



SSC CHSL 5 July 2019 Shift-2

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Reasoning

Instructions

For the following questions answer them individually

Question 1

Select the set in which the numbers are related in the same way as are the numbers of the following set.
(16, 24, 88)

- A (12, 18, 64)
- B (18, 27, 98)
- C (20, 30, 100)
- D (14, 21, 77)

Answer: D

Explanation:

$$8 \times 2 = 16$$

$$8 \times 3 = 24$$

$$8 \times 11 = 88$$

Similarly,

$$7 \times 2 = 14$$

$$7 \times 3 = 21$$

$$7 \times 11 = 77$$

∴ (14, 21, 77) is related in the same way as (16, 24, 88)

Hence, the correct answer is Option D

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Question 2

In a code language, ADVOCATE is written as QXFCCRYA. How will DIALOGUE be written as in that language?

- A NCFKSEN
- B NCKFMESC
- C NCKFCSEM
- D MCKFCSEM

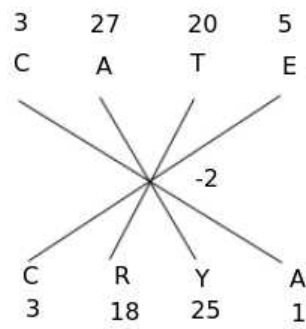
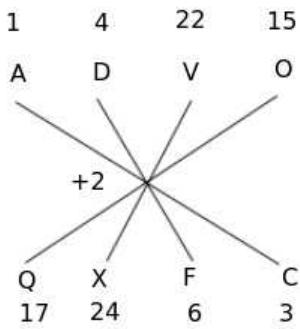
Answer: C

Explanation:

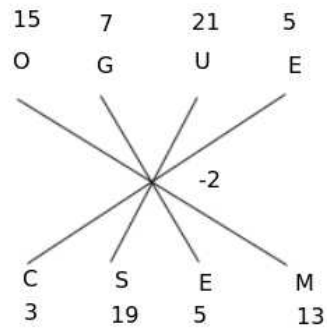
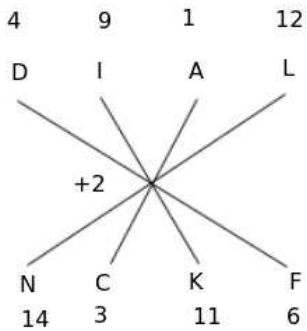
Given,

ADVOCATE is written as QXFCCRYA in the code language

The logic is shown in the below figure



Similarly



∴ DIALOGUE will be written as NCKFCSEM in the code language

Hence, the correct answer is Option C

Question 3

Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- A CFJM
- B PSVY
- C KNQT
- D SVYB

Answer: A

Explanation:

Number of letters between consecutive letters of all letter-clusters are 2 except in CFJM.

The number of letters between F and J is 3.

∴ CFJM is the odd one among the given letter-clusters

Hence, the correct answer is Option A

Question 4

Three persons A, B and C have different amounts of rupees with them. If C takes ₹11 from A, C will have equal amount as B has. B and C together have total ₹111. How many rupees does C have?

- A 60
- B 65
- C 50
- D 70

Answer: C

Explanation:

Given, B and C together have total ₹111

$$\Rightarrow B + C = 111 \dots\dots\dots(1)$$

If C takes ₹11 from A, C will have equal amount as B

$$\Rightarrow C + 11 = B$$

Substituting $B = C + 11$ in equation (1)

$$\Rightarrow C + 11 + C = 111$$

$$\Rightarrow 2C = 100$$

$$\Rightarrow C = 50$$

\therefore C has ₹50

Hence, the correct answer is Option C

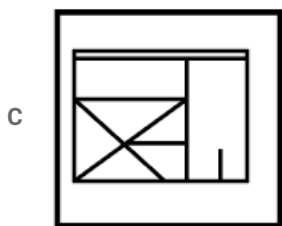
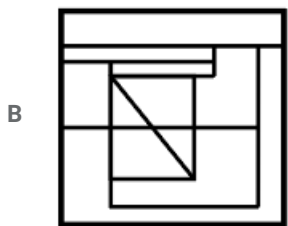
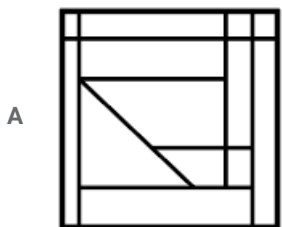
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Question 5

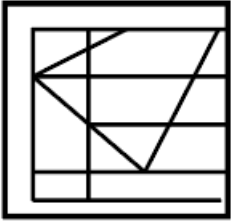
Select the option in which Figure-X is embedded. (Rotation is not allowed)



Figure-X



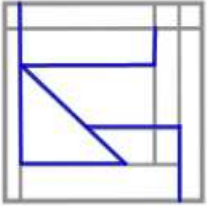
D



Answer: A

Explanation:

The given figure X is embedded in the figure 1 as shown below



Hence, the correct answer is Option A

Question 6

Select the correct alternative to indicate the arrangement of the following activities in a logical and meaningful order.

1. Filling-in application form
2. Bank Account opened
3. Submitting necessary documents
4. Account closing
5. Depositing and withdrawing money

A 1, 3, 5, 2, 4

B 1, 3, 2, 4, 5

C 1, 3, 2, 5, 4

D 2, 5, 4, 1, 3

Answer: C

Explanation:

By filling the application form and submitting the necessary documents bank account will be opened. Depositing and withdrawing of money can be done after opening the account. Final procedure is the closing of bank account.

