PART-A (Solution)

GATE-2010

Q1. Choose the most appropriate word from the options given below to complete the following sentence:

His rather casual remarks on politics _____ his lack of seriousness about the subject.

(a) masked (b) belied (c) betrayed (d) suppressed

Ans. : (c)

Solution: Hence the word bleary has been used in the sense " to reveal unintentionally".

Q2. Which of the following options is the closest in meaning to the word below?

Circuitous

(a) cyclic (b) indirect (c) confusing (d) crooked

Ans. : (b)

Solution: Circuitous means " round about " or "indirect".

Q3. Choose the most appropriate word from the options given below to complete the following sentence:

If we manage to _____ our natural resources, we would leave a better planet for our children.

(a) uphold (b) restrain (c) cherish (d) conserve

Ans. : (d)

Q4 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

Ans. : (d)

Solution: Number of people playing either football or hockey.

$$N(HUF) = N(H) + N(F) - (H \cap F) = 15 + 17 - 10 = 22$$

Thus out of 25 persons the number of persons playing neither hockey nor football $= 25 - 22 = 3$

Q5 The question below consists of a pair of related words followed by four pairs of words. Select the pair that best expresses the relation in the original pair:

Unemployed: Worker

(a) fallow: land (b) unaware: sleeper

(c) wit: jester (d) renovated : house

Ans. : (a)

Solution: A water who is not being used is unemployed. Similarly a land which is not being used is fallow.

Q6. Modern warfare has changed from large scale clashes of armies to suppression of civilian populations. Chemical agents that do their work silently appear to be suited to such warfare; and regretfully, there exist people in military establishments who think that chemical agents are useful tools for their cause.

Which of the following statements best sums up the meaning of the above passage:

(a) Modern warfare has resulted in civil strife

(b) Chemical agents are useful in modern warfare

(c) Use of chemical agents in warfare would be undesirable

(d) People in military establishments like to use chemical agents in war.

Ans. : (d)

Solution: According to the passage the use of chemical agents in warfare would be undesirable.

Q7. 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 will it take to build the wall?

(a) 20 days (b) 18 days (c) 16 days (d) 15 days

Ans. : (d)

Solution: Let S, S' and U denote the skilled, semi-skilled and unskilled worker. Then in order to complete the work in 1 day.

$5\times 20=100$ skilled workers are required.

$8\times 25=200$ semi-skilled workers are required.

$10\times 30=300$ unskilled are workers required.

Thus, $100S=200S^{1}=300U$ $\therefore S=3U, S'=\frac{3}{2}U$

Thus, there are skilled worker is equivalent to 3 unskilled worker and are semi-skilled worker is equivalent to $\frac{3}{2}$ unskilled worker.

Hence, if n is the time required to build the wall then

$$\left(2\times 3+6\frac{3}{2}+5\right)\times n=300$$

$$\Rightarrow 20n=300\Rightarrow n=15 \text{ days.}$$

GATE-2011

Q8 Choose the most appropriate word from the options given below to complete the following sentence.

If you are trying to make a strong impression on your audience, you cannot do so by being understated, tentative or _____

(a) hyperbolic (b) restrained (c) argumentative (d) indifferent

Ans. : (b)

Solution: The words 'understated' and 'tentative' indicate that you are not clearly expressing your idea. Hence the next word should be restrained.

Q9. Choose the most appropriate word(s) from the options given below to complete the following sentence.

I contemplated _____ Singapore for my vacation but decided against it.

(a) to visit (b) having to visit (c) visiting (d) for a visit

Ans. : (c)

Q10. If $\log(P)=(1/2)\log(Q)=(1/3)\log(R)$, then which of the following options is **TRUE**?

(a) $P^2=Q^3R^2$ (b) $Q^2=PR$ (c) $Q^2=R^3P$ (d) $R=P^2Q^2$

Ans. : (b)

Solution: $\log(P)=\frac{1}{2}\log(Q)=\frac{1}{3}\log(R)=\lambda$

Hence $P=e^{\lambda}, Q=e^{2\lambda}, R=e^{3\lambda}$

We have $Q^2=e^{4\lambda}$, $PR=e^{\lambda}\cdot e^{3\lambda}=e^{4\lambda}$

$\therefore Q^2=PR$

Q11. Which of the following options is the closest in the meaning to the word below:

Inexplicable

(a) Incomprehensible (b) Indelible (c) Inextricable (d) Infallible

Ans. : (a)

Solution: Inexplicable means 'that cannot be explained'

Indelible means 'that cannot be deleted or removed'

Inextricable means 'that cannot be separated'.

Infallible means 'unfailing'.

Hence the correct option is (a).

Q12. Choose the word from the options given below that is most nearly opposite in meaning to the given word: **"Amalgamate"**

(a) merge (b) split (c) collect (d) separate

Ans. : (a)

Solution: Amalgamate means ' to mix things' ' merge' has the same meaning,

Q13. 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 4^{th} 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 10^{th} day. What is the minimum number of trucks required so that there will be no pending order at the end of the 5^{th} day?

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

Ans. : (c)

Solution: Let x be the number of pending orders. Suppose a truck can clear k order per day. Let m be the number of orders received per day. Then from the question,

$7k \times 4 = 4m + x \Rightarrow x = 28k - 4m$

Also from the question (i)

$3k \times 10 = 10m + x \Rightarrow 30k - 10m$ (ii)

From (i) and (ii), $28k - 4m = 30k - 10m \Rightarrow 2k = 6m \Rightarrow k = 3m$

From equation (i) $x = 80m$

In 5 days, 5 m more orders will be received. Thus a total of 80 m + 5 m = 85 m orders will have to be cleared. Thus the minimum number of days $= \frac{85m}{3m \times 5} = \frac{17}{3}$

(Since this is not an integer minimum no of days $= 6$)

Q14. 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

Ans. : (a)

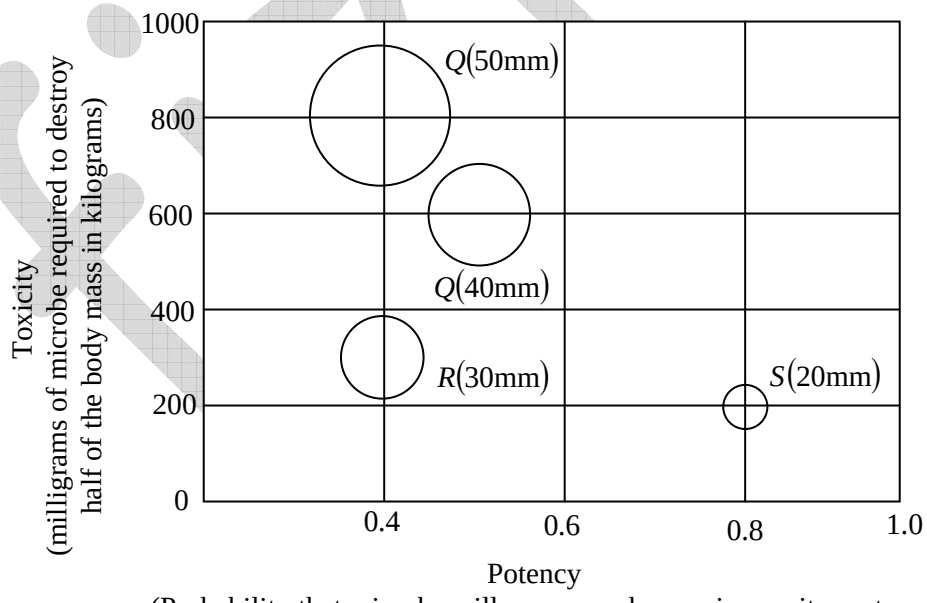
Solution: The total cost of production of product is $T = V + F$ or $T = 4q + \frac{100}{q}$

In order to minimize the cost the derivative of T with respect to q should be zero.

