BAD + \angle BCD$

D: $\angle CBA +$

$\angle ADC$ **Answer:**

A

Year: GATE CSE 2018

Question 76: In a party, 60% of the invited guests are male and 40% are female. If 80% of the invited guests attended the party and if all the invited female guests attended, what would be the ratio of males to females among the attendees in the party?

A: 02:03

B: 01:01

C: 03:02

D: 02:01

Answer: B

Year: GATE CSE 2018

Question 77: If $pqr \neq 0$ and $p^{-x} = \frac{1}{q}$, $q^{-y} = \frac{1}{r}$, $r^{-z} = \frac{1}{p}$, what is the value of the product

xyz ?

A: -1

B: $\frac{1}{pqr}$

C: 1

D: pqr

Answer: C

Year: GATE CSE 2018

Question 78: In appreciation of the social improvements completed in a town, a wealthy philanthropist decided to gift Rs. 750 to each male senior citizen in the town and Rs. 1000 to each female senior citizen. Altogether, there were 300 senior citizens eligible for this gift.

However, only $\frac{8}{9}$ of the eligible men and $\frac{2}{3}$ of the eligible women claimed the gift. How much money (in Rupees) did the philanthropist give away in total?

A: 1,50,000

B: 2,00,000

C: 1,75,000

D: 1,51,000

Answer: B

Year: GATE CSE 2018

Question 79: What is the missing number in the following sequence?

2, 12, 60, 240, 720, 1440, ,0

A: 2880

B: 1440

C: 720

D: 0

Answer: B

Year: GATE CSE 2018

Question 80: What would be the smallest natural number which when divided either by 20 or by 42 or by 76 leaves a remainder of 7 in each case?

A: 3047

B: 6047

C: 7987

D: 63847

Answer: C

Year: GATE CSE 2018

Question 81: The area of a square is d . What is the area of the circle which has the diagonal of the square as its diameter?

A: πd

B: πd^2

C: $\frac{1}{4}\pi d^2$

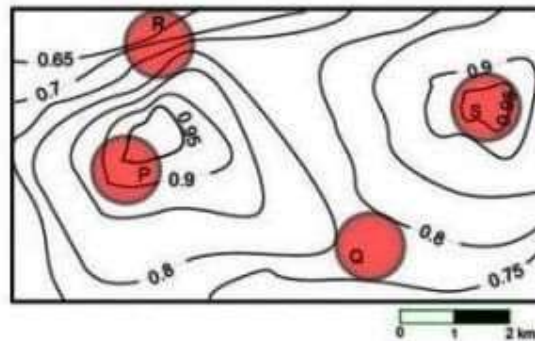
D: $\frac{1}{2}\pi d$

Answer: D

Year: GATE CSE 2017 SET-2

Question 82: An air pressure contour line joins locations in a region having the same atmospheric pressure. The following is an air pressure contour plot of a geographical region. Contour lines are shown at 0.05 bar intervals in this plot.

If the possibility of a thunderstorm is given by how fast air pressure rises or drops over a region, which of the following regions is most likely to have a thunderstorm?



A: P

B: Q

C: R

D: S

Answer: C

Year: GATE CSE 2017 SET-2

Question 83: The number of roots of $e^x + 0.5x^2 - 2 = 0$ in the range $[-5,5]$ is

A: 0

B: 1

C: 2

D: 3

Answer: C

Year: GATE CSE 2017 SET-2

Question 84: X is a 30 digit number starting with the digit 4 followed by the digit 7. Then the number X^3 will have

A: 90 digits

B: 91 digits

C: 92 digits

D: 93 digits

Answer: A

Year: GATE CSE 2017 SET-2

Question 85: There are three boxes. One contains apples, another contains oranges and the last one contains both apples and oranges. All three are known to be incorrectly labeled. If you are permitted to open just one box and then pull out and inspect only one fruit, which box would you open to determine the contents of all three boxes?

A: The box labeled 'Apples'

B: The box labeled 'Apples and Oranges'

C: The box labeled 'Oranges'

D: Cannot be determined

Answer: B

Year: GATE CSE 2017 SET-2

Question 86: There are 3 red socks, 4 green socks and 3 blue socks. You choose 2 socks. The probability that they are of the same colour is

A: $\frac{1}{5}$

B: $\frac{7}{30}$

C: $\frac{1}{4}$

D: $\frac{4}{15}$

Answer: D

Year: GATE CSE 2017 SET-2

Question 87: A test has twenty questions worth 100 marks in total. There are two types of questions. Multiple choice questions are worth 3 marks each and essay questions are worth 11 marks each. How many multiple choice questions does the exam have?