∴ The meaningful order of the given activities are 1,3,2,5,4

Hence, the correct answer is Option C

Question 7

If FASHION is coded as 6118965, then how will LASTING be coded as?

A 3113947

B 2112857

C 3112957

D 3112947

Answer: C

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Question 8

Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

- A 253
- B 239
- C 277
- D 233

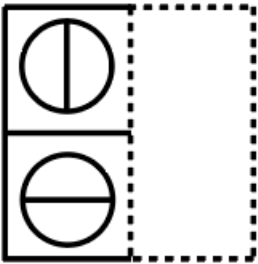
Answer: A

Question 9

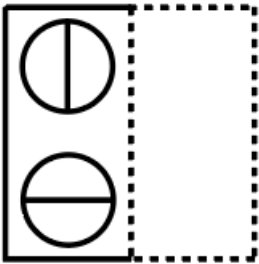
A figure of transparent sheet with a pattern is given below. Select the option that shows how the pattern would appear when the transparent sheet is folded at the dotted line.



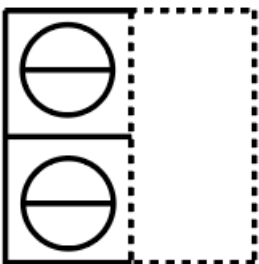
A

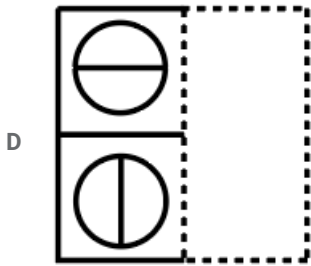


B



C



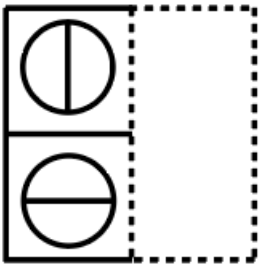


Answer: A

Explanation:

The vertical line at the top right gets aligned as diameter of the circle at the top left and the horizontal line gets aligned as diameter of the bottom circle when folded.

∴ When the given transparent sheet is folded at the dotted line, it would appear as shown below



Hence, the correct answer is Option A

Question 10

Which two signs should be interchanged in the following equation to make it correct ?

$$615 - 377 \div 29 \times 15 + 308 = 502$$

A \times and $+$

B \div and \times

C $+$ and $-$

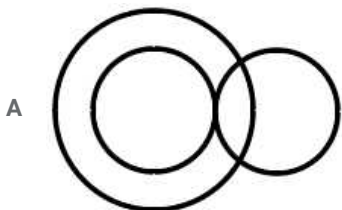
D $+$ and \div

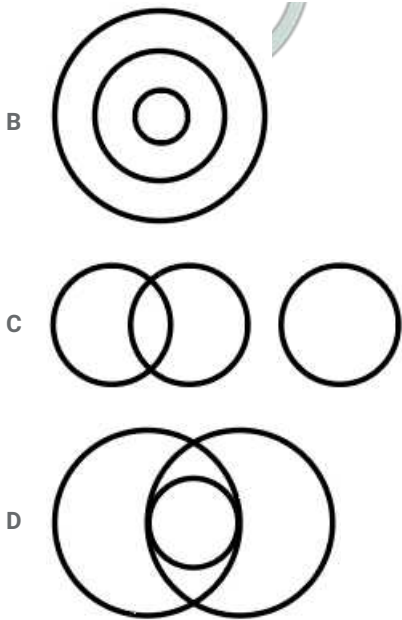
Answer: C

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Question 11

Select the Venn diagram that best illustrates the relationship between the following classes.
Mango, Eatables, Liquid





Answer: A

Question 12

Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- A Microwave
- B Scanner
- C Photocopier
- D Printer

Answer: A

Question 13

Select the word-pair in which the two words are related in the same way as are the two words in the following word-pair.
Telephone : Communication

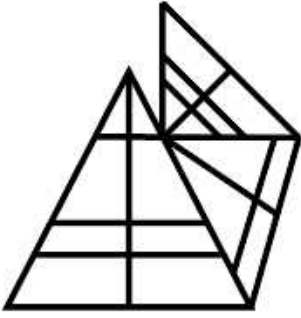
- A Heater : Electricity
- B Television : Entertainment
- C Refrigerator : Equipment
- D Air Cooler : Water

Answer: B

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Question 14

How many triangles are present in the given figure ?



- A 27
- B 25
- C 28
- D 26

Answer: A

Question 15

$A + B$ means 'A is brother of B'

$A - B$ means 'A is daughter of B'

$A \times B$ means 'A is husband of B'

$A \div B$ means 'A is son of B'

If $J + R \div T \times K - Z$, then how is K related to J ?

- A Mother
- B Paternal grandmother
- C Maternal grandmother
- D Sister

Answer: A

Question 16

'Gynecology' is related to 'Women' in the same way as 'Paediatrics' is related to '_____':

- A Men
- B Children
- C Human beings
- D Treatment

Answer: B

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Question 17

Select the number-pair in which the two numbers are related in the same way as are the two numbers of the following number-pair.
25 : 600

- A 16 : 256
- B 20 : 420
- C 14 : 210
- D 18 : 306

Answer: D

Question 18

Select the set in which the numbers are related in the same way as are the numbers of the following set.
(56, 38, 96)

- A (16, 14, 40)
- B (10, 20, 40)
- C (28, 48, 86)
- D (12, 18, 50)

Answer: A

Question 19

Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

KSDO : NPGL :: SBJY : ?

