Csat Test - 1

Csat Test - 1 (Date : 21-04-2024)

Question 1:

The Palghat Gap (or Palakkad Gap), a region about 30km wide in the southern part of the Western Ghats in India is lower than the hilly terrain to its north and south. The exact reasons for the formation of this Gap are not clear. It results in the neighbouring regions of Tamil Nadu getting more rainfall from South West monsoon and neighbouring regions of Kerala having higher summer temperatures.

What can be inferred from this passage ?

1. The palghat gap is formed by high rainfall and high temperatures in southern Tamil Nadu and Kerala.
2. The regions in Tamil Nadu and Kerala that are near the Palghat Gap are low-lying.
3. The low terrain of the Palghat Gap has a significant impact on weather patterns in neighbouring parts of Tamil Nadu and Kerala.
4. High summer temperature caused excessive rainfall near the Palghat Gap region.

Correct Answer : 3

Explanation

In the passage, it is mentioned that the neighboring regions of Tamil Nadu getting more rainfall from the south west monsoon and neighboring regions of Kerala having summer temperature. Hence, we can conclude here that weather is getting affected due to the Gap.

Hence, correct option is (c).

Question 2:

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 rate 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 of the following statements can be inferred from the given passage ?

1. Whenever the Reserve Bank of India reduces the repo rate, the interest rates on small saving schemes are also reduced.
2. Interest rates on small saving schemes arealways maintained on par with fixed deposit interest rates.
3. The government sometimes take into consideration the demands of banking institutions before reducing the interest rates on small saving schemes.
4. A reduction in interest rates on small saving scheme follow only after a reduction in repo rate by the Reserve Bank of India.

Correct Answer : 3

Explanation

According to the passage, we can understand that the government sometimes take into consideration the demand of banking institutions before reducing the interest rates on small saving schemes. Hence correct option is (c).

Question 3:

A recent High court Judgement has sought to dispel the idea of begging as a disease–which leads to its stigmatization and criminalization–and to regard it as a symptom. The underlying disease is the failure of the state to protect citizens who fall through the social security net.

Which of the following statement can be inferred from the given passage?

1. Beggars are lazy people who beg because they are unwilling to work.
2. Beggars are the outcomes of the lack of social welfare schemes.
3. Begging is an offence that has to be dealt firmly.

4. Begging has to be banned because it adversely affects the welfare of the state.

Correct Answer : 2

Explanation

The passage clearly states that the underlying disease behind begging is the failure of the state to protect citizen who falls from the coverage of social security. Hence, correct option is (b).

Question 4:

While teaching a creative writing class in India, I was surprised at receiving stories from the students that were all set in distant places : in the American west with cow boys and in Manhattan penthouses with clinking ice cubes. This was, till an eminent Caribbean writers gave the writers in the once-colonised countries the confidence to see the shabby lives around them as worthy of being “told”.

The writer of this passage is surprised by the creative writting assignment of his students, because .....

1. Some of the students had written stories set in foreign places.
2. None of the students has written stories set in India.
3. None of the students has written about ice cubes and cowboys.
4. Some of the students had written about ice cubes and cowboys.

Correct Answer : 2

Explanation

None of students had written stories based on India. It is explicitly stated that the writer was surprised at receiving stories from students that were all set in distant places. Hence correct option is (b).

Question 5:

Jitendra, the manager, wants his four workers to work in pairs. No pair should work for more than 5 hours. Nikhil and Ashutosh have worked together for 5 hours. Lokesh and Ankit have worked together for 2 hours. Lokesh doesn't want to work with Nikhil. Whom should Jitendra allot to work with Ashutosh, if he wants all the workers to continue working?

1. Ankit
2. Nikhil
3. Lokesh
4. None of these

Correct Answer : 3

Explanation

Nikhil and Ashutosh worked together for 5 hours. So, the pair of Nikhil and Ashutosh will not work together because No pair should work for more than 5 hours. Ashutosh worked with Lokesh because Lokesh doesn't want to work with Nikhil.

Question 6:

Given below are two statements followed by two conclusions. Assuming these statements to be true, decide which one logically follows.

Statements :

(i) No cat is a dog.

(ii) All dogs are lions.

Conclusions :

I. No cat is a lion.

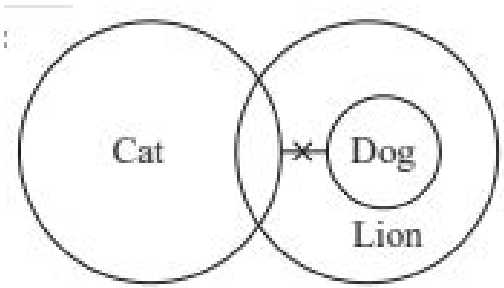
II. No lion is a cat.

1. Only conclusion I follows.
2. Only conclusion II follows.
3. Neither conclusion I nor II follows.

4. Both conclusion I and II follow.

Correct Answer : 3

Explanation



From the above venn-diagram, neither conclusion I nor II follows.

Question 7:

A coin is tossed thrice. Let A be the event that head occurs in each of the first two tosses. Let B be the event that a tail occurs on the third toss. Let C be the event that two tails occurs in three tosses.

Based on the above information, which one of the following statements is true?

1. A and B are not independent.
2. B and C are not independent.
3. B and C are independent.
4. A and C are independent.

Correct Answer : 4

Explanation

Event A, favourable outcome = [HHT, HHH]

Event B, favourable outcome = [HHT, HTT, THT, TTT]

Event C, favourable outcome = [TTH, HTT, THT]

Hence, Event A and C are independent.

Question 8:

If a : b = 1 : 4, b : c = 8 : 3, c : d = 6 : 1, d : e = 2 : 5 and e : f = 2 : 5, then find the value (abc) : (def).