A: 12

B: 15

C: 18

D: 19

Answer: B

Year: GATE CSE 2017 SET-2

Question 88: There are five buildings called V, W, X, Y and Z in a row (not necessarily in that order). V is to the West of W. Z is to the East of X and the West of V. W is to the West of Y. Which is the building in the middle?

A: V

B: W

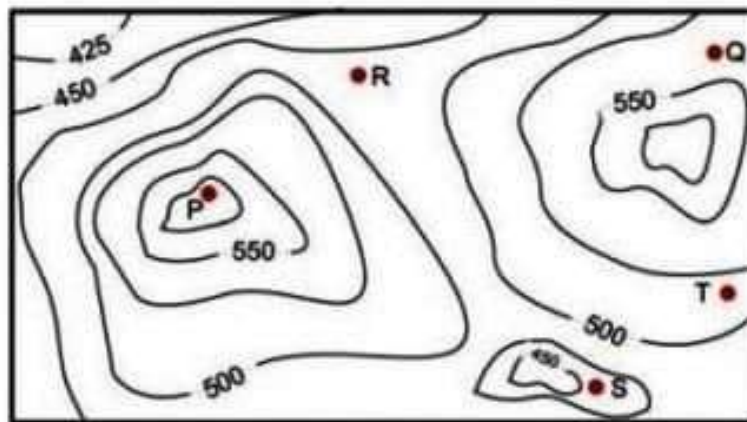
C: X

D: Y

Answer: A

Year: GATE CSE 2017 SET-1

Question 89: A contour line joins locations having the same height above the mean sea level. The following is a contour plot of a geographical region. Contour lines are shown at 25 m intervals in this plot. If in a flood, the water level rises to 525 m, which of the villages P, Q, R, S, T get submerged?



A: P, Q

B: P, Q, T

C: R, S, T

D: Q, R, S

Answer: C

Year: GATE CSE 2017 SET-1

Question 90: Arun, Gulab, Neel and Shweta must choose one shirt each from a pile of four shirts coloured red, pink, blue and white respectively. Arun dislikes the colour red and Shweta dislikes the colour white. Gulab and Neel like all the colours. In how many different ways can they choose the shirts so that no one has a shirt with a colour he or she dislikes?

A: 21

B: 18

C: 16

D: 14

Answer: D

Year: GATE CSE 2017 SET-1

Question 91: The expression $\frac{(x+y) - |x-y|}{2}$ is equal to :

A: The maximum of x and y

B: The minimum of x and y

C: 1

D: None of the above

Answer: B

Year: GATE CSE 2017 SET-1

Question 92: Six people are seated around a circular table. There are at least two men and two women. There are at least three right-handed persons. Every woman has a left-handed person to her immediate right. None of the women are right-handed. The number of women at the table is

A: 2

B: 3

C: 4

D: Cannot be determined

Answer: A

Year: GATE CSE 2017 SET-1

Question 93: The probability that a k -digit number does NOT contain the digits 0, 5, or 9 is

A: 0.3^k

B: 0.6^k

C: 0.7^k

D: 0^k

Answer: C

Year: GATE CSE 2017 SET-1

Question 94: Find the smallest number y such that $y \times 162$ is a perfect cube.

A: 24

B: 27

C: 32

D: 36

Answer: D

Year: GATE CSE 2017 SET-1

Question 95: Rahul, Murali, Srinivas and Arul are seated around a square table. Rahul is sitting to the left of Murali. Srinivas is sitting to the right of Arul. Which of the following pairs are seated opposite each other?

A: Rahul and Murali

B: Srinivas and Arul

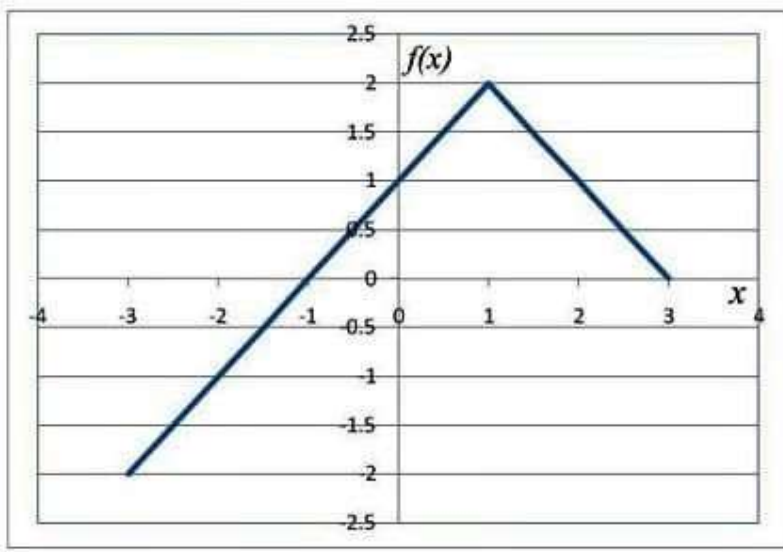
C: Srinivas and Murali

D: Srinivas and Rahul

Answer: C

Year: GATE CSE 2016 SET-2

Question 96:



A: $f(x) = 1 - |x - 1|$

B: $f(x) = 1 + |x - 1|$

C: $f(x) = 2 - |x - 1|$

D: $f(x) = 2 + |x - 1|$

Answer: C

Year: GATE CSE 2016 SET-2

Question 97: In a 2×4 rectangle grid shown below, each cell is rectangle. How many rectangles can be observed in the grid?

A: 21

B: 27

C: 30

D: 36

Answer: C

Year: GATE CSE 2016 SET-2

Question 98: Among 150 faculty members in an institute, 55 are connected with each other through Facebook and 85 are connected through Whatsapp. 30 faculty members do not have Facebook or Whatsapp accounts. The numbers of faculty members connected only through Facebook accounts is ____.

A: 35

B: 45

C: 64

D: 90

Answer: A

Year: GATE CSE 2016 SET-2

Question 99: In a quadratic function, the value of the product of the roots (α, β) is 4. Find the value of

$$\frac{\alpha^n + \beta^n}{\alpha^{-n} + \beta^{-n}}$$

A: n^4

B: 4^n

C: 2^{2n-1}

D: 4^{n-1}

Answer: B

Year: GATE CSE 2016 SET-1

Question 100: In a process, the number of cycles to failure decreases exponentially with an increase in load. At a load of 80 units, it takes 100 cycles for failure. When the load is halved, it takes 10000 cycles for failure. The load for which the failure will happen in 5000 cycles is _____

A: 40

B: 46.02

C: 60.01

D: 92.02

Answer: B

Year: GATE CSE 2016 SET-1

Question 101: If $f(x) = 2x^7 + 3x - 5$, which of the following is a factor of $f(x)$?

A: $x^3 + 8$

B: $x - 1$

C: $2x - 5$

D: $x + 1$

Answer: B

Year: GATE CSE 2016 SET-1

Question 102: A shaving set company sells 4 different types of razors- Elegance, Smooth, Soft and Executive.

Elegance sells at Rs. 48, Smooth at Rs. 63, Soft at Rs. 78 and Executive at Rs. 173 per piece.

The table below shows the numbers of each razor sold in each quarter of a year.

Quarter/Product	Elegance	Smooth	Soft	Executive
Q1	27300	20009	17602	9999
Q2	25222	19392	18445	8942
Q3	28976	22429	19544	10234
Q4	21012	18229	16595	10109

Which product contributes the greatest fraction to the revenue of the company in that year?

A: Elegance

B: Executive

C: Smooth

D: Soft

Answer: B

Year: GATE CSE 2016 SET-1

Question 103: A cube is built using 64 cubic blocks of side one unit. After it is built, one cubic block is removed from every corner of the cube. The resulting surface area of the body (in square units) after the removal is __.