- A WYMV
- B VZMW
- C VYMV
- D VYNW

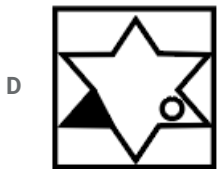
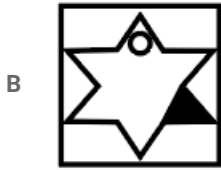
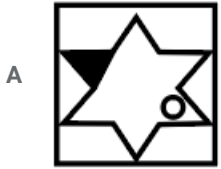
Answer: C

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Question 20

Select the figure that will come next in the following figure series.





Answer: D

Question 21

Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.

5 4 r g B G 9 Q 6

A 2 4 1 g B G 9 Q 6

B 9 Q 6 G B G 9 Q 6

C 6 Q 9 G B G 9 Q 6

D 6 Q 9 G B G 9 Q 6

Answer: C

Explanation:

5 4 r g B G 9 Q 6 | 6 Q 9 G B G 9 Q 6

So Answer is Option C

Question 22

Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some children are clever.

All children are honest.

Conclusions:

I. Some clever are children.

II. Some honest are children.

III. Some clever are honest.

- A Either conclusion I or III follows.
- B All conclusions follow.
- C Only conclusions II and III follow.
- D Only conclusions I and II follow.

Answer: B

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Question 23

Which number will replace the question mark (?) in the following series?

20, 10, 10, 15, 30, ?

- A 90
- B 75
- C 60
- D 45

Answer: B

Explanation:

As in Given series 20, 10, 10, 15, 30, ?

Following pattern being followed :

$$20 \times 0.5 = 10$$

$$10 \times 1 = 10$$

$$10 \times 1.5 = 15$$

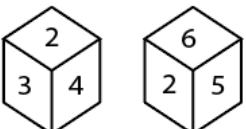
$$15 \times 2 = 30$$

$$30 \times 2.5 = 75$$

∴ Next term is 75

Question 24

Two different positions of the same dice are shown below, the six faces of which are numbered 1 to 6. Find the number on the face opposite to the one having?.



- A 4
- B 3
- C 1
- D 2

Answer: C

Question 25

Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series.

g _ k m _ s k m _ g k m _ s k m g g k _ p s _ m

- A gpgpkm
- B gpgpmk
- C gspgkm
- D gpgskm

Answer: B

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General knowledge

Instructions

For the following questions answer them individually

Question 26

Which one of the following is NOT an operating system ?

- A Unix
- B Linux
- C Windows
- D Intel

Answer: D

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Question 27

What is the name of the anti-satellite missile test conducted by DRDO in March 2019 from the Dr. A P J Abdul Kalam Island launch complex ?

- A Mission Akash
- B Mission Antariksh
- C Mission Suryamandal
- D Mission Shakti

Answer: D

Question 28

Who among the following won the '2019 Pulitzer Prize for Poetry'?

- A Richard Powers
- B Frank Bidart
- C Forrest Gander
- D Andrew Sean Greer

Answer: C

Question 29

Which was India's first full-length 'talkie' film?

- A Alam Ara
- B Indrasabha
- C Shirin Farhad
- D Bhakta Prahlada

Answer: A

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Question 30

When is National Science Day observed in India every year?

- A 15th March
- B 5th May
- C 28th February
- D 2nd January

Answer: C

Question 31

When was Menstrual Hygiene Day observed globally in the year 2019 ?

- A 12th June
- B 10th March
- C 12th April
- D 28th May

Answer: D

Question 32

Which one of the following brings out an annual publication titled 'National Accounts Statistics' containing Gross Domestic Product, Fixed Capital Formation and other macroeconomic aggregates?

- A The Reserve Bank of India (RBI)
- B The Indian Statistical Institute (ISI)
- C The Central Statistics Office (CSO)
- D The National Sample Survey Office (NSSO)

Answer: C

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Question 33

As of May 2019, which of the following nations has won the maximum number of Olympic gold medals in men's hockey?

- A Spain
- B Australia
- C Pakistan
- D India

Answer: D

Question 34

Which of the following is the largest river island in India?

- A Divar Island
- B Diu Island
- C Gundu Island
- D Majuli Island

Answer: D

Question 35

_____ was awarded the 'Kaisar-i-Hind' in 1915 by Lord Hardinge of Peshurst for his contribution to ambulance services in South Africa.

- A Subhash Chandra Bose
- B Muhammad Iqbal
- C Bal Gangadhar Tilak
- D Mahatma Gandhi

Answer: D

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Question 36

Name the sea that separates Asia and Africa with countries such as Egypt and Sudan on the African side and Saudi Arabia on the Asian side.

- A Red Sea
- B Mediterranean Sea
- C Black Sea
- D Caspian Sea

Answer: A

Question 37

Who among the following was the Speaker of the 15th Lok Sabha ?

- A Sumitra Mahajan
- B Rabi Ray
- C P A Sangma
- D Meira Kumar

Answer: D

Question 38

Which of the following Indian companies has been recognised as one of the World's Most Ethical Companies by the Ethisphere Institute in February 2019?

