SSC CHSL Tier-1 2022: Official Paper (Held On: 16 March, 2023 Shift 2) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2022 • 100 questions • 60 minutes • Answer key and solutions

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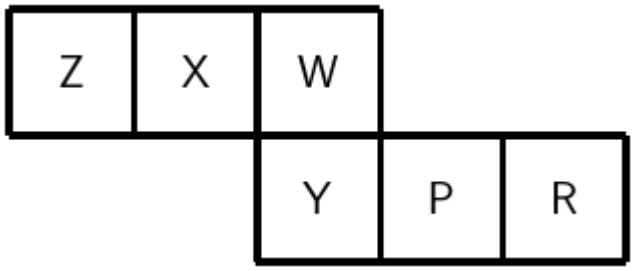
ENGLISH LANGUAGE

Q1. Words given on the left side of (::) are related with each other by some Logic/Rule/Relation. Select the missing word/word pair on the right side of (::) from the given alternatives based on the same Logic/Rule/Relation.

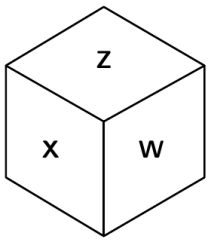
Caterpillar : Butterfly :: ?

(a) Tadpole : Cat
(b) Hen : Chick
(c) Lamb : Sheep
(d) ^(Deer : Fawn)

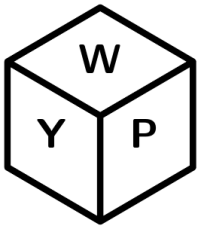
Q2. Which of the following cubes can be formed on folding the given sheet of paper in the question?



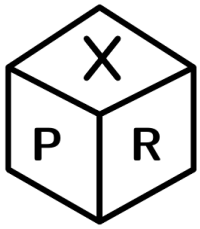
(a)



(b)



(c)



(d)



Q3. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

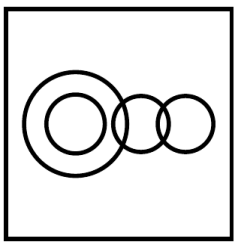
PQSS, SKBG, VEKU, YYTI, ?

(a) BMQR
(b) BSDV
(c) BSRT
(d) BSCW

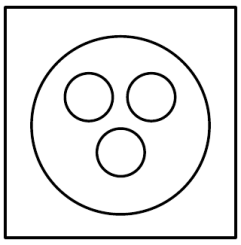
Q4. Select the Venn diagram that best represents the relationship between the following classes.

Animals, Dogs, Cats, Elephant

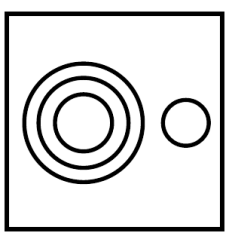
(a)



(b)

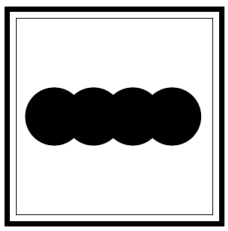


(c)



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(d)



Q5. By Interchanging the given two numbers (not digits) which of the following equation will not be correct?

7 and 4

I. 4 × 3 - 7 + 8 ÷ 2 = 23

II. 7 × 5 - 9 ÷ 3 + 4 = 24

(a) Neither I nor II
(b) Only II
(c) Only I
(d) Both I and II

Q6. If '÷' means '+', '×' means '-', '+' means '÷' and ' - ' means '×', then 64 ÷ 13 + 65 - 15 × 48 + 8 = ?

(a) 63
(b) 49
(c) 57
(d) 61

Q7. Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

9 : 730 :: 5 : 126 :: 7 : ?

(a) 354
(b) 344
(c) 364
(d) 342

Q8. E is the brother of F. D is the wife of E. G is the mother of H. F is the sister of G. How is E related to H?

(a) Maternal uncle
(b) Son
(c) Brother in law
(d) Son in law

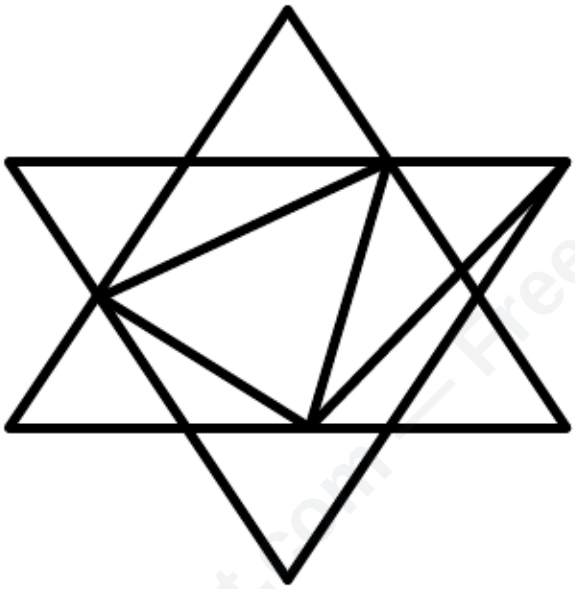
Q9. In the given word pairs, the first word is related to the second word following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

Captivity : Imprisonment

(a) Cheap : Dear
(b) Dense : Opaque
(c) Accept : Deny
(d) Agree : Disagree

Q10. How many maximum triangles are there in the given figure?