1. 125 : 3072
2. 3072 : 125
3. 1 : 6000
4. 6000 : 1

Correct Answer : 2

Explanation

$$\frac{a}{b} = \frac{1}{4} \Rightarrow a = \frac{b}{4} = \frac{8c}{3\times 4} = \frac{2c}{3}$$

$$\frac{b}{c} = \frac{8}{3} \Rightarrow b = \frac{8c}{3}$$

$$\frac{c}{d} = \frac{6}{1} \Rightarrow c = 6d$$

$$\frac{d}{e} = \frac{2}{5} \Rightarrow e = \frac{5}{2}d$$

$$\frac{e}{f} = \frac{2}{5} \Rightarrow \frac{5e}{2} = \frac{5}{2}\times\frac{5}{2}d = \frac{25}{4}d$$

$$(a\ b\ c) : (d\ e\ f) = \left(\frac{2c}{3}\times\frac{8c}{3}\times c\right) : \left(d\times\frac{5}{2}d\times\frac{25}{4}d\right)$$

$$= \frac{16}{9}c^3 : \frac{125}{7}d^3$$

$$= 16\times 8c^3 : 125\times 9d^3$$

$$= 16\times 8\times 216d^3 : 125\times 9d^3$$

$$= 3072 : 125$$

Question 9:

Vijay and Ajay are running on a 1200 m circular track in opposite direction. Every time when they meet, they interchanged the speed as well as direction with each other. What will be the minimum distance between their 13th and 23rd meeting point, if the ratio of their original speed is 1 : 5 ?

1. 800 m
2. 200 m

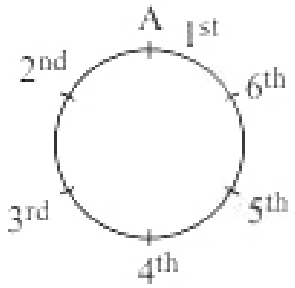
3. 400 m

4. 600 m

Correct Answer : 3

Explanation

Let the speed of Ajay and Vijay be x m/s and 5x m/s respectively.



Relative speed of Ajay and Vijay = (x + 5x) m/s

= 6x m/s

Let A be the starting point.

In the first round, Ajay covered a distance of 200 m, while in same time Vijay covered a distance of 1000 m. In the next round, Ajay covered a distance of 1000 m and Vijay covered a distance of 200 m.

In 13 times they will meet at second point and in 23 times they will meet at 6th point.

Required minimum distance = (200 + 200) m

= 400 m

Question 10:

Consider the following sequence :

51, 123, 171, 291, 363, 531, ...

What will be the next term of the series ?

1. 963

2. 563

3. 843

4. 731

Correct Answer : 3

Explanation

: 51 123 171 291 363 531

$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$

7^2+2 11^2+2 13^2+2 17^2+2 19^2+2 23^2+2

In the given series, 2 is added in the square of prime number

Hence, the next term = $(29)^2 + 2 = 841 + 2$

$= 843$

Question 11:

A person bought A.C. worth 25,000 at the rate of 10% per annum compounded yearly. At the end of first year he paid 10,000 and at the end of second year he also paid 10,000. How much will he have to pay at the end of third year to clear the debt ?

1. 5,000

2. 8,000

3. 10,175

4. 9,250

Correct Answer : 3

Explanation

$$\text{Cost of A.C.} = ₹25{,}000$$

$$\text{Rate} = 10\% \text{ p.a.}$$

$$\text{Interest at the end of } 1^{st} \text{ year} = \frac{P \times R \times T}{100}$$

$$= \frac{25{,}000 \times 10 \times 1}{100}$$

$$= ₹2500$$

$$\text{Amount} = ₹25{,}000 + ₹2500$$

$$= ₹27{,}500$$

$$\text{Principal for } 2^{nd} \text{ year} = ₹27{,}500 - 10{,}000$$

$$= ₹17{,}500$$

$$\text{Interest at the end of } 2^{nd} \text{ year} = \frac{17500 \times 10 \times 1}{100}$$

$$= ₹1750$$

$$\text{Amount} = ₹17{,}500 + ₹1750$$

$$= ₹19{,}250$$

$$\text{Principal for } 3^{rd} \text{ year} = ₹19250 - ₹10{,}000$$

$$= ₹9250$$

$$\text{Interest at the end of } 3^{rd} \text{ year} = \frac{9250 \times 10 \times 1}{100}$$

$$= ₹925$$

Total amount paid at end of third year to clear the debt

$$= ₹9250 + ₹925 = ₹10{,}175$$

Question 12:

After traveling a distance of 180 km, a train met with an accident and then travelled at 3 4 of its original speed and reached its destination 1 hour late. If accident had occurred a further 60 km from the place of the accident, then the delay would have been only 30 minutes. What is the total distance travelled by the train ?

1. 300 km
2. 400 km
3. 600 km.
4. 500 km.

Correct Answer : 1

Explanation

Let the total distance and speed be x km and y km/h respectively.

A/Q,

$$\frac{180}{y}+\frac{x-180}{\frac{3y}{4}} = \frac{x}{y}+1$$

$$\Rightarrow \quad \frac{180}{y}+\frac{4x-720}{3y} = \frac{x}{y}+1$$

$$\Rightarrow \quad \frac{4x}{3y}-\frac{60}{y} = \frac{x}{y}+1$$

$$\Rightarrow \quad \frac{4x}{3y}-\frac{x}{y} = 1+\frac{60}{y}$$

$$\Rightarrow \quad \frac{x}{3y} = \frac{y+60}{y}$$

$$\Rightarrow \quad x = 3y + 180$$

$$\therefore \quad x - 3y = 180 \qquad ...(i)$$

$$\frac{240}{y}+\frac{x-240}{\frac{3y}{4}} = \frac{x}{y}+\frac{1}{2}$$

$$\Rightarrow \quad \frac{240}{y} + \frac{4x - 960}{3y} = \frac{x}{y} + \frac{1}{2}$$

$$\Rightarrow \quad \frac{4x}{3y} - \frac{80}{y} = \frac{x}{y} + \frac{1}{2}$$

$$\Rightarrow \quad \frac{4x}{3y} - \frac{x}{y} = \frac{1}{2} + \frac{80}{y}$$

$$\Rightarrow \quad \frac{x}{3y} = \frac{y + 160}{2y}$$

$$\Rightarrow \quad 2x = 3y + 480$$

$$\therefore \quad 2x - 3y = 480 \qquad \text{...(ii)}$$

By subtracting equation (ii) from (i), we get,

$$\begin{array}{r} x - 3y = 180 \\ 2x - 3y = 480 \\ - \quad + \qquad - \\ \hline -x = -300 \end{array}$$

$$\therefore \quad x = 300 \text{ km}$$

Total distance travelled by train = 300 km.