- A Jindal Steel
- B Tata Steel
- C Tata Chemicals
- D Bharat Heavy Electricals Ltd.

Answer: B

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Question 39

As of May 2019, who among the following has won the maximum number of Grand Slam tournaments in Men's Tennis?

- A Roger Federer
- B Ivan Lendl
- C Pete Sampras
- D Andre Agassi

Answer: A

Question 40

Which among the following is the largest coalfield in India ?

- A Yellandu
- B Rampur
- C Jharia
- D Talcher

Answer: C

Question 41

Who among the following won the Women's Singles title at the '2019 Australian Open' tennis tournament?

- A Naomi Osaka
- B Angelique Kerber
- C Elina Svitolina
- D Caroline Wozniacki

Answer: A

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Question 42

_____ of the Constitution of India deals with emergency due to war, external aggression or armed rebellion.

- A Article 269
- B Article 350
- C Article 352
- D Article 347

Answer: C

Question 43

Which one of the following is defined as "a private network that uses Internet technology and the public tele communication system to securely share part of a business's information or operations with suppliers, vendors, partners, customers or other businesses"?

- A Intranet
- B Extranet
- C Local Area Network
- D World Wide Web

Answer: B

Question 44

Which of the following is the smallest neighbouring country of India in terms of population?

- A Afghanistan
- B Maldives
- C Nepal
- D Bangladesh

Answer: B

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Question 45

Which one of the following is an X-linked, recessive disorder caused by the deficiency of functional plasma clotting factor VIII (FVIII), which may be inherited or arise from spontaneous mutation ?

- A Leukemia
- B Multiple Myeloma
- C Venous Thrombosis
- D Haemophilia A

Answer: D

Question 46

Who is the author of the famous book 'Meghdoot'?

- A Kalidasa
- B Sudraka
- C Vatsyayana
- D Bhasa

Answer: A

Question 47

Who among the following defeated Harshavardhan in 618 CE?

- A Pushyamitra
- B Alexander
- C Chandragupta I
- D Pulakeshin II

Answer: D

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Question 48

Who among the following was appointed as the chairperson of the News Broadcasting Standards Authority (NBSA) in May 2019?

- A Justice H L Dattu
- B Justice Adarsh Kumar Goel
- C Justice A K Sikri
- D Justice Madan Lokur

Answer: C

Question 49

Which one of the following is used for indexing dearness allowance to government employees for increase in prices in India?

- A Consumer Price Indices (CPI)
- B Statutory Liquidity Ratio (SLR)
- C Interest rates
- D Bank rates

Answer: A

Question 50

In 2019, Skytrax released its 'World Airport Survey' which ranked the world's Top 100 Airports for 2019. Identify the airport that has been correctly paired with its rank.

- A Kempegowda International Airport - 75th
- B Indira Gandhi International Airport - 60th
- C Chhatrapati Shivaji Maharaj International Airport - 57th
- D Rajiv Gandhi Hyderabad International Airport - 66th

Answer: D

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Quant

Instructions

For the following questions answer them individually

Question 51

In a $\triangle ABC$, the bisectors of $\angle B$ and $\angle C$ meet at point O within the triangle. If $\angle A = 116^\circ$, then the measure of $\angle BOC$ is:

- A 74°
- B 116°
- C 148°
- D 85°

Answer: C

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Question 52

Two numbers are in the ratio 7 : 5. On diminishing each of them by 40, the ratio becomes 27 : 17. The difference between the numbers is:

- A 25
- B 50
- C 75
- D 40

Answer: B

Explanation:

Let the numbers are x and y

According to questions, Ratio of x and y are 7 : 5

$$\therefore \frac{x}{y} = \frac{7}{5}$$

$$\Rightarrow y = \frac{5x}{7}$$

After diminishing both of them by 40, Ratio becomes 27 : 17

$$\therefore \frac{(x-40)}{(y-40)} = \frac{27}{17}$$

$$\Rightarrow 17(x - 40) = 27(y - 40)$$

$$\Rightarrow 17x - 17 \times 40 = 27y - 27 \times 40$$

$$\Rightarrow 27y - 17x = 27 \times 40 - 17 \times 40$$

$$\Rightarrow 27y - 17x = 40 \times (27 - 17)$$

$$\Rightarrow 27y - 17x = 400$$

Putting value of y in above equation,

$$\Rightarrow 27\left(\frac{5x}{7}\right) - 17x = 400$$

$$\Rightarrow \frac{135x}{7} - 17x = 400$$

$$\Rightarrow \frac{135x - 119x}{7} = 400$$

$$\Rightarrow 16x = 2800$$

$$\Rightarrow x = \frac{2800}{16} = 175$$

$$\Rightarrow y = \frac{5x}{7} = \frac{5 \times 175}{7} = 5 \times 25 = 125$$

\therefore Difference b/w both numbers = $175 - 125 = 50$

Question 53

If $\cos x = \frac{-1}{2}$ and $\pi < x < \frac{3\pi}{2}$, then the value of $4 \tan^2 x + 3 \operatorname{cosec}^2 x$ is:

- A 4
- B 10

C 16

D 8

Answer: C

Question 54

The average age of four brothers is 15 years. If their father is included, the average is increased by 5 years. The age of the father (in years) is:

A 36

B 38

C 35

D 40

Answer: D

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Question 55

The simplified value of $1\frac{1}{7} \div \left\{ 7 - \left(\frac{1}{7} \div \frac{1}{5} \right) \right\}$ is:

A $\frac{13}{7}$

B $\frac{13}{16}$

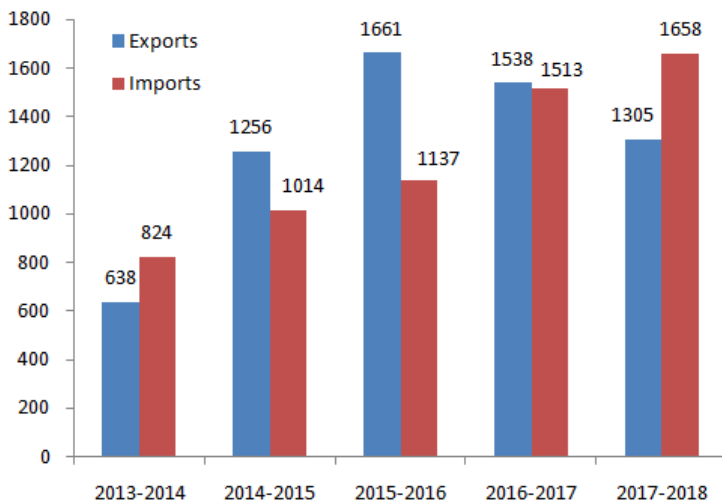
C $\frac{13}{8}$

D $\frac{13}{64}$

Answer: D

Instructions

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



Question 56

In which financial year the percentage increase in total of Exports and Imports is the highest in comparison to its previous financial year ?

- A 2016-2017
- B 2014-2015
- C 2015-2016
- D 2017-2018

Answer: B

Question 57

In which financial year the total of the Exports and Imports is the lowest ?

- A 2013-2014
- B 2017-2018
- C 2015-2016
- D 2014-2015

Answer: A

Explanation:

According to question,

Total of the Exports and Imports in 2013-2014 = 638 + 824 = 1462

Total of the Exports and Imports in 2014-2015 = 1256 + 1014 = 2270

Total of the Exports and Imports in 2015-2016 = 1661 + 1137 = 2798

Total of the Exports and Imports in 2016-2017 = 1538 + 1513 = 3051

Total of the Exports and Imports in 2017-2018 = 1305 + 1658 = 2963

Here We can see,

∴ In financial year 2013-2014, total of the Exports and Imports is the lowest

Alternatively we can clearly notice from the graph that the values of exports and imports are the lowest for the year 2013-14 and rest of the figures are all higher.

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Instructions

For the following questions answer them individually

Question 58

A person purchased a vehicle for ₹5,90,828 and sold it for ₹6,52,920. What is the profit percent he earned on this vehicle (correct to two decimal places) ?

- A 9.51%
- B 9.55%
- C 10.51%
- D 11.55%

Answer: C

Question 59

A, B and C can complete a piece of work in 4, 20 and 60 days respectively. Working together, they can complete the same work in how many days ?

- A $5\frac{3}{19}$
- B $5\frac{1}{19}$
- C $3\frac{3}{19}$
- D $3\frac{1}{19}$

Answer: C

Question 60

A man bought 2 articles for ₹4158 each. He sold one article at 15% loss. Then at what percent profit the other article should be sold so that no profit/loss percentage is earned.

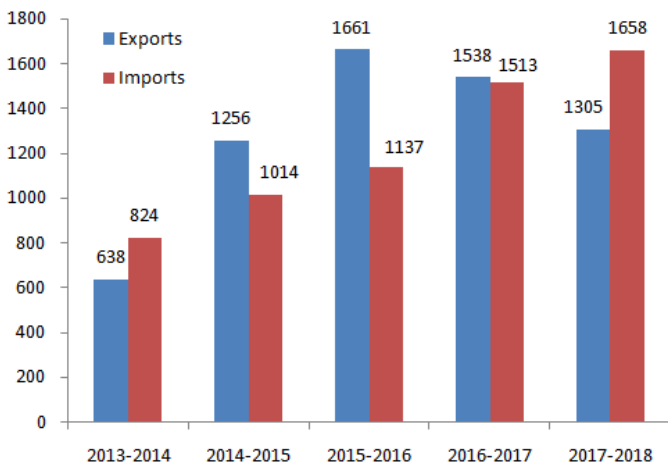
- A 15%
- B 10%
- C 12%
- D 18%

Answer: A

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Question 61

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



What is the ratio of total Imports to total Exports during 2013-2014, 2015-2016 and 2017-2018?