A: 56

B: 64

C: 72

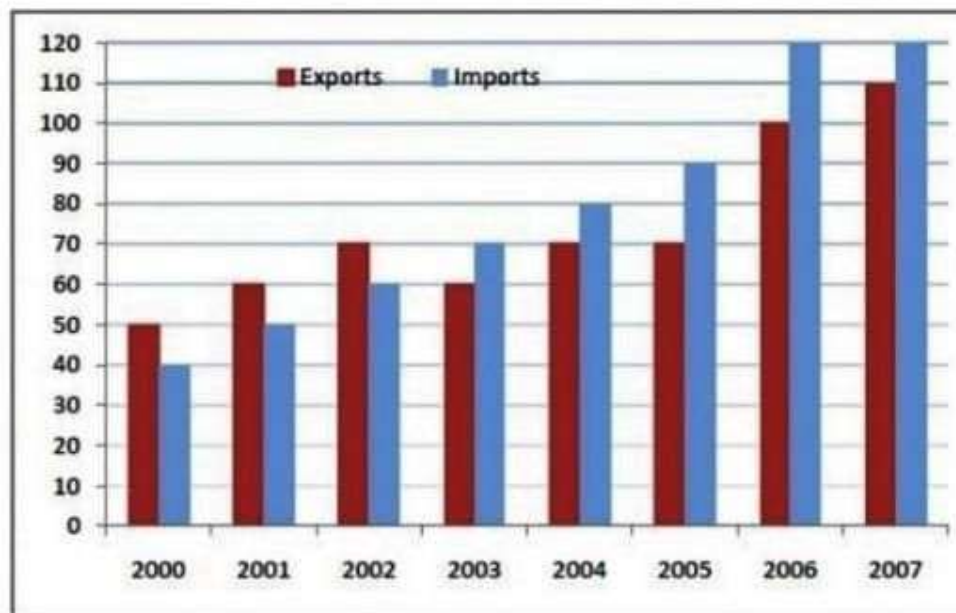
D: 96

Answer: D

Year: GATE CSE 2015 SET-3

Question 104: The exports and imports (in crores of Rs.) of a country from the year 2000 to 2007 are given in the following bar chart. In which year is the combined percentage increase

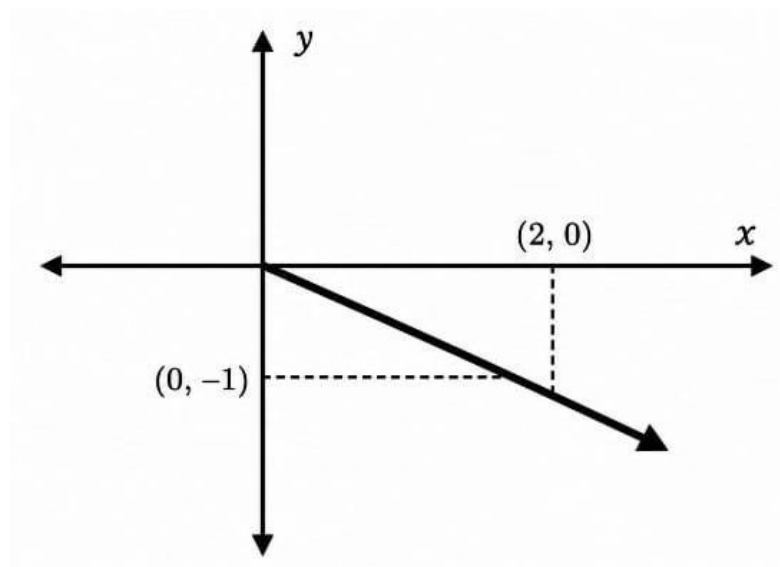
in imports and exports the highest?



Answer: 2006

Year: GATE CSE 2015 SET-3

Question 105: Choose the most appropriate equation for the function drawn as thick line, in the plot below.



A: $x=y - |y|$

B: $x= -(y - |y|)$

C: $x=y + |y|$

D: $x= -(y + |y|)$

Answer: B

Year: GATE CSE 2015 SET-3

Question 106: The head of newly formed government desires to appoint five of the six selected members P, Q, R, S, T and U to portfolios of Home, Power, Defense, Telecom, and Finance. U does not want any portfolio if S gets one of the five. R wants either Home or Finance or no portfolio. Q says that if S gets Power or Telecom, then she must get the other one. T insists on a portfolio if P gets one.

Which is the valid distribution of portfolios?

A: P-Home, Q-Power, R-Defense, S-Telecom, T-Finance

B: R-Home, S-Power, P-Defense, Q-Telecom, T-Finance

C: P-Home, Q-Power, T-Defense, S-Telecom, U-Finance

D: Q-Home, U-Power, T-Defense, R-Telecom, P-Finance

Answer: B

Year: GATE CSE 2015 SET-3

Question 107: A function $f(x)$ is linear and has a value of 29 at $x= -2$ and 39 at $x=3$. Find its value at $x=5$.

A: 59

B: 45

C: 43

D: 35

Answer: C

Year: GATE CSE 2015 SET-2

Question 108: If p, q, r, s are distinct integers such that: $f(p, q, r, s) = \max(p, q, r, s)$

$$g(p, q, r, s) = \min(p, q, r, s)$$

$$h(p, q, r, s) = \text{remainder of } \frac{(p \times q)}{(r \times s)} \text{ if } (p \times q) > (r \times s)$$

$$\text{or remainder of } \frac{(r \times s)}{(p \times q)} \text{ if } (r \times s) > (p \times q)$$

Also a function $fgh(p, q, r, s) = f(p, q, r, s) \times g(p, q, r, s) \times h(p, q, r, s)$

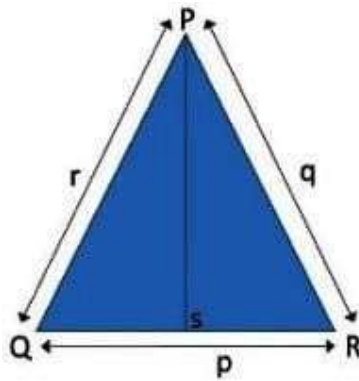
Also the same operations are valid with two variable functions of the form $f(p, q)$

What is the value of $fgh(2, 5, 7, 3), 4, 6, 8)$?