Question 13:

Find the average of 3^{18}, 3^{17}, 3^{20} and 3^{21}.

1. $3^{17} \times 28$

2. $3^{18} \times 6$

3. $3^{15} \times 12 \times 21$

    1. 1 only

    2. 2 and 3 only

    3. 1 and 3 only

    4. All of the above

Correct Answer : 3

Explanation

$$\text{Average} = \frac{\text{Total sum of all the observation}}{\text{Number of observation}}$$

$$= \frac{3^{18} + 3^{17} + 3^{20} + 3^{21}}{4}$$

$$= \frac{3^{17}(3 + 1 + 3^3 + 3^4)}{4}$$

$$= \frac{3^{17} \times 112}{4} = 3^{17} \times 28$$

$$= 3^{15} \times 3^2 \times 7 \times 4$$

$$= 3^{15} \times 21 \times 12$$

Question 14:

Consider the following sequence that follows some arrangement :

ccbab_caa_bccc_a_

The letters that appears in the gaps are :

1. babb
2. bbba
3. baab
4. babc

Correct Answer : 1

Explanation

c c b a / b b c a / a a b c / c c b a / b

Hence, b a b b is correct.

Question 15:

Seven person A, B, C, D, E, F and G are standing in a straight line. D is standing to the right of G. C is standing between A and B. E is standing between F and D. There are three persons standing between G and B.

1. A is standing at right end of the line.

2. B is standing between G and F.

3. G is standing left on the end of the line.

Select the correct answer using the code given below.

1. 1 and 3 only
2. 1 and 2 only
3. 2 and 3 only
4. 1, 2 and 3

Correct Answer : 1

Explanation

: From the given information,

From the above arrangement, only (1) and (3) are correct.

Question 16:

If the data related to the production of cars of type E is represented on a pie chart, then the central angle of the sector representing the data of production of cars in 2013 will be :

1. 102°
2. 84°
3. 70°
4. 80°

Correct Answer : 2

Explanation

Total production of type E car from 2012 to 2016 =

$$20 + 42 + 40 + 35 + 43 = 180$$

Production of type E car in 2013 = 42

Required central angle = $\left(\frac{42}{180} \times 360\right)^{\circ} = 84^{\circ}$

Question 17:

What is the ratio of the total production of cars of type A in 2014 and type C in 2013 to the total production of cars of type B in 2016 and type E in 2015?

1. 12 : 13
2. 11 : 12
3. 10 : 11
4. 12 : 11

Correct Answer : 1

Explanation

Total production of cars of type A in 2014 and type C in

2013 = (48 + 36) = 84000

Total production of cars of type B in 2016 and type E in

2015 = (56 + 35) = 91000

Required ratio = 84 : 91

= 12 : 13

Question 18:

The total production of type B cars in 2012, 2014 and 2015 taken together is approximately what percent more than the total production of type A cars in 2013 and 2016 taken together ?

1. 31.9 %
2. 33.2 %
3. 36.3 %
4. 34.4 %

Correct Answer : 1

Explanation

Total production of type B cars in 2012, 2014 and 2015 together = 42 + 40 + 38 = 120 thousand

Total production of type A cars in 2013 and 2016 together

$$= 35 + 56 = 91 \text{ thousand}$$

$$\text{Required } \% = \left(\frac{120-91}{91} \times 100\right)\%$$

$$= \left(\frac{29}{91} \times 100\right)\% = 31.868\%$$

$$\approx 31.9\%$$

Question 19:

Drought is basically a distress situation caused by the failure of rainfall. This failure may be due to insufficient rain or due to wide gap between two or more spells of rain. Droughts are of three types. Meteorological drought is a situation when the actual rainfall is significantly less than the climatologically expected rainfall over a wide area. Here the rains do not arrive on time and are inadequate. Such droughts are mainly concentrated in the areas falling between arid and semi-arid zones of the country and are characterized by high variability of rainfall. Hydrological droughts are associated with the drying up of surface water such as rivers, streams, lakes and reservoirs and fall in groundwater levels. Such droughts are augmented by deforestation, mining, road construction, overgrazing and withdrawal of excessive ground water. All these factors contribute to hydrological instability leading to droughts. Agricultural droughts or soil droughts occur when soil lose their effective moisture conserving capacity. This prevents healthy crop growth. Such droughts may occur even when meteorological droughts do not occur and vice versa. Under extreme conditions of such a drought, no Plant exists and such a condition is called desertification. Although, all these three forms of drought occur independently of each other, but the occurrence of meteorological drought is the basic reason of hydrological droughts. Prolonged meteorological drought results into hydrological drought, and may, thereafter, lead to agricultural drought. This transition is a very slow process.

Consider the following statements:

1. In dry area, chances of receiving high or low rainfall are not high.

2. Hydrological droughts begin with illicit felling of trees and overgrazing only.

Which of the statements given above is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 1

Explanation

In the last sentence of the first paragraph states that arid and semi-arid zones of the country are characterised by high variability of rainfall. Also, felling of trees and overgrazing are not the only reason, but they contribute as factors in bringing hydrological instability. The occurrence of meteorological drought is the basic reason behind this.

Question 20:

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Consider the following statements:

1. Meteorological drought is the cause of every drought.

2. Hydrological drought is always an outcome of the human factors.

Which of the statements given above is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 1

Explanation

According to the last paragraph of the passage. Meteorological drought is the basic reason of hydrological drought.