Implies $\frac{dT}{dq} = 0 \Rightarrow 4 - \frac{100}{q^2} = 0 \Rightarrow 4q^2 - 100 = 0 \Rightarrow q^2 - 25 = 0 \Rightarrow q = \pm\ 5$.

Since negative value of q is not allowed, hence $q = 5 units.$

Q15. 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 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

Ans. : (b)

Solution: Since the danger to human being is proportional to toxity (t) potency (P) and growth (g) . Hence $d\alpha \quad ptg$

Using this information we see that product tpg is highest for microbe.

Q. Hence the company should the tangier microbe Q.

Q16. **Few school curricula include a unit on how to deal with bereavement and grief, and yet all students at some point in their lives suffer from losses through death and parting.**

Based on the above passage which topic would not be included in a unit on bereavement?

(a) how to write a letter of condolence

(b) what emotional stages are passed through in the healing process

(c) what the leading causes of death are

(d) how to give support to a grieving friend

Ans. : (a)

Solution: According to passage it is clear that the passage does not clear with how to write a letter of condolence.

Q17. A container originally contains 10 litres of pure spirit. From this container 1 litre of spirit is 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

Ans. : (d)

Solution: The amount of spirit left in the container is given by amount

Where n is the number of times the proves is repeated. Thus final amount of spirit.

$$10\times\left(1-\frac{1}{10}\right)^3=7\cdot 29 \text{ liters.}$$

GATE-2012

Q18. Choose the grammatically **INCORRECT** sentence:

(a) They gave us the money back less the service charge of three hundred rupees.

(b) This country's expenditure is not less than that of Bangladesh.

(c) The committee initially asked for a funding of fifty lakh rupees, but later settled for a less sum.

(d) This country's expenditure on educational reforms is very less.

Ans. : (c)

Solution: Hence the funding is being compared, hence we should use "lesser" instead of "less"

Q19. Which one of the following options is the closest in meaning to the word given below?

Mitigate

(a) Diminish (b) Divulge (c) Dedicate (d) Denote

Ans. : (a)

Solution: Mitigate means to reduce the effect of something. Hence option is (a).

Q20. Choose the most appropriate alternative from the options given below to complete the following sentence:

Despite several _____ the mission succeeded in its attempt to resolve the conflict.

(a) attempts (b) setbacks (c) meeting (d) delegations

Ans. : (b)

Solution: Setback means 'obstruction'.

Q21. 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

Ans. : (a)

Solution: The cost of amount q is $5\ q^2$ the selling price of amount $q = 50q$

Hence profit P is given by $P = 50q - 5q^2$

For maximum value $\frac{dp}{dq} = 0 \Rightarrow 50 - 10q = 0 \therefore q = 5.$

Q22. Choose the most appropriate alternative from the options given below to complete the following sentence:

Suresh's dog is the one_____ was hurt in the stampede.

(a) that (b) which (c) who (d) whom

Q.61 – Q.65 carry two marks each.

Ans. : (b)

Solution: We are picking 'one of the dogs'. Hence the correct answer is 'which'

Q23. 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

Ans. : (c)

Solution: The mean of n entries is given by

$$\overline{x} = \frac{x_1 + x_2 .....x_n}{n}$$

where $x_1 + x_2 .....x_n$ are the values of entries. Adding 7 to each entry adds 7 to the mean.

$$\frac{(x_1 + 7) + (x_2 + 7) + ...(x_n + 7)}{n} = \frac{x_1 + x_2 + ...x_n}{n} + \frac{7n}{n} = \overline{x} + 7$$

Doubling each entry in the list double the mean as

$$\frac{2x_1 + 2x_2 + ... + 2x_n}{x} = 2\overline{x}$$

The standard deviation σ is defined by

$$\sigma = \sqrt{\frac{(x_1 - \overline{x})^2 + (x_2 - \overline{x})^2 .....(x_n - \overline{x})}{n}}$$

When 7 is added to each entry the differences $(x_1 - \overline{x}), (x_2 - \overline{x}).....(x_n - \overline{x})$ remains unchanged.

From the definition, we can conclude that when each entry is doubled, then the standard deviation becomes twice.

Q24. 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

Ans. : (b)

Solution: Given $y = 2x - 0 \cdot 1x^2$, where y is the height in meters. For maximum height attained by the arch.

$$\frac{dy}{dx} = 0 \Rightarrow 2 - 0 \cdot 2x = 0 \Rightarrow x = 10m.$$

when $x = 10m, y = 2 \times 10 - 0 \cdot 1 \times (10)^2$ or $y = 10m.$

Q25. **Wanted Temporary, Part-time persons for the post of Field Interviewer to conduct personal interviews to collect and collate economic data. Requirements: High School-pass, must be available for Day, Evening and Saturday work. Transportation paid, expenses reimbursed.**

Which one of the following is the best inference from the above advertisement?

(a) Gender-discriminatory

(b) Xenophobic

(c) Not designed to make the post attractive

(d) Not gender-discriminatory

Ans. : (c)

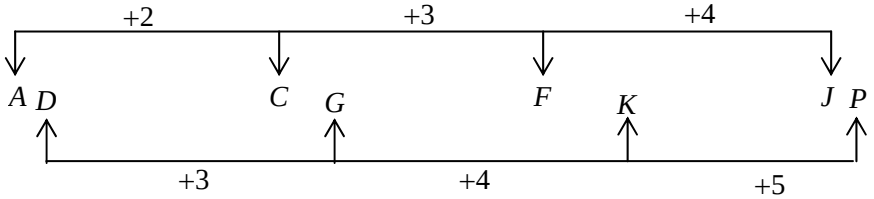
Solution: Nothing has been said in the advertisement about the benefit to the people. We expect the advertisement should contain benefit to the people joining as field interviewer.

Q26. Given the sequence of terms, AD CG FK JP, the next term is

(a) OV (b) OW (c) PV (d) PW

Ans. : (a)

Solution:



From the diagram, the next term would be OV.

GATE-2013

Q27. A number is as much greater than 75 as it is smaller than 117. The number is:

(a) 91 (b) 93 (c) 89 (d) 96

Ans. : (d)

Solution: Let x be the amount by which the number is greater than 75 and les than 117.

$\therefore x-75=117-x \Rightarrow 2x=192 \Rightarrow x=96$

Q28. The professor ordered to the students to go out of the class.

I II III IV

Which of the above underlined parts of the sentence is grammatically incorrect?

(a) I (b) II (c) III (d) IV

Ans. : (b)

Solution: The verb order in a transitive verb. Hence it will directly take an object. Hence the use of $(+_0)$ is incorrect.

Q29. Which of the following options is the closest in meaning to the word given below:

Primeval

(a) Modern (b) Historic (c) Primitive (d) Antique

Ans. : (c)

Solution: The word closest in meaning to primeval is “primitive”.

Q30. Friendship, no matter how _____it is, has its limitations.

(a) cordial (b) intimate (c) secret (d) pleasant

Ans. : (b)

Solution: Intimate means “ very close ”.