- A 4175 : 4011
- B 4011 : 4175
- C 3619 : 3604

D 3604 : 3073

Answer: C

Explanation:

total Imports during 2013-2014, 2015-2016 and 2017-2018 = $824 + 1137 + 1658 = 3619$

total Exports during 2013-2014, 2015-2016 and 2017-2018 = $638 + 1661 + 1305 = 3604$

Ratio = $3619 : 3604$

Question 62

The ratio between the speeds of two trains is 5 : 7. If the first train covers 300 km in 3 hours, then the speed (in km/h) of the second train is:

A 100

B 150

C 140

D 120

Answer: C

Question 63

If $5\sqrt[3]{x} + 12\sqrt[3]{x} = 13\sqrt[3]{x}$, then the value of x is:

A 2

B 8

C 1

D 4

Answer: B

Explanation:

The numbers 5, 12 and 13 form a pythagorean triplet as $5^2 + 12^2 = 13^2$

So comparing $5\sqrt[3]{x} + 12\sqrt[3]{x} = 13\sqrt[3]{x}$ with above written pythagorean formula

We get, $\sqrt[3]{x} = 2$

$\therefore x = 2^3 = 8$

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Question 64

If $6(\sec^2 59^\circ - \cot^2 31^\circ) + \frac{2}{3} \sin 90^\circ - 3 \tan^2 56^\circ y \tan^2 34^\circ = 3$, then the value of y is:

A 2

B $\frac{2}{3}$

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

D -2

Answer: A

Question 65

If $\sec \theta = 4x$, and $\tan \theta = \frac{4}{x}$, ($x \neq 0$) then the value of $8 \left(x^2 - \frac{1}{x^2} \right)$ is:

- A $\frac{1}{8}$
- B $\frac{1}{16}$
- C $\frac{1}{4}$
- D $\frac{1}{2}$

Answer: D

Explanation:

As We know the trigonometry identity :

$$\sec^2 \theta - \tan^2 \theta = 1$$

By putting value of $\sec \theta$ and $\tan \theta$, we get

$$\Rightarrow (4x)^2 - \left(\frac{4}{x}\right)^2 = 1$$

$$\Rightarrow 16x^2 - \frac{16}{x^2} = 1$$

$$\Rightarrow 16\left(x^2 - \frac{1}{x^2}\right) = 1$$

$$\therefore 8\left(x^2 - \frac{1}{x^2}\right) = \frac{1}{2}$$

Question 66

In triangle ABC, the length of BC is less than twice the length of AB by 2 cm. The length of AC exceeds the length of AB by 10 cm. The perimeter is 32 cm. The length (in cm) of the smallest side of the triangle is:

- A 10
- B 4
- C 6
- D 8

Answer: C

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Question 67

The chord of the contact of tangents drawn from a point on the circle $x^2 + y^2 = a^2$ to the circle $x^2 + y^2 = b^2$ touches the circle $x^2 + y^2 = c^2$ such that $b^m = a^n c^p$ where $m, n, p \in \mathbb{N}$ and m, n, p are prime to each other, then the value of $m + n + p - 3$ is:

- A 1
- B -1
- C 0
- D 2

Answer: A

Question 68

If $(2x + 7)^3 + (2x + 8)^3 + (2x + 3)^3 = 3(2x + 7)(2x + 8)(2x + 3)$, then what is the value of x ?

- A -3
- B -2
- C 3
- D 2

Answer: A

Explanation:

We know the identity

$$a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$$

$$\Rightarrow a^3 + b^3 + c^3 = 3abc \text{ only if } (a + b + c) = 0$$

So as in Given Question,

$$(2x + 7)^3 + (2x + 8)^3 + (2x + 3)^3 = 3(2x + 7)(2x + 8)(2x + 3) \text{ then}$$

$$\therefore (2x + 7) + (2x + 8) + (2x + 3) = 0$$

$$\therefore 6x + 18 = 0$$

$$\therefore 6x = -18$$

$$\therefore x = \frac{-18}{6}$$

$$\therefore x = -3$$

Question 69

If $x = \sqrt{3} - \sqrt{2}$, then the value of $x^3 - x^{-3}$ is:

- A $-22\sqrt{3}$
- B $22\sqrt{2}$
- C $-22\sqrt{2}$
- D $22\sqrt{3}$

Answer: C

Explanation:

Given $x = \sqrt{3} - \sqrt{2}$ and we have to find $x^3 - x^{-3}$

$$\text{As we know the identity, } (x - \frac{1}{x})^3 = x^3 - (\frac{1}{x})^3 - 3(x)(\frac{1}{x})(x - \frac{1}{x})$$

So we have to first find the value of $\frac{1}{x}$

$$\Rightarrow \frac{1}{x} = \frac{1}{\sqrt{3} - \sqrt{2}} = \frac{1 \times (\sqrt{3} + \sqrt{2})}{(\sqrt{3} - \sqrt{2}) \times (\sqrt{3} + \sqrt{2})} = \frac{\sqrt{3} + \sqrt{2}}{3 - 2} = \sqrt{3} + \sqrt{2} \text{ (Rationalizing the denominator)}$$

$$\therefore x - \frac{1}{x} = (\sqrt{3} - \sqrt{2}) - (\sqrt{3} + \sqrt{2}) = -2\sqrt{2}$$

Now, using above identity

$$(x - \frac{1}{x})^3 = x^3 - (\frac{1}{x})^3 - 3(x)(\frac{1}{x})(x - \frac{1}{x})$$

$$\Rightarrow (-2\sqrt{2})^3 = x^3 - (\frac{1}{x})^3 - 3(-2\sqrt{2})$$

$$\Rightarrow -16\sqrt{2} = x^3 - (\frac{1}{x})^3 + 6\sqrt{2}$$

$$\therefore x^3 - \left(\frac{1}{x}\right)^3 = -16\sqrt{2} - 6\sqrt{2} = -22\sqrt{2}$$