Question 21:

The important thing in life is not what you have been but what you are reaching for and becoming. At my age, when I can see the end of the road more clearly than most, I can sit back and recollect in transquility the varying vicissitudes of my life and what it has taught me. When I look back, I find that the great and glorious hours of my life were those when I gave a helping hand to others without expecting anything in return and not when I struggled and succeeded to gain my own ends. And I can well imagine and appreciate that in this world those alone live who live for others. I have no regrets for the Past. Life has been kind to me. My only regret is that I received more from life than I gave

What according to the author, were the most fulfilling moments of his life?

1. When he recollected his life in tranquility.
2. When he succeeded in gaining his own ends.
3. When he managed to struggle through the vicissitudes of life.
4. When he could help others without expecting anything back.

Correct Answer : 4

Explanation

In the passage the writer quotes that “I find that the great and glorious hours of my life were those when I gave a helping hand to others without expecting anything in return.”

Question 22:

No doubt the ‘GreenRevolution’hasled to self-sufficiency in food production but it has also brought the formidable problem of poisoning of food grain and other eatables. This is caused by excessive use of chemicals on crops and pesticide residues. It has also created havoc by exterminating the species of

useful parasites and viruses which keep pests under control. Scientists are now worried about the resurgence of such formidable pests in menacing proportions which seem to undermine all that they have achieved in agriculture production.

In the sequence 4, 2, 1, 2,1, 4, 2, 1, 1, 2, 4, 4, 4, 1, 2, 2, 1, 2, 1, 4, 4, 2, 1, 4, 2, 1, 2, 1, 2, 4, 1, 4, 2, 1, 2, 4, 1, 4, 6, how many such 2 are there which are preceded by 1 and not followed by 4 ?

1. Two
2. Three
3. Four
4. Five

Correct Answer : 3

Explanation

4, 2, 1, 2, 1 4, 2, 1, 1, 2, 4, 4, 4, 1, 2, 2 , 1, 2, 1 , 4, 4, 2, 1, 4, 2, 1, 2, 1 , 2, 4, 1, 4, 2, 1, 2, 4, 1, 4, 6

Hence, four 2’s are there which are preceded by 1 and not followed by 4.

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Which of the following is not the last day of century year ?

1. Wednesday
2. Tuesday
3. Friday
4. Sunday

Correct Answer : 2

Explanation

: In 100 years, number of odd days = 5 days

Hence, Last day of 1st century will be Friday

In 200 years, number of odd days = remainder of $\left(\frac{10}{7}\right)$

= 3 days

Hence last day of 2nd century will be Wednesday.

In 300 years, the number of odd days

$$= \text{remainder of } \frac{15}{7} = 1 \text{ day}$$

Hence, last day of 3rd century will be Monday.

In 400 years, number of odd days = 0

Hence, last day of 4th century will be Sunday.

Hence, clearly Tuesday will not be the last day of any century year.

Question 24:

Raju's age was cube of an integral number (different from 1) four years ago and square of an integral number after four years. How long should he wait so that his age becomes multiple of 7 in the previous year and multiple of 13 in the next year ?

1. 50 years
2. 56 years
3. 17 years
4. 52 years

Correct Answer : 4

Explanation

The present age of Raju is 12 years, as four years ago,

his age = 12 – 4 = 8, which is cube of 2 and

after 4 years, his age = 12 + 4 = 16 which is square of 4.

Solving from options:

(a) After 50 years, age of Raju

= 12 + 50 = 62 years

1 year ago, he was 61, it is not multiple of 7.

(b) After 56 years, age of Raju

= 56 + 12 = 68 years

1 year ago, he was 67, it is not multiple of 7.

(c) After 17 years, age of Raju

= 17 + 12 = 29 years

1 year ago, he was 28, it is a multiple of 7.

1 year after, he will be 30 years, not a multiple of 13.

(d) After 52 years, Raju's age = 52 + 12 = 64 years

1 year before Raju's age = 63, which is multiple of 7

1 year after, Raju's age = 65 years which is multiple of 13

So, 52 is the correct answer.

Hence, option (d) is correct.

Question 25:

Ankit and Anil start walking from one point in opposite directions. After every 2 km, Ankit always turns left and Anil always turns right.

Which of the following statement is correct ?

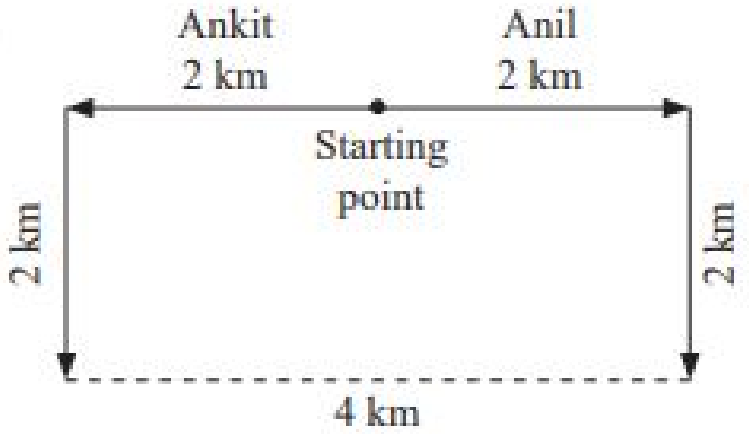
1. After both have travelled 4 km, the distance between them is 8 km.
2. They meet after traveling 6 km by each of them.
3. They meet for the first time after traveling 8 km by each of them.
4. They never meet each other.

Correct Answer : 2

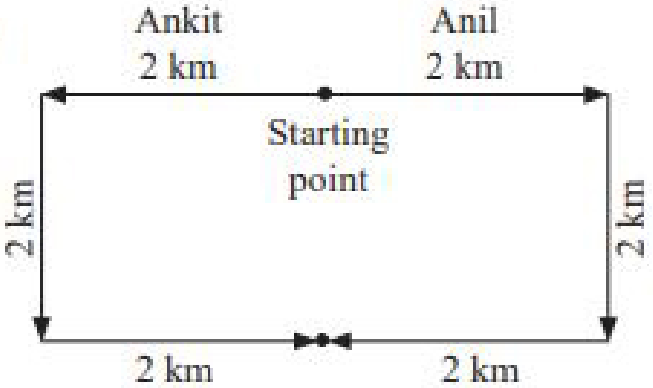
Explanation

Solving from options,

(a)



(b)



Hence, option (b) is correct because they meet after each has travelled 6 km.