Answer: 8

Year: GATE CSE 2015 SET-2

Question 109: In a triangle PQR , PS is the angle bisector of $\angle QPR$ and $\angle QPS = 60^\circ$. What is the length of PS ?



- A: $\left(\frac{q+r}{qr}\right)$
 B: $\left(\frac{qr}{q+r}\right)$
 C: $\sqrt{(q^2 + r^2)}$
 D: $\left(\frac{(q+r)^2}{qr}\right)$

Answer: B

Year: GATE CSE 2015 SET-2

Question 110: Four branches of a company are located at M, N, O and P. M is north of N at a distance of 4km; P is south of O at a distance of 2 km; N is southeast of O by 1km. What is the distance between M and P in km?

- A: 5.34
 B: 6.74
 C: 25.5
 D: 45.49

Answer: A

Year: GATE CSE 2015 SET-2

Question 111: If the list of letters P, R, S, T, U is an arithmetic sequence, which of the following are also in arithmetic sequence?

I. $2P, 2R, 2S, 2T, 2U$

II. $P - 3, R - 3, S - 3, T - 3, U - 3$

III. P^2, R^2, S^2, T^2, U^2

A: I only

B: I and II

C: II and III

D: I and III

Answer: B

Year: GATE CSE 2015 SET-2

Question 112: Based on the given statements, select the most appropriate option to solve the given question.

What will be the total weight of 10 poles each of same weight?

Statements:

I. One fourth of the weight of the pole is 5 Kg.

II. The total weight of these poles is 160 Kg more than the total weight of two poles.

A: Statement I alone is not sufficient.

B: Statement II alone is not sufficient.

C: Either I or II alone is sufficient.

D: Both statements I and II together are not sufficient.

Answer: C

Year: GATE CSE 2015 SET-2

Question 113: Consider a function $f(x) = 1 - |x|$ on $-1 \leq x \leq 1$. The value of x at which the function attains a maximum, and the maximum value of the function are:

A: 0, -1

B: -1, 0

C: 0, 1

D: -1, 2

Answer: C

Year: GATE CSE 2015 SET-1

Question 114: The probabilities that a student passes in mathematics, physics and chemistry are m, p and c respectively. Of these subjects, the student has 75% chance of passing in at least one, a 50% chance of passing in at least two and a 40% chance of passing in exactly two. Following relations are drawn in m, p, c :

I. $p+m+c=27/20$

II. $p+m+c=13/20$

III. $(p) \times (m) \times (c) = 1/10$

A: Only relation I is true.

B: Only relation II is true.

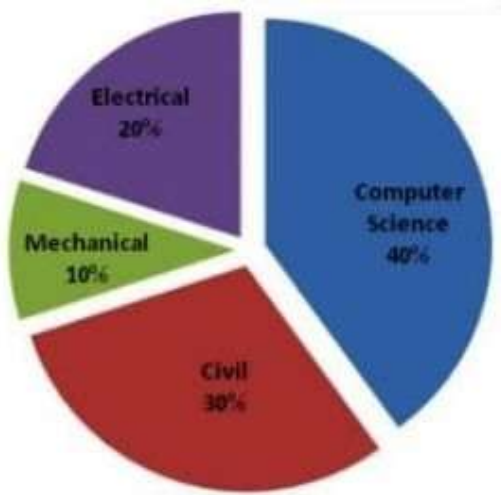
C: Relations II and III are true.

D: Relations I and III are true.

Answer: D

Year: GATE CSE 2015 SET-1

Question 115: The pie chart below has the breakup of the number of students from different departments in an engineering college for the year 2012. The proportion of male to female students in each department is 5:4. There are 40 males in Electrical Engineering. What is the difference between the numbers of female students in the civil department and the female students in the Mechanical department?



Answer: 32

Year: GATE CSE 2015 SET-1

Question 116: The number of students in a class who have answered correctly, wrongly, or not attempted each question in an exam, are listed in the table below. The marks for each question are also listed. There is no negative or partial marking.

Q No.	Marks	Answered Correctly	Answered Wrongly	Not Attempted
1	2	21	17	6
2	3	15	27	2
3	1	11	29	4
4	2	23	18	3
5	5	31	12	1

What is the average of the marks obtained by the class in the examination?