Q31. Select the pair that best expresses a relationship similar to that expressed in the pair:

Medical: Health

(a) Science: Experiment (b) wealth: Peace

(c) Education: Knowledge (d) Money: Happiness

Ans. : (c)

Solution: Medical is related to improvement of health. Education is related to improvement of knowledge.

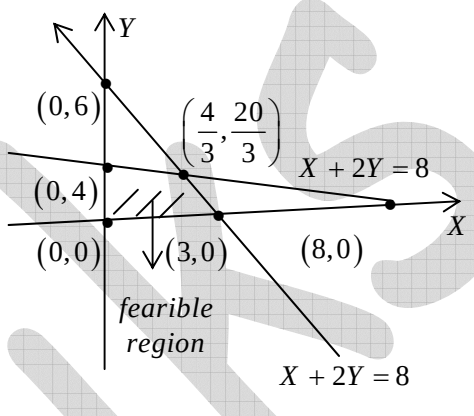
Q32. X and Y are two positive real numbers such that $2X+Y\le 6$ and $X+2Y\le 8$. for which of the following values of (X,Y) the function $f(X,Y)=3X+6Y$ will give maximum value?

(a) $(4/3,10/3)$ (b) $(8/3,20/3)$ (c) $(8/3,10/3)$ (d) $(4/3,20/3)$

Ans. : (d)

Solution: This is linear programming problem. The maximum value can occur only of the corner point of the feasible region. There are four corner points. We calculate the value of F (X,Y) of each of these corner points.

(X,Y)	$F(X,Y)$
$(0,0)$	(0)
$(3,0)$	(9)
$(4,0)$	(24)
$\left(\frac{4}{3},\frac{20}{3}\right)$	(44)



From the table, we conclave that the maximum value occurs of point $(⅓2013)$.

Q33. If $|4X-7|=5$ then the value of $2|X|-|-X|$ is

(a) $2,1/3$ (b) $1/2,3$ (c) $3/2,9$ (d) $2/3,9$

Ans. : (b)

Solution: $|4X-7|=5\Rightarrow 4X-7=\pm 5$

$\Rightarrow 4X=12$ *or* $4X=2\Rightarrow X=3$ *or* $X=\frac{1}{2}$

When $X=3$, then

$2|X|-|-X|=2|3|-|-3|=3$

When $X=\frac{1}{2}$

$2\left|\frac{1}{2}-\left(\frac{1}{2}\right)\right|=\frac{1}{2}$

Q34. Following table provides figures (in rupees) on annual expenditure of a firm for two years-2010 and 2011.

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

In 2011, which of the following two categories have registered increase by same percentage?

(a) Raw material and Salary & wages

(b) Salary & wages and Advertising

(c) Power & fuel and Advertising

(d) Raw material and Research & Development

Ans. : (d)

Solution: When 2011 the percentage increase in annual expenditure is 20% for both Raw material and Research and Development.

Q35. A firm is selling its product at Rs. 60 per unit. The total cost of production is Rs. 100 and firm is earning total profit of Rs. 500. Later, the total cost increased by 30%. By what percentage the price should be increased to maintained the same profit level.

(a) 5 (b) 10 (c) 15 (d) 30

Ans.: (a)

Solution: Let the number of units produced is x. Then according to question,

$60x - 100 = 500$ or $x = 10$

Thus the firm is selling 10 units.

Suppose that.

In order to maintain the same profit level the company increases the price to $Rs.\ Y$ per unit.

Hence $10 \times Y - 130 = 500$

Or $Y = 63$ increase in price per unit = Rs. 3. Hence, the percentage increase in price

$= \frac{3}{60} \times 100 = 5\%$

Q36. Abhishek is elder to Savar.

Savar is younger to Anshul.

Which of the given conclusions is logically valid and is inferred from the above statements?

(a) Abhishek is elder to Anshul

(b) Anshul is elder to Abhishek

(c) Abhishek and Anshul are of the same age

(d) No conclusion follows

Ans. : (d)

Solution: According to first statement.

Abhishek > Savar

According to second statement.

Savar < Anshul

From those two statement we made conclave that ‘ Anshul may be elder than Savar than Abhishek’ . Or Anshul may be the eldest’. Hence no conclusion can be drawn.

GATE - 2014

Q37. A student is required to demonstrate a high level of comprehension of the subject, especially in the social sciences.

The word closest in meaning to comprehension is

(a) understanding (b) meaning (c) concentration (d) stability

Ans. : (a)

Q38. choose the most appropriate word from the options given below to complete the following sentence.

One of his biggest _____was his ability to forgive

(a) vice (b) virtues (c) choices (d) strength

Ans. : (b)

Solution: Ability to forgive is definitely a virtue.

Q39. 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 with him

(d) Rajan had believed that Sajan and he would be working together

Ans. : (d)

Solution: Since Rajan was not happy with rajan working alone. Hence if can be cancelled they rajan had believed that rajan and he would work together.

Q40. If $y = 5x^2 + 3$, then the tangent at $x = 0,\ \ y = 3$

(a) passes through $x = 0, y = 0$ (b) has a slope of +1

(c) is parallel to the $x-$axis (d) has a slope of -1

Ans. : (c)

Solution: The slope of $y = 5x^2 + 3$ is $\frac{dy}{dx} = 10x$

At $x = 0,\ y = 3$ $\left.\frac{dy}{dx}\right|_{(0,3)} = 10 \times 0 = 0$

Thus the tangent of $x = 0,\ y = 3$ is in parallel to the x - axis

Q41. 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 tonnes. What is the cost of production in Rs per tonne for a daily production of 100 tonnes?

Ans. : (c)

Solution: The cost of production in Rs per tonn is

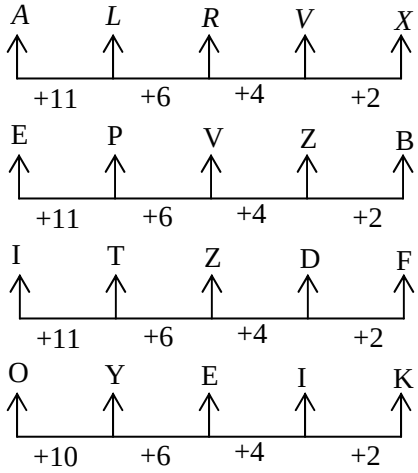
$$\frac{50{,}000+800\times100}{100} = \text{Rs.}1300$$

Q42. Find the odd one in the following group: $ALRVX, EPVZB, ITZDF, OYEIK$

(a) $ALRVX$ (b) $EPVZB$ (c) $ITZDF$ (d) $OYEIK$

Ans. : (d)

Solution:



The first three items of the group follow the same pattern but the last one does not follow the same pattern, hence it is incorrect.

Q43. Anuj, Bhola, Chandan, Dilip, Eswar and Faisal live on different floors in a six-storeyed building (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. Chandan does not live on any of the floors below Faisal's floor. 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

Ans. : (b)

Solution: Let us denote the statements by letters.

A : Anuj lives on an even numbered floor.

B : Bhola does not live on an odd numbered floor.

C : Chandan does not live on any floor below faisal's floor.

D : Dilip does not live on floor number 2.

E : Eshwar does not live on a floor immediately above or immediately below Bhola.

F : Faisal' s lives three floors above Dilip.

From F, Dilip and Faisal can live on floors

$$1 \to 4, 2 \to 5, 3 \to 6$$

From D and C we see that $2 \to 5 and 3 \to 6$ are not possible. Hence only $1 \to 4$ remains.