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(a) 20
(b) 12
(c) 14
(d) 17

Q11. In a certain code language, 'ANSWER' is coded as 'APPWGO'. What is the code for 'DEFINE' in that code language?
(a) DGCIPB
(b) DGCJPD
(c) DGCIQD
(d) DGCIBB

Q12. In the following question, select the odd word pair from the given alternatives.
(a) Question - Answer
(b) Pencil - Rub
(c) Cup - Saucer
(d) Chair - Table

Q13. Select the option in which the number share the same relationship in set as that shared by the numbers in the given set.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits.

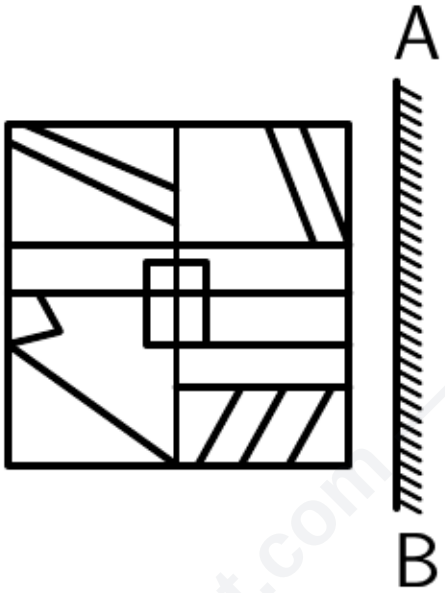
E.g.13 - Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(392, 29, 449)

(395, 31, 566)

(a) (486, 32, 538)
(b) (391, 45, 834)
(c) (487, 34, 809)
(d) (562, 35, 594)

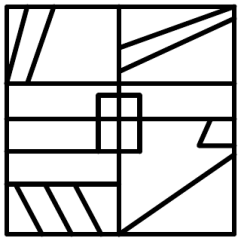
Q14. If a mirror is placed on the line AB, then out of the option figures which figure will be the right image of the question figure?



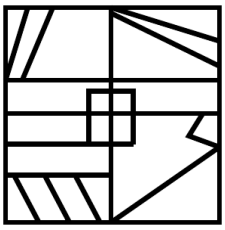
(a)



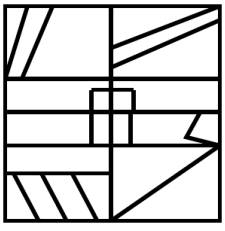
(b)



(c)



(d)



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Q15. In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:

I. Some H are D.

II. AII D are M.

Conclusions:

I. Some M are D.

II. Some H are M.

III. Some D are H.

(a) Both conclusions I and III follows
(b) Both conclusions II and III follows
(c) All conclusion follows
(d) Both conclusions I and II follows

Q16. In the following question, four number pairs are given. In each pair the number on left side of (-) is related to the number of the right side of (-) with some Logic/Rule /Relation. Three pairs are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits.

E.g.13 - Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

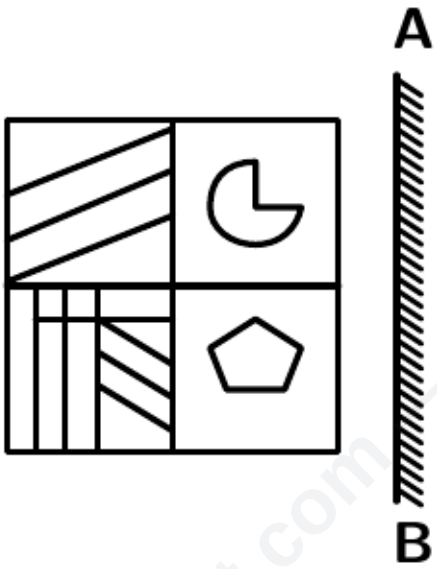
(a) 3926 - 7852
(b) 7624- 15248
(c) 1658 - 3216
(d) 5826 - 11652

Q17. In the following question, four number pairs are given. In each pair the number on left side of (-) is related to the number of the right side of (-) with some Logic/Rule /Relation. Three pairs are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

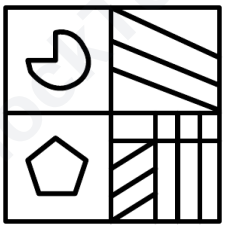
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g.13 - Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(a) 260 - 1560
(b) 540 - 3240
(c) 480 - 2860
(d) 320 - 1920

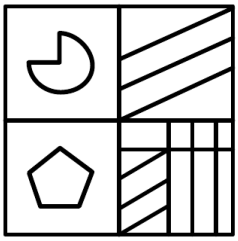
Q18. If a mirror is placed on the line AB, then out of the option figures which figure will be the right image of the question figure?