A: 2.29

B: 2.97

C: 6.795

D: 8.795

Answer: C

Year: GATE CSE 2015 SET-1

Question 117: Based on the given statements, select the most appropriate option to solve the given question.

If two floors in a certain building are 9 feet apart, how many steps are there in a set of stairs that extends from the first floor to the second floor of the building?

Statements:

I. Each step is $\frac{3}{4}$ foot high.

II. Each step is 1 foot wide.

A: Statements I alone is sufficient, but statement II alone is not sufficient.

B: Statements II alone is sufficient, but statement I alone is not sufficient.

C: Both statements together are sufficient, but neither statement alone is sufficient.

D: Statements I and II together are not sufficient.?

Answer: A

Year: GATE CSE 2015 SET-1

Question 118: Given Set A=2,3,4,5 and Set B=11,12,13,14,15, two numbers are randomly selected, one from each set. What is the probability that the sum of the two numbers equals 16?

A: 0.2

B: 0.25

C: 0.3

D: 0.33

Answer: A

Year: GATE CSE 2014 SET-3

Question 119: Consider the equation: $(7526)_8 - (Y)_8 = (4364)_8$, where $(X)_N$ stands for X to the base N . Find Y .

A: 1634

B: 1737

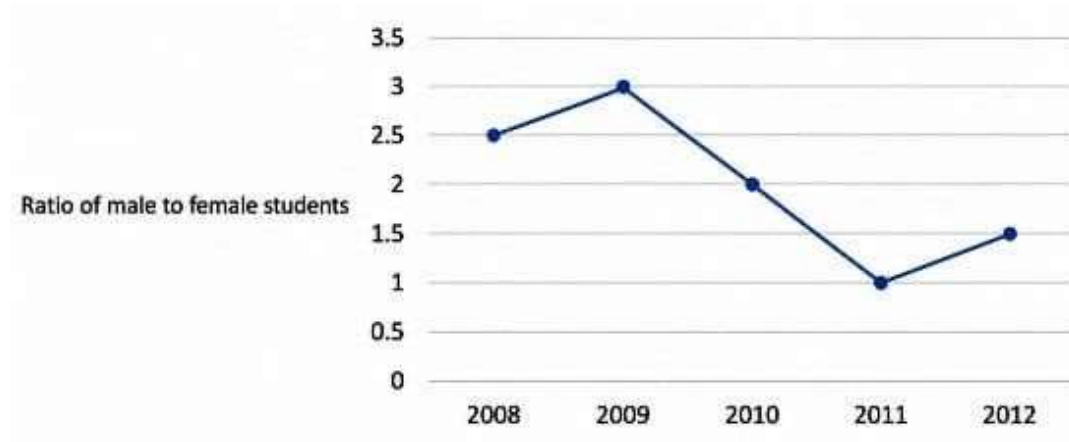
C: 3142

D: 3162

Answer: C

Year: GATE CSE 2014 SET-3

Question 120: 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 in 2011 and 2012 is equal, what is the ratio of male students in 2012 to male students in 2011?



A: 01:01

B: 02:01

C: 1.5:1

D: 2.5:1

Answer: C

Year: GATE CSE 2014 SET-3

Question 121: 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%

Answer: D

Year: GATE CSE 2014 SET-3

Question 122: A dance programme is scheduled for 10.00 a.m. Some students are participating in the programme 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 programme. The instruction you think that is appropriate for this is

A: Students should come at 9.00 a.m. and parents should come at 10.00 a.m.

B: Participating students should come at 9.00 a.m. accompanied by a parent, and other parents and students should come by 10.00 a.m.

C: Students who are not participating should come by 10.00 a.m. and they should not bring their parents. Participating students should come at 9.00 a.m.

D: Participating students should come before 9.00 a.m. Parents who accompany them should come at 9.00 a.m. All others should come at 10.00 a.m.

Answer: B

Year: GATE CSE 2014 SET-3

Question 123: 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

Answer: C

Year: GATE CSE 2014 SET-3

Question 124: 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

Answer: C

Year: GATE CSE 2014 SET-2

Question 125: At what time between 6 a. m. and 7 a. m. will the minute hand and hour hand of a clock make an angle closest to 60° ?

A: 6: 22 a.m.

B: 6: 27 a.m.