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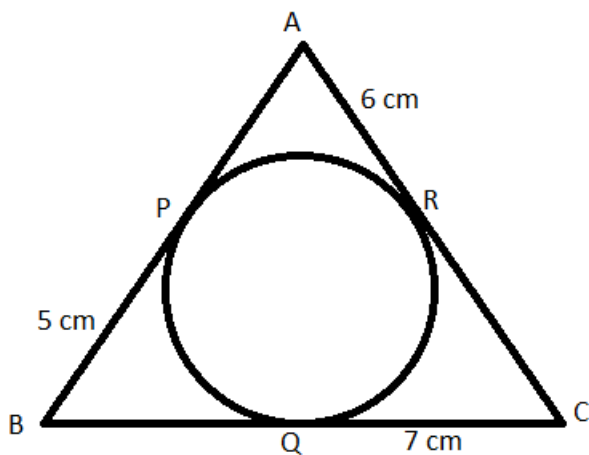
Question 70

A circle is inscribed in a triangle ABC. It touches sides AB, BC and AC at the points P, Q and R respectively. If BP = 5 cm, CQ = 7 cm and AR = 6 cm, then the perimeter (in cm) of the $\triangle ABC$ is:

- A 37.5
- B 37.25
- C 36
- D 35

Answer: C

Explanation:



We know that **Tangent segments from a common point external to a circle have the same length.**

As above given Diagram, we can say

$$AP = AR, BP = BQ, CQ = CR$$

$$\therefore AP = AR = 6\text{cm}, BP = BQ = 5\text{cm}, CQ = CR = 7\text{cm}$$

$$\Rightarrow AB = (AP + BP) = 6 + 5 = 11\text{cm}$$

$$\Rightarrow BC = (BQ + CQ) = 5 + 7 = 12\text{cm}$$

$$\Rightarrow AC = (AR + CR) = 6 + 7 = 13\text{cm}$$

$$\therefore \text{Perimeter of the } \triangle ABC = AB + BC + AC = 11 + 12 + 13 = 36\text{cm}$$

Question 71

There was 25% off on shirt. A lady bought that shirt and got an additional 20% discount for paying in cash and further 10% discount for being a loyal customer. She paid ₹324. What was the price tag (in ₹) on the shirt ?

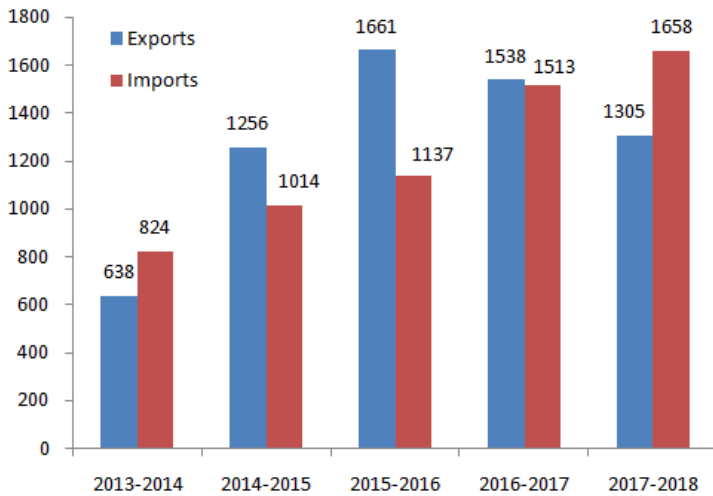
- A 750
- B 600
- C 650

D 725

Answer: B

Question 72

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



What is the average of total Import and Export (in tonnes) during the five financial year ?

- A 2508.8
- B 2279.5
- C 2552.4
- D 2325.9

Answer: A

Explanation:

As Given in Question, We have to find avg. import-export during the five financial year So,

Import-export during 2013-2014 = $638 + 824 = 1,462$

Import-export during 2014-2015 = $1256 + 1014 = 2,270$

Import-export during 2015-2016 = $1661 + 1137 = 2,798$

Import-export during 2016-2017 = $1538 + 1513 = 3,051$

Import-export during 2017-2018 = $1305 + 1658 = 2,963$

Total import-export during 5 years = 12,544

\therefore Avg. import-export = $\frac{12544}{5} = 2508.8$

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Question 73

If a 10-digit number $7220x558y2$ is divisible by 88, then the value of $(5x + 5y)$ is:

- A 35
- B 25
- C 15

D 10

Answer: C

Question 74

A number is increased by 30%, then decreased by 30%, then further decreased by 30%. What is the net increase/decrease percent in the number(correct to the nearest integer)?

A 36% decrease

B 36% increase

C 40% increase

D 40% decrease

Answer: A

Explanation:

Let the number is 100

First, Increased by 30% = $\frac{130}{100} \times 100 = 130$

Then, decreased by 30% = $\frac{70}{100} \times 130 = 91$

Then further decreased by 30% = $\frac{70}{100} \times 91 = 63.7$

So change = $63.7 - 100 = -36.3$ or 36.3 % decrease.

\therefore change % = 36% decrease (nearest integer)

Question 75

The ratio of the areas of two triangles ABC and PQR is 3 : 5 and the ratio of their heights is 5 : 3. The ratio of the bases of triangle ABC to that of triangle PQR is:

A 25 : 9

B 9 : 25

C 2 : 1

D 1 : 1

Answer: B

Explanation:

Let the Areas of $\triangle ABC$ and $\triangle PQR$ are $3x : 5x$

Let the Heights of $\triangle ABC$ and $\triangle PQR$ are $5y : 3y$ and Bases are B_1 and B_2 respectively.