1	2	3	4	5	6
Dilip	Anuj	Eshwar	Faisal	Chandan	Bhola

According to statements A and B only Anuj and Bhola are of floors 2 and 4. Using statement C, Chandan lives on floor 5.

Using statement A,B and E we cancelled that Anuj lives on floor 2, Bhola on floor 6 and Eshwar on floor 3.

Q44. The smallest angle of a triangle is equal to two third of the smallest angle of quadrilateral. The ratio between the angles of the quadrilateral is 3:4:5:6. The largest angle of the triangle is twice its smallest angle. What is the sum, in degrees, of the second largest angle of the triangle and the largest angle of the quadrilateral?

Ans. : (b)

Solution: Given that ratio of angles of quadrilateral $= 3:4:5:6$ Hence angles of quadrilateral are $60^0, 80^0, 100^0, 120^0,$ respectively.

The smallest angle of triangle $= \frac{2}{3} \times$ smallest angle of quadrilateral $= \frac{2}{3} \times 60^0 = 40^0$

The largest angle of the triangle $= 2 \times$ smallest angle of triangle $= 2 \times 40^0 = 80^0$ hence the second largest angle of the triangle $= 180^0 - 40^0 - 80^0 = 60^0$ the sum of the second largest angle of the triangle and the largest angle of the quadrilateral $= 60^0 + 120^0 = 180^0$

Q45. 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 Y. Taking both countries together, what is the percentage of people taller than 6ft?

(a) 3.0 (b) 2.5 (c) 1.5 (d) 1.25

Ans. : (d)

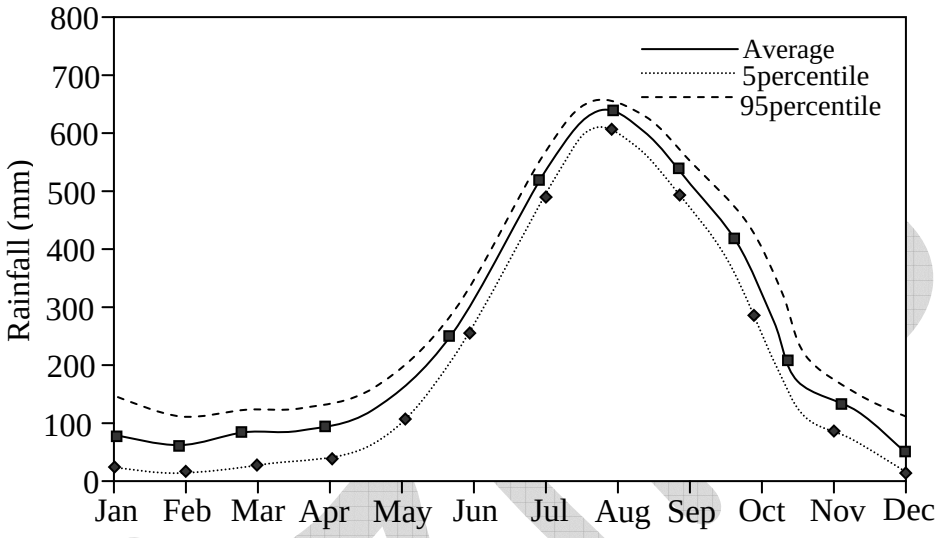
Solution: Let the number of people in country X is 300. Then from the question number of people in country Y is 100.

The number of people in country X above $6Ft =$ two percent of $100 = 02$

Taking both countries together, the percentage of people taller than $6Ft$

$$=\frac{(3+2)}{(300+100)}\times 100 = 1\cdot 25$$

Q46. 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 the 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)

Ans. : (b)

Solution: If the average of variable X is greater than variable Y, Then we cannot conclave that all values of X are greater than all values of Y. Hence we cannot conclave that the amount of rainfall of angle is more than that in January. It is also clear from graph that the rainfall in July is greater than that in December. From the percentage curve it is clear that July rainfall can be estimated with better confidence than February rainfall.

GATE 2015

Q47. Choose the appropriate word/phrase out of the four options given below, to complete the following sentence:

Apparent lifelessness _____dormat life.

(a) harbours (b) leads to (c) supports (d) affects

Ans. : (b)

Q48. Fill in the blank with the correct idiom/phrase:

The boy from the town was a _____in sleepy village

(a) dog out of herd (b) sheep from the heap

(c) fish out of water (d) bird from the flock

Ans. : (c)

Solution: If someone in a fish out of water, he / she is restless

Q49. Choose the statement where underlined word is used correctly.

(a) When the teacher eludes 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

Ans. : (b)

Solution: Since the thief keeps eluding (giving escape to) the police, being elusive.

Q50. Tanya is older than Eric. Cliff is older than Tanya. Eric is older than Cliff

If the first two statement are true, then the third statement is:

(a) True (b) False (c) Uncertain (d) Data insufficient

Ans. : (b)

Solution: According to the first two statements the ages in ascending order are

$$\text{Eric} < \text{Tanya} < \text{Cliff}$$

Thus if the first two statements are true, then the third statements is false.

Q51. Five teams have to compete in a league, with every team playing every other team exactly once, before going to the next round. How many matches will have to be held to complete the league round of matches?

(a) 20 (b) 10 (c) 8 (d) 5

Ans. : (b)

Solution: Since in the league round every team has to play with every other team, hence the number of materials to be played is $5_{C_2} = 10$

Q52. 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 in productivity necessarily (d) No improvement required

Ans. : (c)

Q53. Given below are two statement 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 executives

Conclusions:

I No manager is an executive.

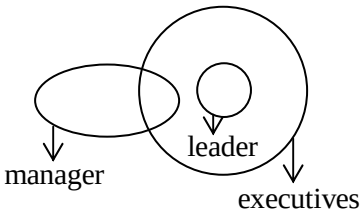
II No executive is a manager.

(a) Only conclusion I follows (b) Only conclusion II follows

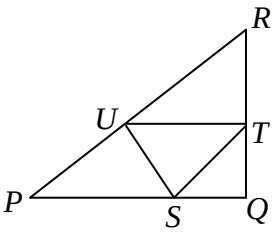
(c) Neither conclusion I nor II follows (d) Both conclusions I and II follow

Ans. : (c)

Solution: From the diagrams we see that 'Some managers may be executives' and ' some executives may be managers' Hence both options are false.



Q54. 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^2, then the area of triangle PQR in cm^2 is_____.

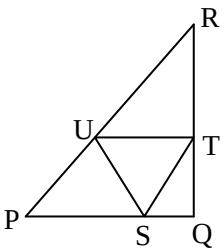


Ans. : $280 cm^2$

Solution: Given PS: QS = 3:1 Hence we can write PS = 3x ,QS = x .

Also, RT : QT = 5 : 2 . Hence we can write $RT = 5y, QT = 2y$.

The area of triangle QTS = $\frac{1}{2} \times x \times 2y = xy$



The area of triangle PQR $=\frac{1}{2}\times 4x\times 7y=14xy$

But from the Question area of triangle QTS is $20cm^2$, Hence $xy=20cm^2$

$\therefore$ Area of Δ PQR $14\times 20=280cm^2$

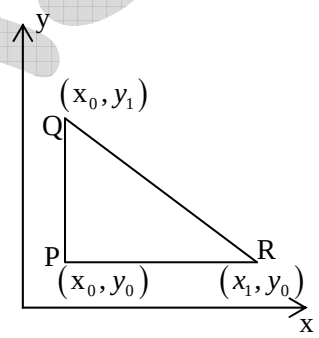
Q55. Right triangle PQR is to be constructed in the $xy-$plane so that the right angle is at P and line PR is parallel to the x-axis. The x and y coordinates of P,Q and R are to be integers that satisfy the inequalities: $-4\le x\le 5$ and $6\le y\le 16$. How many different triangles could be constructed with these properties?