Question 26:

The age of Raju is thrice the age of Rohit. To find the difference in their ages, which of the following information is/ are sufficient?

I. After 10 years, the ratio of their ages would be 19 : 8.

II. Before 6 years, the ratio of their ages was 15 :4.

1. I only
2. II only
3. Both I and II
4. Either I or II

Correct Answer : 4

Explanation

Let the age of Rohit be x years.

Age of Raju = 3x years

From statement I,

$$\frac{3x+10}{x+10} = \frac{19}{8}$$

$$24x + 80 = 19x + 190$$

$$5x = 110$$

$\therefore$ $x = 22$ years

Difference of their ages $= 3x - x = 2x = 2 \times 22$

$= 44$ years

From statement II,

$$\frac{3x-6}{x-6} = \frac{15}{4}$$

$$12x - 24 = 15x - 90$$

$$3x = 66$$

$\therefore$ $x = 22$

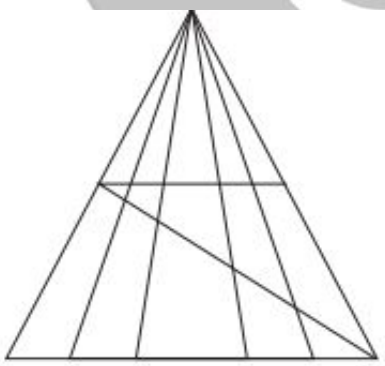
Difference of their ages $= (3x - x) = 2x = 2 \times 22$

$= 44$ years

Hence, either I or II is sufficient to answer the question.

Question 27:

How many triangles are there in the given figure ?



1. 25
2. 14

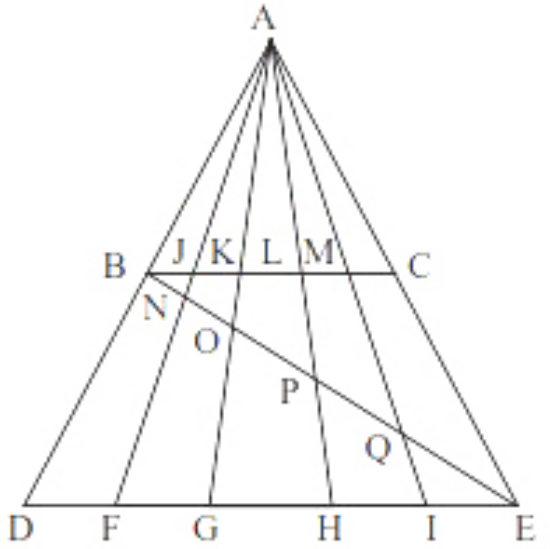
3. 39

4. 40 or more

Correct Answer : 4

Explanation

:



Δ ABJ, Δ ABK, Δ ABL, Δ ABM, Δ ABC, Δ AJK, Δ AJL, Δ AJM, Δ AJC, Δ AKL, Δ AKM, Δ AKC, Δ ALM, Δ ALC, Δ AMC, Δ ADF, Δ ADG, Δ ADH, Δ ADI, Δ ADE, Δ AFG, Δ AFH, Δ AFI, Δ AFE, Δ AGH, Δ AGI, Δ AGE, Δ AHI, Δ AHE, Δ AIE, Δ BJN, Δ BKO, Δ BLP, Δ BMQ, Δ BCE, Δ QIE, Δ EPH, Δ EOG, Δ EFN, Δ EDB, Δ ABE, Δ QBA, Δ APB, Δ AOB, Δ ANB.

Hence, there are 40 or more triangles in the given figure.

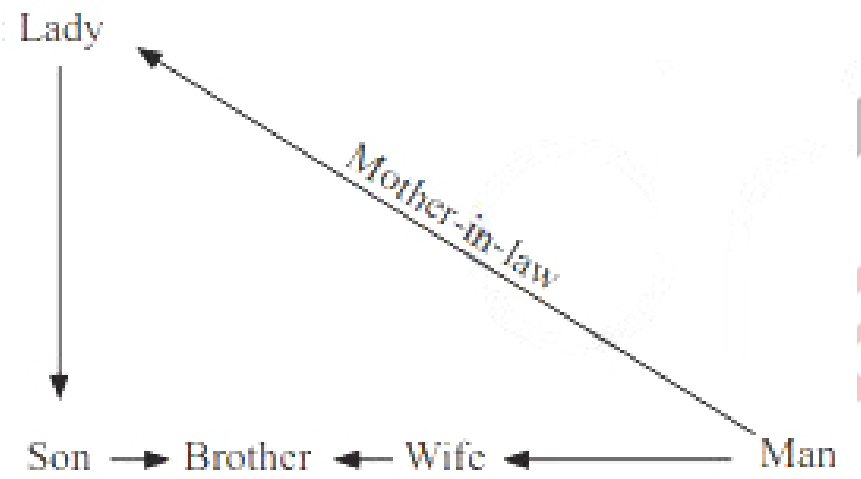
Question 28:

A man pointing to a lady said, “The only brother of his son is the brother of my wife”. How the lady is related to that man ?

1. Mother’s sister
2. Grand mother
3. Mother-in-law
4. Sister of Father-in-law

Correct Answer : 3

Explanation



Hence, lady is the mother-in-law of that man.

Question 29:

Semi-perimeter of a triangle is 8.5 cm. If the sides of triangle are in integer, then how many such triangles are possible?