Area of $\triangle ABC = \frac{1}{2} \times 5y \times B_1$ and Area of $\triangle PQR = \frac{1}{2} \times 3y \times B_2$

$$\therefore \frac{3x}{5x} = \frac{\frac{1}{2} \times 5y \times B_1}{\frac{1}{2} \times 3y \times B_2}$$

$$\Rightarrow \frac{B_1}{B_2} = \frac{9}{25}$$

$$\therefore B_1 : B_2 = 9 : 25$$

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English

Instructions

Fill in the blank with the most appropriate word.

Question 76

The child made _____ as he was getting late for school.

- A haste
- B rapidity
- C swiftness
- D hurry

Answer: A

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Question 77

The old man was _____ at the hospital after a long illness.

- A recuperating
- B relenting
- C relaxing
- D rejoicing

Answer: A

Instructions

For the following questions answer them individually

Question 78

Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution.
You must not prevent me to do what I want.

- A to do what I am wanting
- B by doing what I wanted
- C from doing what I want
- D No substitution

Answer: C

Question 79

Select the most appropriate synonym of the given word.

DEFIANCE

- A resistance
- B assistance
- C pretence

D deference

Answer: A

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Instructions

Select the most appropriate meaning of the given idiom.

Question 80

Turn a deaf ear

A to pay attention

B to make someone deaf

C to pay no heed

D to listen carefully

Answer: C

Question 81

Take to task

A to rebuke

B to praise

C to give an award

D to assign work

Answer: A

Instructions

For the following questions answer them individually

Question 82

Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution.
The manufacturer conformed with the specifications given from the client.

A to the specifications given by

B with the specifications given of

C by the specifications given for

D No substitution

Answer: A

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Instructions

Select the most appropriate word for the group of words.

Question 83

The state of remaining unmarried

- A celibacy
- B polygamy
- C feminism
- D monogamy

Answer: A

Question 84

An office with high salary but no work

- A autocracy
- B sinecure
- C honorary
- D bureaucracy

Answer: B

Instructions

For the following questions answer them individually

Question 85

Select the most appropriate antonym of the given word.

DESPAIR

- A hope
- B pride
- C calm
- D dearth

Answer: A

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Question 86

Select the most appropriate synonym of the given word.

TEMPERATE

- A extreme
- B temporary
- C moderate
- D tentative

Answer: C

Question 87

Select the correctly spelt word.

- A separate
- B saprate
- C saperate
- D separate

Answer: D

Instructions

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Comprehension:

Spain and Italy have produced the (1) _____ painters and sculptors because (2) _____ fine arts appeal more to the (3) _____ an to the intellect. These countries have (4) _____ very few men of science in comparison (5) _____ artists and poets.

Question 88

Select the most appropriate option to fill in blank number 1

- A more greater
- B great
- C greatest
- D greater

Answer: C

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Question 89

Select the most appropriate option to fill in blank number 2

- A that
- B this
- C these
- D what

Answer: C

Question 90

Select the most appropriate option to fill in blank number 3

- A imagination
- B situation
- C ambition

D creation

Answer: A

Question 91

Select the most appropriate option to fill in blank number 4

A presented

B prepared

C produced

D perplexed

Answer: C

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Question 92

Select the most appropriate option to fill in blank number 5

A for

B by

C from

D to

Answer: D

Instructions

For the following questions answer them individually

Question 93

Identify the segment which contains the grammatical error.

The members of the victorious football team as well as the captain was congratulated.

A The members of the

B as well as the captain

C victorious football team

D was congratulated

Answer: D

Question 94

Select the wrongly spelt word.

A typical

B tyranny

C trivial

D tutition

Answer: D

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Question 95

Select the most appropriate passive form of the given sentence.
They were distributing food grains among the poor.

- A Food grains will be distributed among the poor.
- B Food grains were distributed among the poor.
- C The poor will be distributed among food grains.
- D Food grains were being distributed among the poor.

Answer: D

Question 96

Select the most appropriate indirect form of the given sentence.
He said to the grocer, "What is the price of tomatoes?"

- A He asked the grocer what the price of tomatoes was.
- B He asked the grocer what is the price of tomatoes.
- C He asked the grocer that what was the price of tomatoes.
- D He asked the grocer what was the price of tomatoes.

Answer: A

Question 97

Identify the segment which contains the grammatical error.
No sooner did the comedian begin his act when the audience roared with laughter.

- A when the audience
- B No sooner did
- C the comedian begin
- D roared with laughter

Answer: A

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Question 98

Select the most appropriate antonym of the given word.
EXCEPTIONAL

- A optional
- B ordinary

C unique

D rare

Answer: B

Instructions

Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

Question 99

- A. Yet, it is India that is the home of the malnourished child.
- B. Some major ones are lack of food, sanitation and proper healthcare.
- C. The reasons for malnutrition among Indian children are many.
- D. Millions of rupees have been spent on child care in the country.

A DCAB

B ACBD

C DACB

D CBAD

Answer: C

Question 100

- A. Yet, whatever was printed was profound and even inspirational.
- B. In pre-independence India there were two kinds of newspapers.
- C. The other spoke of the aspirations of the people and pointed out injustice.
- D. One set was supportive of the colonial power.

A DCAB

B ABDC

C BACD

D BDCA

Answer: D

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