(a) 110 (b) 1,100 (c) 9,900 (d) 10,000

Ans. : (c)

Solution: Given that PR is parallel to $-x$ axis . The side PQ will be parallel to the $y-$ axis. Then the triangle furred will be as shown in the figure.

From the Question x can take 10 values and y can 11 values and let (x_0,y_0) be the coordinates of P, then the coordinates of R will be as shown.



x_1 can take all values other than x_0 and y_1 can take all values other than y_0.

We first pick (x_0,y_0). This can be done in $10\times 11=110$ ways.

Corresponding to each of these ways. y_1 can be picked in 10 ways and x_1 can be θ picked in 9 ways. Hence the number of triangles furred will be

$$110\times 10\times 9=9900$$

Q56. 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 occur in three tosses. 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 are independent

Ans. : (b)

Solution: The sample space of the experiment consist of $2\times 2\times 2=8$ elements.

$X=\{HHT,HHH\}$, $Y=\{HHT,HTT,THT,TTT\}$ and $Z=\{TTH,HTT,THT\}$

$P(x)=\frac{2}{8}=\frac{1}{4}$, $P(y)=\frac{4}{8}=\frac{1}{2}$ and $P(Z)=\frac{4}{8}=\frac{1}{2}$

$P(X\cap Y)=\frac{1}{8}, P(X\cap Y)=\frac{2}{8}=\frac{1}{4}$ $P(X\cap Z)=0$

$P(X)\cdot P(Y)=\frac{1}{4},\frac{1}{2}=\frac{1}{8}=P(X\cap Y)$

Thus X and Y are independent.

$P(Y)\times P(Z)=\frac{1}{4}$ But $P(Y\cap Z)=0\cdot$ Thus Y and Z are not Independent. They are dependent.

$P(X)\cdot P(Z)=\frac{1}{8}, P(X\cap Z)=0\cdot$ Thus X and Z are dependent.

GATE 2016

Q57. 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

Ans. : (b)

Solution: The correct use is “less than”.

Q58. The unruly crowd demanded that the accused be _____ without trial.

(a) hanged (b) hanging (c) hankering (d) hung

Ans. : (a)

Solution: The verb used after ‘ be’ is its $V3$ form.

Q59. 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

Ans. : (d)

Solution: Prove has two meanings.

(I). Likely or liable to suffer from do or experience something unpleasant .

(II) Lying flat especially face downloads.

Q60. **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 (iii), then (iv). (b) If (i), then (iii).

(c) If (i), then (ii). (d) If (ii), then (iv).

Ans. : (c)

Solution: Option (c) implies that it rain the field is not way which is just opposite to the given fact.

Q61. 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

Ans. : (b)

Solution: The figure shows the window made with a square portion above if. The perimeter of window $= 6m.$ Hence, each of triangle and square $= \frac{6}{5} = 1\cdot 2m.$ Hence area of window

$$(1\cdot 2)^2 + \frac{\sqrt{3}}{4}(1\cdot 2)^2 = (1\cdot 44)\left(1+\frac{\sqrt{3}}{4}\right) = 2\cdot 06m$$

Q62. 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 .

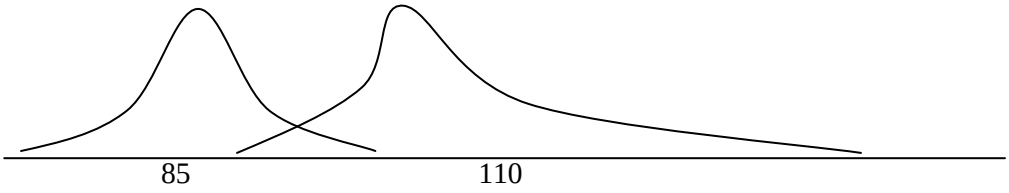
(b) No student in group P scored less marks than any student in group Q.

(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.

Ans. : (c)

Solution: Since the two curves extend indefinitely on both sides so options (a) and



(b) are incorrect. For the normal distribution the mean, median and mode are the same. Hence option (d) is incorrect. Since the standard deviation of statements in group Q is less than that of group P, Hence option (c) is correct.

Q63. A smart city integrates all modes of transport, uses clean energy and promotes sustainable use of resources. It also uses 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 a 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

Ans. : (c)

Solution: From the critics arguments it seems that there is a perception that smart cities promote surveillance.

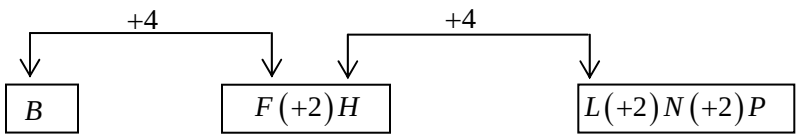
Q64. Find the missing sequence in the letter series.

B, FH, LNP, _ _ _ _.

(a) SUWY (b) TUVW (c) TVXZ (d) TWXZ

Ans. : (c)

Solution:



From the figure we can conclude that the missing sequence will be $TVXZ$.

Q65. 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

Ans. : (a)

Solution: By definition $a \square b = ab + (a + b)$.....$(i)$

By definition of identity element $a \square x = a$.....(ii)

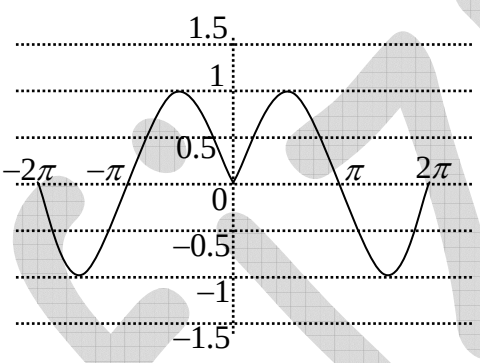
from equations (i) and (ii) $ax + a + x = a \Rightarrow x(1 + a) = 0$.

Since a is any real number, $(1 + a)$ will not be zero for all values of a. Hence $x = 0$.

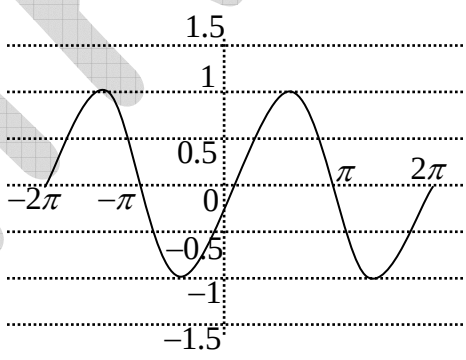
Q66. Which of the following curves represents the function, $y = \ln\left(\left|e^{\left[\left|\sin(|x|)\right|\right]}\right|\right)$ for $|x| < 2\pi$?

Here, x represents the abscissa and y represents the ordinate.