1. 7
2. 8
3. 9
4. Cannot be determined

Correct Answer : 2

Explanation

Semi-perimeter of triangle = 8.5 cm perimeter of triangle = (8.5 × 2) cm = 17 cm

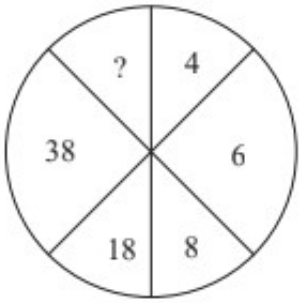
Sides of possible triangles are

(1, 8, 8), (2, 8, 7), (3, 7, 7), (4, 5, 8), (4, 6, 7), (5, 5, 7) (5, 6, 6) and (6, 8, 3)

Hence, there are 8 triangles whose semi-perimeter is 8.5 cm

Question 30:

. Consider the following figure :

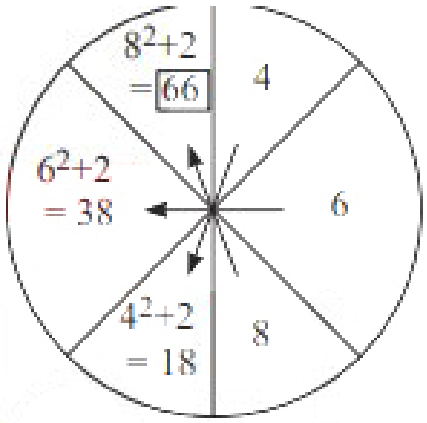


Find out the missing number from the following:

1. 65
2. 58
3. 79
4. 66

Correct Answer : 4

Explanation



Hence, 66 will come in place of question mark.

Question 31:

A student obtained total 50% marks in five subject. Ratio of marks obtained by him in five subjects is 10 : 9 : 8 : 7 : 6. If passing marks is 40% of the maximum marks and maximum marks of all the subjects are equal, then in how many subjects he passed ?

1. 2
2. 3
3. 4
4. 5

Correct Answer : 3

Explanation

: Let the maximum marks of each subjects be 100.

$$\text{Passing marks} = 40\% \text{ of } 100$$
$$= 40$$

Maximum marks of all five subjects

$$= (5 \times 100) = 500$$

Total marks obtained by the student

$$= 50\% \text{ of } 500 = 250$$

$$\text{Marks obtained in } 1^{st} \text{ subject} = 250 \times \frac{10}{40} = 62.50$$

$$\text{Marks obtained in } 2^{nd} \text{ subject} = 250 \times \frac{9}{40}$$
$$= \frac{225}{4} = 56.25$$

$$\text{Marks obtained in } 3^{rd} \text{ subject} = 250 \times \frac{8}{40}$$
$$= 50$$

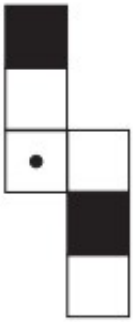
$$\text{Marks obtained in } 4^{th} \text{ subject} = 250 \times \frac{7}{40}$$
$$= \frac{175}{4} = 43.75$$

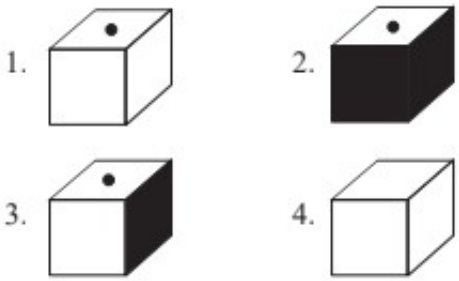
$$\text{Marks obtained in } 5^{th} \text{ subject} = 250 \times \frac{6}{40} = \frac{75}{2}$$
$$= 37.50$$

Hence, he passed the exam in 4 subjects.

Question 32:

The figure given below folded to form a box. Which of the following box can be formed ?



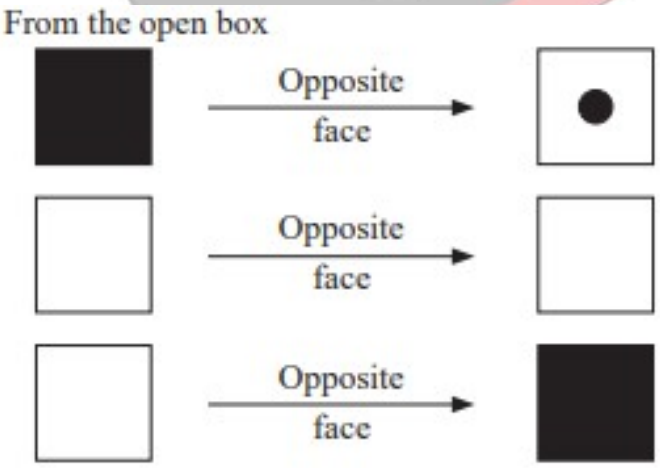


Select the correct answer using the code given below.

1. 1 and 4 only
2. 1, 3 and 4 only
3. 2, 3 and 4 only
4. 1 and 3 only

Correct Answer : 4

Explanation



Box (2) can't be formed because [●] is opposite to [ ]

Box (4) can't be formed because [ ] is opposite to [ ].

Question 33:

Authors William Strauss and Neil Howe are known for their theories about cycles of generations in American history. They refer to each cycle of four generations as a constellation, and they posit that each constellational era corresponds to "recurring type of historical events" and moods. They state that adjacent generations do not live similar lives and that each generation ages as a singular cohort as time moves forward. According to Strauss and Howe, each generation is comprised of people who possess (1) common age (2) common beliefs and (3) perceived membership in the same generation. A generation is approximately 22 years in length. Since a lifetime may reach 80-90 years members of 4 generations are alive at one time. The four generational archetypes identified by Strauss are Idealist, Reactive, Civic and Adaptive. Idealist are "increasingly indulged youth after a secular crisis", who cultivate principle rather than pragmatism in midlife, and emerge as "visionary elders". "Reactive grow up" Under protected and criticized youths during a spiritual awakening", mature into risk taking adults, mellow into pragmatic midlife leaders during a secular crisis", and become reclusive elders. Civics grow up "increasingly protected youth after a spiritual awakening" become "a heroic and achieving cadre of young adults", build institutions as midlife and "emerges as busy midlifers, attacked by the next spiritual awakening". Adaptive grow up as "overprotected and suffocated youths during a secular crisis," become "risk-averse, conformist rising adults", mature into "indecisive arbitrator leaders during a spiritual awakening", and become sensitive elders.

According to the passage which of the following statement can be inferred?