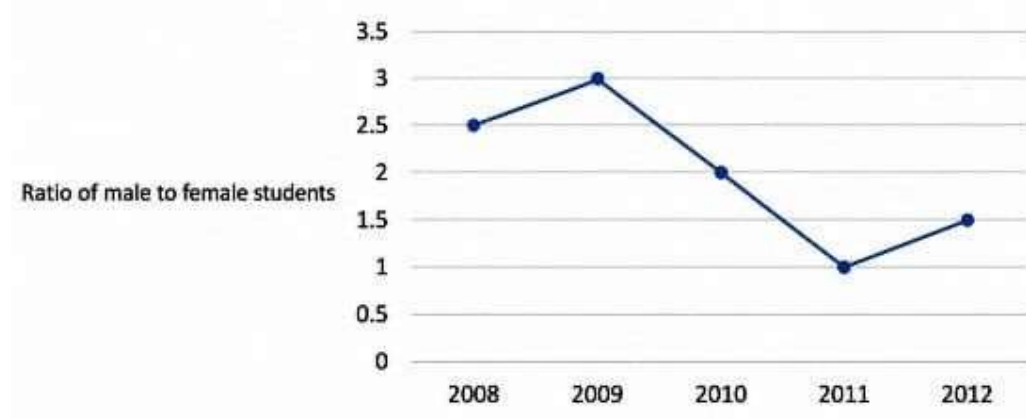
C: 6: 38 a.m.

D: 6: 45 a.m.

Answer: A

Year: GATE CSE 2014 SET-2

Question 126: 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?



Answer: 140

Year: GATE CSE 2014 SET-2

Question 127: 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

Answer: D

Year: GATE CSE 2014 SET-2

Question 128: The value of $\sqrt{12 + \sqrt{12 + \sqrt{12 + \dots}}}$ is

A: 3.464

B: 3.932

C: 4

D: 4.444

Answer: C

Year: GATE CSE 2014 SET-2

Question 129: What is the average of all multiples of 10 from 2 to 198?

A: 90

B: 100

C: 110

D: 120

Answer: B

Year: GATE CSE 2014 SET-1

Question 130: When a point inside of a tetrahedron (a solid with four triangular surfaces) is connected by straight lines to its corners, how many (new) internal planes are created with these lines?

Answer: 6

Year: GATE CSE 2014 SET-1

Question 131: 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 tabulated below. What percent of respondents do not own a scooter?

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

Answer: 48

Year: GATE CSE 2014 SET-1

Question 132: 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 _____

Answer: 850

Year: GATE CSE 2014 SET-1

Question 133: The roots of $ax^2 + bx + c = 0$ 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

Answer: D

Year: GATE CSE 2014 SET-1

Question 134: If $(z + \frac{1}{z})^2 = 98$, compute $(z^2 + \frac{1}{z^2})$

Answer: 96

Year: GATE CSE 2013

Question 135: The current erection cost of a structure is Rs. 13,200. If the labour wages per day increase by $\frac{1}{5}$ of the current wages and the working hours decrease by $\frac{1}{24}$ of the current period, then the new cost of erection in Rs. Is

A: 16500

B: 15180

C: 11000

D: 10120

Answer: B

Year: GATE CSE 2013

Question 136: A tourist covers half of his journey by train at 60 km/h, half of the remainder by bus at 30 km/h and the rest by cycle at 10 km/h. The average speed of the tourist in km/h during his entire journey is

A: 36

B: 30

C: 24

D: 18

Answer: C

Year: GATE CSE 2013

Question 137: Out of all the 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: $(\frac{13}{90})$

- B: $(\frac{12}{90})$
 C: $(\frac{78}{90})$
 D: $(\frac{77}{90})$

Answer: D

Year: GATE CSE 2013

Question 138: Find the sum of the expression

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

- A: 7
 B: 8
 C: 9
 D: 10

Answer: B

Year: GATE CSE 2013

Question 139: What will be the maximum sum of 44, 42, 40, ... ?

- A: 502
 B: 504
 C: 506
 D: 500

Answer: C

Year: GATE CSE 2012

Question 140: Given the sequence of terms, AD CG FK JP, the next term is

- A: OV

B: OW

C: PV

D: PW

Answer: A

Year: GATE CSE 2012

Question 141: 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: Adding 7 to each entry in a list adds 7 to the standard deviation of the list

R: Doubling each entry in a list doubles the mean of the list

S: 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

Answer: C

Year: GATE CSE 2012

Question 142: 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: 0.72

Answer: B

Year: GATE CSE 2012

Question 143: A political party orders an arch for the entrance to the ground in which the annual convention is being held. The profile of the arch follows the equation $y = 2x - 0.1x^2$ 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

Answer: B

Year: GATE CSE 2012

Question 144: The cost function for a product in a 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

Answer: A

Year: GATE CSE 2011

Question 145: A container originally contains 10 litres of pure spirit. From this container, 1 litre of spirit replaced with 1 litre of water. Subsequently, 1 litre of the mixture is again replaced with 1 litre of water and this process is repeated one more time. How much spirit is now left in the container?