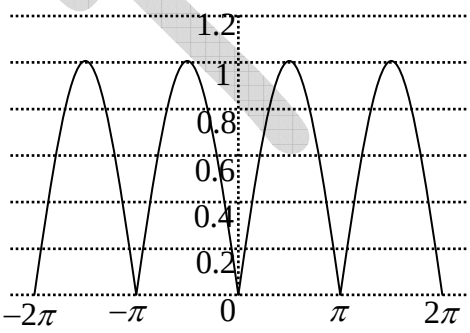
(a)



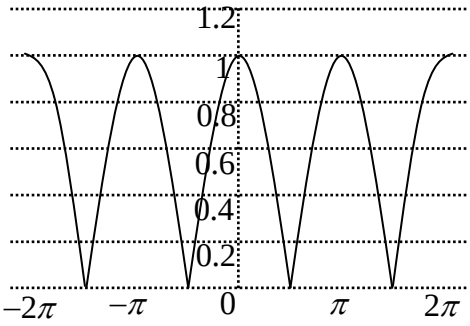
(b)



(c)



(d)



Ans. : (c)

Solution: When $x = \pi, y = |n| = 0$, when $x = \pm\frac{3\pi}{2}, y = \log_e e = 1$

We see that only figure in option (c) satisfies all the three conditions

GATE 2017

Q67. The ninth and the tenth of this month are Monday and Tuesday……..

(a) figuratively (b) retrospectively (c) respectively (d) rightfully

Ans.: (c)

Solution: When we are talking about two consecutive days or numbers or events the term respectively is used.

Q68. It is……. to read this year's textbook……. the last year's.

(a) easier, than (b) most easy, than (c) easier, from (d) easiest, from

Ans.: (a)

Solution: In the sentence comparative degree of an objective "easy" will be used as the degree of the comparison is two objects.

Q69. A rule states that in order to drink beer, one must be over 18 years old. In a bar, there are 4 people. P is 16 years old, Q is 25 years old, R is drinking milkshake and S is drinking a beer. What must be checked to ensure that the rule is being followed?

(a) Only P's drink (b) Only P's drink and S's age

(c) Only S's age (d) Only P's drink, Q's drink and S's age

Ans. : (b)

Solution: According to the question

$P < 16$, (below 18 year) (1)

$Q = 25 > 18$ (Above 18 year) (2)

$R < 18$ (Either above 18 or below 18 year) , he is drinking milk shake. (3)

S is drinking beer but his age is not known hence the age of S should be checked.

Since P is less than 16 years his drink must be checked.

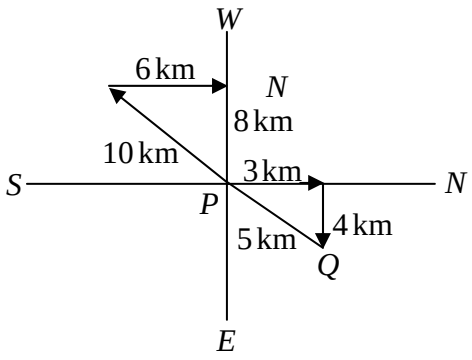
Hence the correct option is (b)

Q70. Fatima starts from point P, goes North for $3\,km$ and then East for $4\,km$ to reach point Q. She then turns to face point P and goes $15\,km$ in that direction. She then goes North for $6\,km$. How far is she from point P and in which direction should she go to reach point P?

(a) $8\,km$, East (b) $12\,km$, North (c) $6\,km$, East (d) $10\,km$, North

Ans.: (a)

Solution:



Q71. 500 students are taking one or more courses out of Chemistry, Physics and Mathematics. Registration records indicate course enrolment as follows: Chemistry (329), Physics (186), Mathematics (295), Chemistry and Physics (83), Chemistry and Mathematics (217) and Physics and Mathematics (63). How many students are taking all 3 subjects?

(a) 37 (b) 43 (c) 47 (d) 53

Ans.: (d)

Solution: Let the number of students who has taken the subjects chemistry, physics, and mathematics are represented by $n(C), n(P)$ and $n(M)$, respectively.

According to the question,

$n(C)=329, n(P)=186$ and $n(M)=295, n(P\cap M)=63, h(C\cap P)=83, n(C\cap M)=217$ and let the number of students who has taken all the subjects are $n(C\cap P\cap M)=x$. We know that total number of students is 500, which can be written as $n(C\cup P\cup M)$ we know that

$$n(C\cup P\cup M)=n(C)+n(M)+n(P)-n(C\cap M)$$
$$-n(C\cap P)-n(P\cap M)+n(C\cap P\cap M)$$

or, $500=329+186+295-83-217-63+x$

or, $500=810-363+x$ or $500=447+x \Rightarrow x=500-447=53$

Q72. "If you are looking for a history of India, or for an account of the rise and fall of the British Raj, or for the reason of the cleaving of the subcontinent into two mutually antagonistic parts and the effects this mutilation will have in the respective sections, and ultimately on Asia, you will not find it in these pages; for though I have spent a lifetime in the country, I lived too near the seat of events and was too intimately associated with the actors, to get the perspective needed for the impartial recording of these matters."

Which of the following statements best reflects the author's opinion?

(a) An intimate association does not allow for the necessary perspective

(b) Matters are recorded with an impartial perspective

(c) An intimate association offers an impartial perspective

(d) Actors are typically associated with the impartial recording of matters

Ans.: (c)

Solution: From the author's opinion being intimately associated with the events gives the perspective needed for the impartial recording of these matters.

Q73. Each of P, Q, R, S, W, X, Y and Z has been married at most once. X and Y are married and have two children P and Q. Z is the grandfather of the daughter S of P. Further, Z and W are married and are parents of R. Which one of the following must necessarily be FALSE?

(a) X is the mother-in-law of R

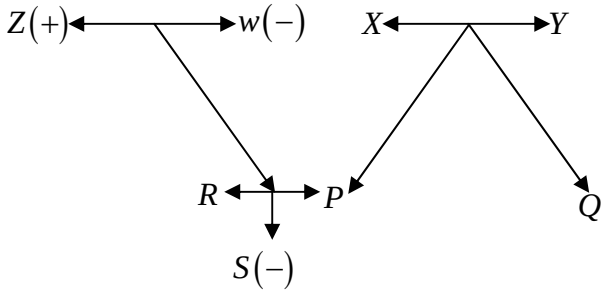
(b) P and R are not married to each other

(c) P is a son of X and Y

(d) Q cannot be married to R

Ans.: (b) From the given information,

From the free diagram we see that if the married persons are from the given persons, then P must be married to R.



Q74. 1200 men and 500 women can build a bridge in 2 weeks. 900 men and 250 women will take 3 weeks to build the same bridge. How many men will be needed to build the bridge in one week?

(a) 3000 (b) 3300 (c) 3600 (d) 3900

Ans.: (c)

Solution: 1200 men and 500 women can build a bridge in 2 weeks. The requirement of men and women to build the bridge in a one week $(1200\,\text{men}+500\,\text{women})\times 2$. From the second part of the question 900 men and 250 women will be required to make a bridge in three weeks.

Then the requirement of men and women to build the bridge in a one week - $(900\,\text{men}+250\,\text{women})\times 3$

Hence, $(1200\,\text{men}+500\,\text{women})\times 2=(900\,\text{men}+250\,\text{women})\times 3$

or, $2700\,\text{men}-2400\,\text{men}=1000\,\text{women}-750\,\text{women}$

or, $300\,\text{men}=250\,\text{women}\Rightarrow 6\,\text{men}=5\,\text{women}$

or, $1\,\text{women}=\frac{6}{5}\,\text{men}$

The requirement of men and women to build the bridge in a one week

$(1200\,\text{men}+500\,\text{women})\times 2$

or, $\left(1200\,\text{men}+\frac{6}{5}\times 500\,\text{men}\right)\times 2$

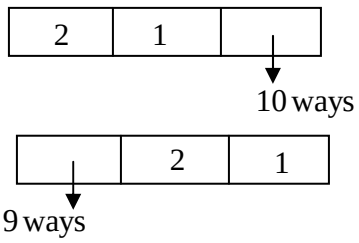
or, $2400\,\text{men}+1200\,\text{men}=3600\,\text{men}$

Q75. The number of 3- digit numbers such that the digit 1 is never to the immediate right of 2 is

(a) 781 (b) 791 (c) 881 (d) 891

Ans.: (c)

Solution: First we calculate the number of numbers in which the digit 1 is to the immediate right of 2.