1. Adaptive are elders when civics are adults.
2. When reactive are adults, civics are youths.
3. Reactive are one generation younger than the Civics.
4. Idealist are one generation younger than the Reactive.

Correct Answer : 2

Explanation

According to the passage it is clear that 'Reactive' are youth during spiritual Awakening and after the spiritual Awakening. 'Civic' are youth whereas 'Reactive' turns into risk-taking adults.

Question 34:

Authors William Strauss and Neil Howe are known for their theories about cycles of generations in American history. They refer to each cycle of four generations as a constellation, and they posit that each constellational era corresponds to “recurring type of historical events” and moods. They state that adjacent generations do not live similar lives and that each generation ages as a singular cohort as time moves forward. According to Strauss and Howe, each generation is comprised of people who possess (1) common age (2) common beliefs and (3) perceived membership in the same generation. A generation is approximately 22 years in length. Since a lifetime may reach 80-90 years members of 4 generations are alive at one time. The four generational archetypes identified by Strauss are Idealist, Reactive, Civic and Adaptive. Idealist are “increasingly indulged youth after a secular crisis”, who cultivate principle rather than pragmatism in midlife, and emerge as “visionary elders”. “Reactive grow up” Under protected and criticized youths during a spiritual awakening”, mature into risk taking adults, mellow into pragmatic midlife leaders during a secular crisis”, and become reclusive elders. Civics grow up “increasingly protected youth after a spiritual awakening” become “a heroic and achieving cadre of young adults”, build institutions as midlife and “emerges as busy midlifers, attacked by the next spiritual awakening”. Adaptive grow up as “overprotected and suffocated youths during a secular crisis,” become “risk-averse, conformist rising adults”, mature into “indecisive arbitrator leaders during a spiritual awakening”, and become sensitive elders.

What is the assumption made by Strauss and Howe?

1. The cycle of generations share some common features and moods.
2. Alternate generation live similar lives.
3. Each constellational era corresponds to recurring types of historical events and moods.
4. Four generations co-exist at one and the same time.

Correct Answer : 3

Explanation

According to the first six lines of the paragraph, Author William Strauss and Neil Howe refer the each cycle of four generations as a constellation, and they posit that each constellational era corresponds to “recurring type of historical events” and moods. So, option (c) is the assumption which is made by Strauss and Howe.

Question 35:

Constitutional Government is a type of governance that is characterized by the fact that “Government” operates within a set of legal and institutional constraints that both limits its power and protects the individual liberty of the citizen of a state. Central elements of constitutional government therefore, are the set of rules or “basic laws” that establish the duties, power and functions of government (i.e., institutional

autonomy) and define the relationship between state and individual (individual autonomy). This complex of institutional relations is a type of governance, because it is fundamentally different from those states where the “Rule of Law” is either absent (or suspended), or is defined on the basics of other principles than “liberalism” (i.e. commitment to the principles of individual liberty, freedom to associate, tolerating other person’s belief and respecting minorities and consenting equal rights to all citizens within the state). Hence, constitutional government is based on a “contract” between the “Principal” and the “Public” at large and can be considered as an authoritative guideline concerning the “Room to Maneuver” of government. The origin and development of “constitutionalism” can be traced to its roots in the 18th century as the enlightenment and the Bourgeois revolutions in the US and Europe. This overview will show that at present the meaning of constitutional government appears to overlap strongly with the idea of the “rule of law” and also has influenced the chosen organization (its forms like, republicanism, federalism, parliamentary) of the state and the values (independence, social and economic objectives i.e. public welfare, human rights, etc.) of a society. Thus, the constitutional government is both a principle for organizing public life and a framework for assessing the sustainability of a political system. It can be considered as one of the building

Which of the following can be said to associate with constitutional government?

1. Its present nature has its genesis in the enlightenment.

2. Various political ideologies which organize the state, inspired by it.

Select the correct answer from the codes given below:

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 3

Explanation

Roots of constitutionalism can be traced back to 18th century enlightenment which eventually laid the foundation of constitutional government. It also organizes the public life for assessing the sustainability of a political system. Hence, (c) is the correct option.

Question 36:

Constitutional Government is a type of governance that is characterized by the fact that “Government” operates within a set of legal and institutional constraints that both limits its power and protects the individual liberty of the citizen of a state. Central elements of constitutional government therefore, are the set of rules or “basic laws” that establish the duties, power and functions of government (i.e., institutional

autonomy) and define the relationship between state and individual (individual autonomy). This complex of institutional relations is a type of governance, because it is fundamentally different from those states where the “Rule of Law” is either absent (or suspended), or is defined on the basics of other principles than “liberalism” (i.e. commitment to the principles of individual liberty, freedom to associate, tolerating other person’s belief and respecting minorities and consenting equal rights to all citizens within the state). Hence, constitutional government is based on a “contract” between the “Principal” and the “Public” at large and can be considered as an authoritative guideline concerning the “Room to Maneuver” of government. The origin and development of “constitutionalism” can be traced to its roots in the 18th century as the enlightenment and the Bourgeois revolutions in the US and Europe. This overview will show that at present the meaning of constitutional government appears to overlap strongly with the idea of the “rule of law” and also has influenced the chosen organization (its forms like, republicanism, federalism, parliamentary) of the state and the values (independence, social and economic objectives i.e. public welfare, human rights, etc.) of a society. Thus, the constitutional government is both a principle for organizing public life and a framework for assessing the sustainability of a political system. It can be considered as one of the building

Constitutional government enables:

1. Establishes the relations between institutions and individuals.

2. With this, the value involved in a society can be maintained.

3. It acts as a fundamental principle of governing the state.

Select the correct answer from the codes given below:

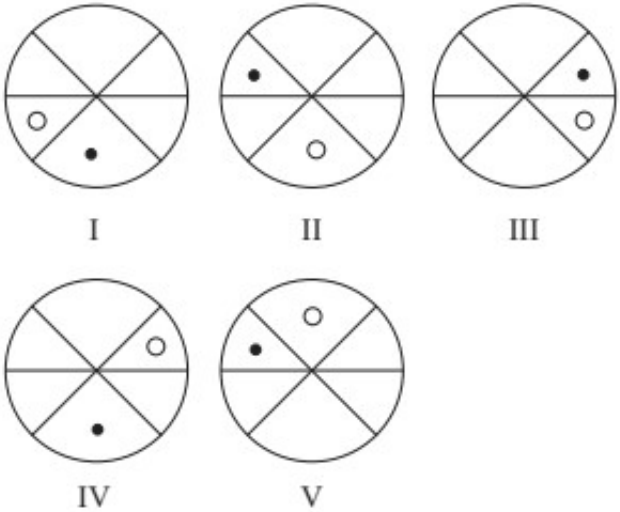
1. 1 and 3 only
2. 2 and 3 only
3. 1 and 2 only
4. 1, 2 and 3

Correct Answer : 4

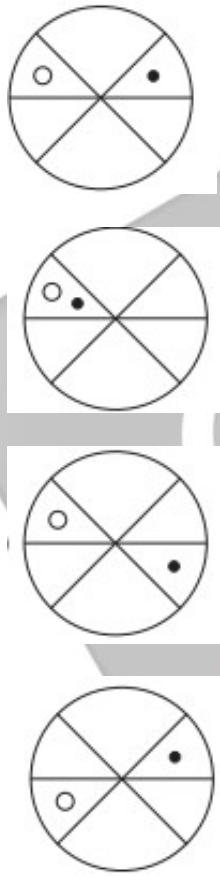
Explanation

First paragraph does talk about Constitutional government as a set of rules or 'basic laws' that establish the functions of government and define the relationship between state and individual.

Question 37:



In the above figures from (I) to (V), some parts are shown to change their position in regular directions. Following the same sequence, which of the figures given below will appear at step VI ?



Correct Answer : 1

Explanation

‘I’is shifted two place in clock-wise whereas O shifted one place in anti-clock wise. Hence opion (a) is correct

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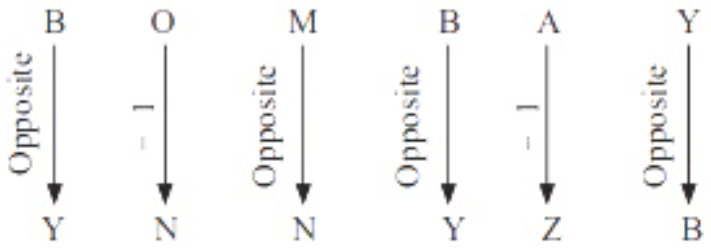
Question 38:

If ‘YNNYZB’ is code for ‘BOMBAY’ and ‘SNXPDB’ is code ‘HOCKEY’, then code for ‘SCIENCE’ is :

1. HXRDMXD
2. HXRVMXV
3. HXMDMSD
4. HXHDMXD

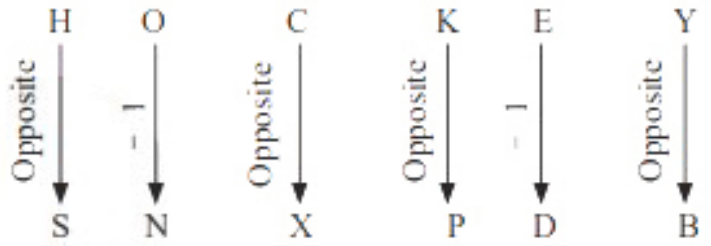
Correct Answer : 4

Explanation

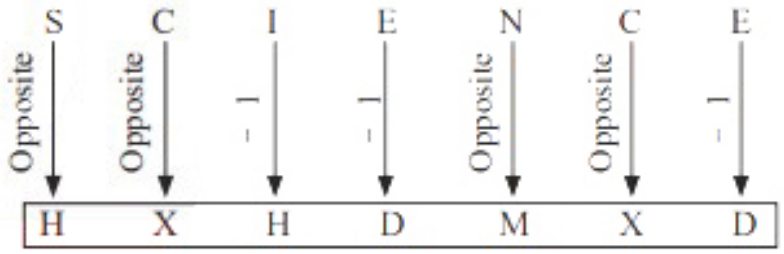


In this coding, consonants are written opposite where as 1 is subtracted from vowels.

and



Similarly,



Question 39:

If 500! is completely divisible by 21K then what will be the maximum value of K?

1. 216
2. 72
3. 247
4. 82

Correct Answer : 4

Explanation

$500! = 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times \ldots\ldots\ldots \times 499 \times 500$

21 will be the multiple of 3 and 7.

$$21 = 3 \times 7$$

In 500!, the number of multiple of 7

$$= \left[\frac{500}{7}\right] + \left[\frac{500}{49}\right] + \left[\frac{500}{343}\right]$$

([.]→ Greatest Integer Function)

$$= 71 + 10 + 1 = 82$$

In 500!, the number of multiple of 3

$$= \left[\frac{500}{3}\right] + \left[\frac{500}{9}\right] + \left[\frac{500}{27}\right] + \left[\frac{500}{81}\right] + \left[\frac{500}{243}\right]$$

$$= 166 + 55 + 18 + 6 + 2 = 247$$

$\therefore$ In 500!, number of multiple of 21 = 82

Hence, maximum value of K will be 82.

Question 40:

In a company, 60% employees have bikes, 30% employees have cars and 15% of employees have both bikes and cars. In all there are 1920 employees in the company. How many employees do not have car or bike?

1. 400
2. 480
3. 520
4. 560

Correct Answer : 2

Explanation

Percentage of employees who have bikes

$$[n(A)] = 60\%$$

Percentage of employees who have car

$$[n(B)] = 30\%$$

Percentage of employees who have both bike and car

$$[n(A \cap B)] = 15\%$$

Percentage of employees who have either bike

or car

$$[n(A \cup B)] = n(A) + n(B) - n(A \cap B)$$

$$= (60 + 30 - 15)\%$$

$$= 75\%$$

Percentage of employees who neither have bike nor car

$$= (100 - 75)\% = 25\%$$

Number of employees who neither have bike nor car

$$= 25\% \text{ of } 1920 = \frac{25}{100} \times 1920$$

$$= 480$$