A: 7.58 litres

B: 7.84 litres

C: 7 litres

D: 7.29 litres

Answer: D

Year: GATE CSE 2011

Question 146: A transporter 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 orders 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 5th day?

A: 4

B: 5

C: 6

D: 7

Answer: C

Year: GATE CSE 2011

Question 147: 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 $F = \frac{100}{q}$. How many units should be produced to minimize the total cost ($V + F$)?

A: 5

B: 4

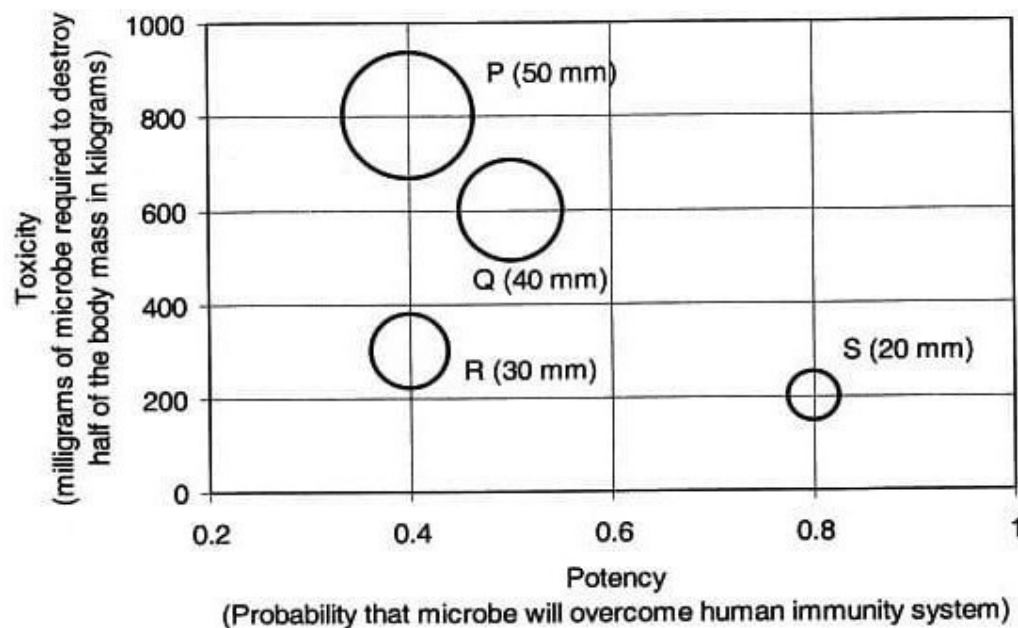
C: 7

D: 6

Answer: A

Year: GATE CSE 2011

Question 148: P,Q,R and S are 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:



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

Answer: D

Year: GATE CSE 2011

Question 149: If $\log(P) = (1/2)\log(Q) = (1/3)\log(R)$, 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: $R = P^2 Q^2$

Answer: B

Year: GATE CSE 2010

Question 150: Given digits 2, 2, 3, 3, 3, 4, 4, 4, 4 how many distinct 4 digit numbers greater than 3000 can be formed?

A: 50

B: 51

C: 52

D: 54

Answer: B

Year: GATE CSE 2010

Question 151: 5 skilled workers can build a wall in 20 days; 8 semi-skilled 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 semi-skilled and 5 unskilled workers, how long it will take to build the wall?

A: 20 days

B: 18 days

C: 16 days

D: 15 days

Answer: D

Year: GATE CSE 2010

Question 152: 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 three years. Given the following facts:

i. Hari's age + Gita's age > Irfan's age + Saira's age

ii. The age difference between Gita and Saira is one year. However Gita is not the oldest and Saira is not the youngest.

iii. There are no twins.

In what order they were born (oldest first)?

A: HSIG

B: SGHI

C: IGSH

D: IHSG

Answer: B

Year: GATE CSE 2010

Question 153: If $137+276=435$ how much is $731+672$?

A: 534

B: 1403

C: 1623

D: 1513

Answer: C

Year: GATE CSE 2010

Question 154: 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

Answer: D

Year: GATE IT 2008

Question 155: The exponent of 11 in the prime factorization of $300!$ is

A: 27

B: 28

C: 29

D: 30

Answer: C

Year: ISRO CSE 2007

Question 156: The Fibonacci sequence is the sequence of integers

A: 1, 3, 5, 7, 9, 11, 13

B: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34

C: 0, 1, 3, 4, 7, 11, 18, 29, 47

D: 0, 1, 3, 7, 15

Answer: B