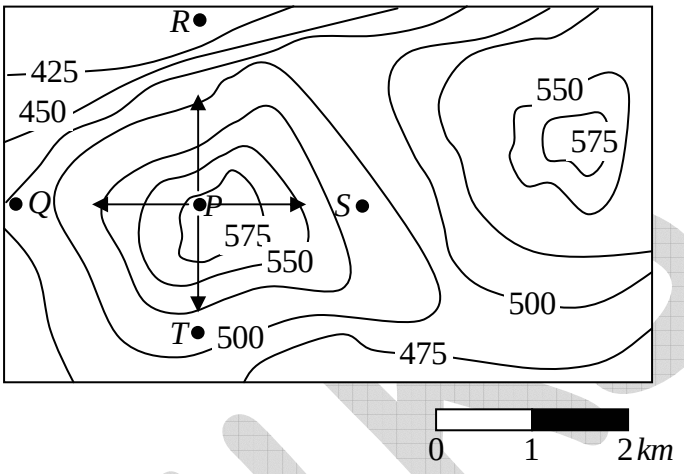
Thus the total number of three digit numbers in which number 1 is to the immediate right of 2 is

$1\times 1\times 10+9\times 1\times 1=19$

Since the total number of three digit numbers is 900, hence the number of numbers in which digit 1 is to the immediate right of 2 is

$$900-19=881$$

Q76. 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.



Which of the following is the steepest path leaving from P?

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

Ans.: (b)

Solution: On the contour curve we see that the steepest decrease occurs if we move from P to R.

GATE-2018

Q77. – Q81. carry one mark each.

Q77. "When she fell down the _____, she received many _____ but little help".

The words that best fill the blanks in the above sentence are

(a) stairs, stares (b) stairs, stairs (c) stares, stairs (d) stares, stares

Ans. : (a)

Solution: stairs means steps while stares means to look someone continuously.

Q78. "In spite of being warned repeatedly, he failed to correct his_____ behaviour"

The word that best fills the blank in the above sentence is

(a) rational (b) reasonable (c) errant (d) good

Ans. : (c)

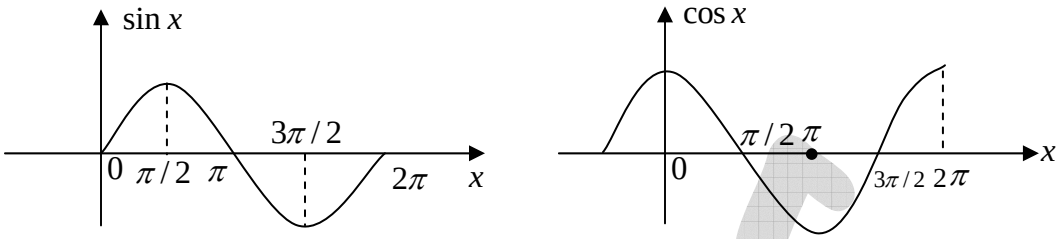
Solution: The most suitable option is errant as errant means irregular.

Q79. For $0 \le x \le 2\pi$, $\sin x$ and $\cos x$ are both decreasing functions in the interval_____

(a) $\left(0, \frac{\pi}{2}\right)$ (b) $\left(\frac{\pi}{2}, \pi\right)$ (c) $\left(\pi, \frac{3\pi}{2}\right)$ (d) $\left(\frac{3\pi}{2}, 2\pi\right)$

Ans. : (b)

Solution: Graph of $\sin x$ and $\cos x$ is shown in the figure below



From the graph we see that $\sin x$ and $\cos x$ are both decreasing function in the interval $\left(\frac{\pi}{2}, \pi\right)$

Q80. The area of an equivalent triangle is $\sqrt{3}$. What is the perimeter of the triangle?

(a) 2 (b) 4 (c) 6 (d) 8

Ans. : (c)

Solution: Let the side of equilateral triangle $= a$, then the area $= \frac{\sqrt{3}}{4}a^2$

or $\frac{\sqrt{3}}{4}a^2 = \sqrt{3}$ or $a^2 = 4$ or $a = 2$

Hence, the perimeter of the equilateral triangle $= 3a = 3 \times 2 = 6$

Q81. Arrange the following three-dimensional objects in the descending order of their volumes:

(i) A cuboid with dimensions $10\,cm$, $8\,cm$ and $6\,cm$

(ii) A cube of side $8\,cm$

(iii) A cylinder with base radius $7\,cm$ and height $7\,cm$

(iv) A sphere of radius $7\,cm$

(a) (i), (ii), (iii), (iv) (b) (ii), (i), (iv), (iii)

(c) (iii), (ii), (i), (iv) (d) (iv), (iii), (ii), (i)

Ans. : (d)

Solution: The value of cuboid $= 10cm \times 8cm \times 6cm = 480cm^3$

The volume of cube $= 8cm \times 8cm \times 8cm = 512cm^3$

The volume of cylinder $= \pi r^2 h = \frac{22}{7} \times 7 \times 7 \times 7cm^3 = 1078cm^3$

The value of sphere $=\frac{4}{3}\pi r^3=\frac{4}{3}\times\frac{22}{7}\times7\times7\times7=1437.3cm^3$

Hence the descending orders of volume will be $1437.3cm^3$, $1078cm^3, 512cm^3$ and $480cm^3$

Q82. – Q86. carry two marks each.

Q82. An automobile travels from city A to city B and returns to city A by the same route. The speed of the vehicle during the onward and return journeys were constant at $60\,km/h$ and $90\ km/h$, respectively. What is the average speed in km/h for the entire journey?

(a) 72 (b) 73 (c) 74 (d) 75

Ans. : (a)

Solution: Let the distance between A and B **is** xkm. Then

$$\text{Average speed}=\frac{\text{Total distance}}{\text{Total time}}=\frac{2xkm}{\left(\frac{x}{60}+\frac{x}{90}\right)\text{hour}}=2x\times\frac{360}{10x}km/h=72km/h$$

Q83. A set of 4 parallel lines intersect with another set of 5 parallel lines. How many parallelograms are formed?

(a) 20 (b) 48 (c) 60 (d) 72

Ans. (c)

Solution: Any two lines in one direction and any two parallel line in the other direction can form a parallelograms.

So, number of parallelogram formed

$$=5C_2\times4C_2=\frac{5!}{2!3!}\times\frac{4!}{2!2!}=\frac{4\times5}{2}\times\frac{3\times4}{2}=10\times6=60$$

Q84. To pass a test, a candidate needs to answer at least 2 out of 3 questions correctly. A total of 6,30,000 candidates appeared for the test. Question A was correctly answered by 3,30,000 candidates. Question B was answered correctly by 2,50,000 candidates. Question C was answered correctly by 2,60,000 candidates. Both questions A and B were answered correctly by 1,00,000 candidates. Both questions B and C were answered correctly by 90,000 candidates. Both questions were A and C were answered correctly by 80,000 candidates. If the number of students answering all questions correctly is the same as the number answering none, how many candidates failed to clear the test?

(a) 30,000 (b) 2,70,000 (c) 3,90,000 (d) 4,20,000

Ans. : (d)

Solution: Let $n(0)$ denote the number of students answering none of the questions and $n(3)$ be the number of students answering all questions, then

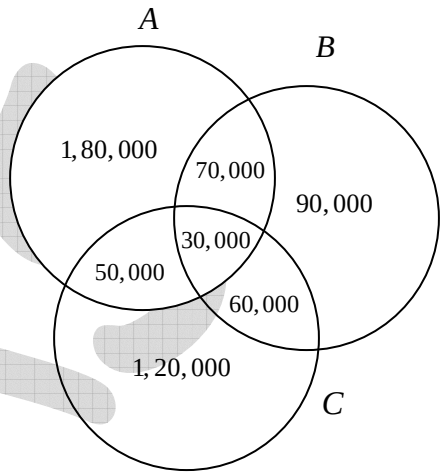
$$n(A\cup B\cup C)-n(0)=n(A)+n(B)+n(C)-n(A\cap B)-n(B\cap C)-n(A\cap C)+n(3)$$

$$6,30,000-n(0)=3,30,000+2,50,000+2,60,000-1,00,000-90,000-80,000+n(3)$$

$$\Rightarrow 6,30,000-n(0)=5,70,000+n(3)$$

Since, $n(0)=n(3)$

Hence, $2n(0)=60,000\Rightarrow n(0)=30,000$



Using this fact and the information given, one fill the Venn-diagram. It is obvious that the number of failed students will be, the sum of number the students who only passed in one subject and the number of student answering none of the question. Hence, the number of students failed to clear the test $=1,80,000+1,20,000+90,000+30,000=4,20,000$

Q85. If $x^2+x-1=0$, what is the value of $x^4+\frac{1}{x^4}$?

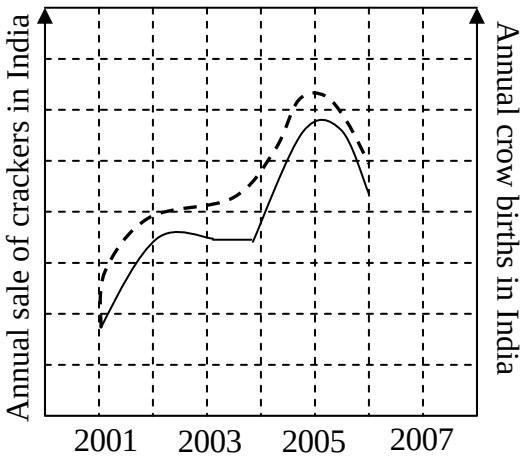
(a) 1 (b) 5 (c) 7 (d) 9

Ans. : (c)

Solution: Given that $x^2+x-1=0\Rightarrow x(1+x)=1\Rightarrow 1+x=\frac{1}{x}\Rightarrow x-\frac{1}{x}=-1,$

$$x^2+\frac{1}{x^2}=3\Rightarrow x^4+\frac{1}{x^4}=9-2=7$$

Q86. In a detailed study of annual crow births in India, it was found that there was relatively no growth during the period 2002 to 2004 and a sudden spike from 2004 to 2005. In another unrelated study, it was found that the revenue from cracker sales in India which remained fairly flat from 2002 to 2004, saw a sudden spike in 2005 before



declining again in 2006. The solid line in the graph below refers to annual sale of crackers and the dashed line refers to the annual crow births in India. Choose the most appropriate inference from the above data.

(a) There is a strong correlation between crow birth and cracker sales

(b) Cracker usage increases crow birth rate

(c) If cracker sale declines, crow birth will decline

(d) Increased birth rate of crows will cause an increase in the sale of crackers

Ans.: (a)

Solution: The growth pattern of crows and the growth in annual sales of fire crackers in nearly the same. The two graphs are almost parallel to each other. Hence there is strong correlation between crow birth and crackers sales.

GATE-2019

Q87 – Q91. carry one mark each.

Q87. The fishermen, _____ the flood victims owed their lives, were rewarded by the government.

(a) whom (b) to which (c) to whom (d) that

Ans. : (c)

Q88. Some students were not involved in the strike.

If the above statement is true, which of the following conclusions is/are logically necessary?

1. Some who were involved in the strike were students
2. No student was involved in the strike
3. At least one student was involved in the strike
4. Some who were not involved in the strike were students

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

Ans. : (c)

Q89. The radius as well as the height of a circular cone increases by 10 %. The percentage increase in its volume is _____.

(a) 17.1 (b) 21.0 (c) 33.1 (d) 72.8

Ans. : (c)

Q90 Five numbers 10, 7, 5, 4 and 2 are to be arranged in a sequence from left to right following the directions given below:

1. No two odd or even numbers are next to each other
2. The second number from the left is exactly half of the left-most number
3. The middle number is exactly twice the right-most number

Which of the second number from the right?

(a) 2 (b) 4 (c) 7 (d) 10

Ans. : (c)

Q91. Until Iran came along, India had never been _____ in kabaddi.

(a) defeated (b) defeating (c) defeat (d) defeatist

Ans. : (a)

Q92 – Q96. carry two marks each.

Q92. Since the last one year, after a 125 basis point reduction in repo rate by the Reserve Bank of India, banking institutions have been making a demand to reduce interest rates on small saving schemes. Finally, the government announced yesterday a reduction in interest rates on small saving schemes to bring them on par with fixed deposit interest rates.

Which one of the following statements can be inferred from the given passage?

(a) Whenever the Reserve Bank of India reduces the repo rate, the interest rates on small saving schemes are also reduced

(b) Interest rates on small saving schemes are always maintained on par with fixed deposit interest rates

(c) The government sometimes takes into consideration the demands of banking institutions before reducing the interest rates on small saving schemes

(d) A reduction in interest rates on small saving schemes follow only after a reduction in repo rate by the Reserve Bank of India.

Ans. : (c)

Q93. In a country of 1400 million population 70% own mobile phones. Among the mobile phone owners, only 294 million access the Internet. Among these Internet users, only half buy goods from e-commerce portals. What is the percentage of these buyers in the country?

(a) 10.50 (b) 14.70 (c) 15.00 (d) 50.00

Ans. : (a)

Q94. The nomenclature of Hindustani music has changed over the centuries. Since the medieval period dhrupad styles were identified as baanis. Terms like gayaki and baaj were used to refer to vocal and instrumental styles, respectively. With the institutionalization of music education the term gharana became acceptable. Gharana originally referred to hereditary musicians from a particular lineage, including disciples and grand disciples.

Which one of the following pairings is NOT correct?

(a) dhupad, baani (b) gayaki, vocal (c) baaj, institution (d) gharana, lineage

Ans. : (c)

Q95. Two trains started at 7 AM from the same point. The first train travelled north at a speed of $80\,km/h$ and the second train travelled south at a speed of $100\,km/h$. The time at which they were $540\,km$ apart is _____A.M

(a) 9 (b) 10 (c) 11 (d) 11.30

Ans. : (b)

Q96. "I read somewhere that in ancient times the prestige of a kingdom depended upon the number of taxes that it was able to levy on its people. It was very much like the prestige of a head-hunter in his won community."

Based on the paragraph above, the prestige of a head-hunter depended upon _____

(a) the prestige of the kingdom (b) the prestige of the heads

(c) the number of taxes he could levy (d) the number of heads he could gather

Ans. : (d)