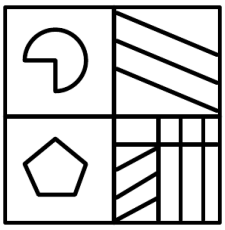
(a)



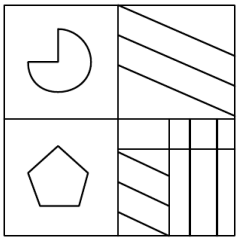
(b)



(c)



(d)



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Q19. In the following question, select the missing number from the given series.

47, 49, 53, 61, 77, ?, 173

(a) 103
(b) 109
(c) 99
(d) 111

Q20. In the following question, select the related letters from the given alternatives.

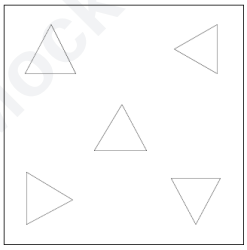
NR : OT :: PS : ?

(a) QO
(b) XU
(c) NU
(d) QU

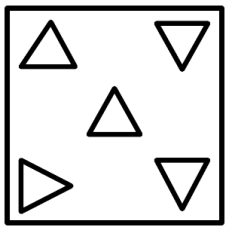
Q21. Select the figure from the given options that can replace the question mark (?) in the following series.



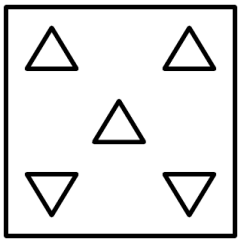
(a)



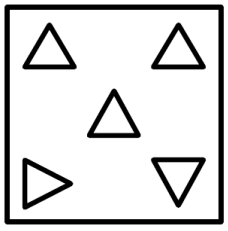
(b)



(c)



(d)

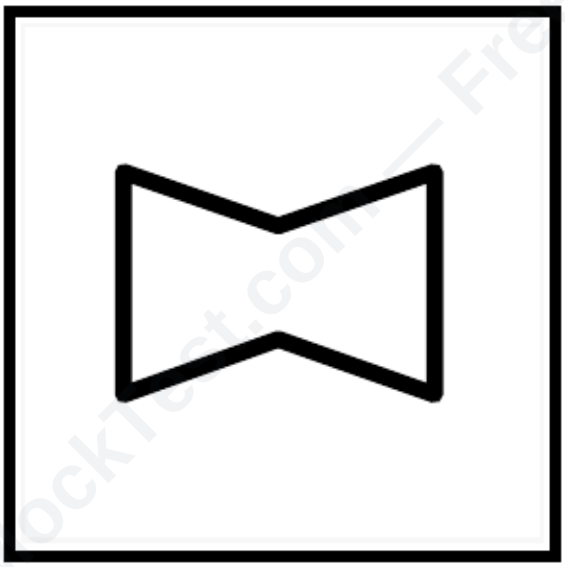


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Q22. In the following question, select the odd letter/letters from the given alternatives.

(a) RTW
(b) FHK
(c) SVY
(d) KMP

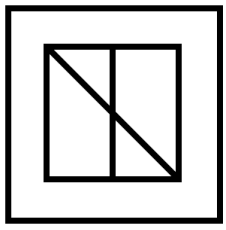
Q23. Select the option figure in which the given figure is embedded. (Rotation is NOT allowed).



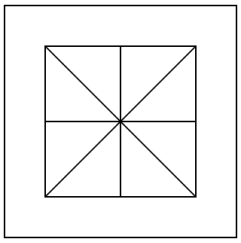
(a)



(b)

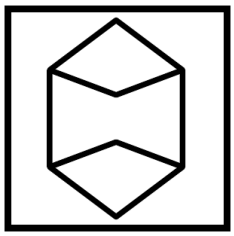


(c)



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(d)



Q24. In a certain code language, 'WOULD + ALL' is coded as '8', 'MAJOR + EXAMS' is coded as '10'. What is the code for 'COMMON + NOW' in that code language?

(a) 2
(b) 5
(c) 9
(d) 6

Q25. Arrange the given words in the sequence in which they occur in the dictionary.

1. Migrate
2. Migrant
3. Might
4. Migrator
5. Mig

(a) 3, 5, 1, 4, 2
(b) 5, 3, 2, 1, 4
(c) 3, 1, 4, 5, 2
(d) 5, 3, 1, 2, 4

GENERAL INTELLIGENCE

Q26. In _____, the East India Company acquired a charter from the ruler of England, Queen Elizabeth I, granting it the sole right to trade with the East.

(a) 1600
(b) 1610
(c) 1620
(d) 1580

Q27. Which among the following has the highest boiling point?

(a) NaCl
(b) CaO
(c) CaCl2
(d) LiCl

Q28. Which of the following pairs of "player - sports" is correct?

I. Vicky Ostwal - Cricket
II. Anshu Malik - Wrestling

(a) Both I and II
(b) Only I
(c) Only II
(d) Neither I nor II

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Q29. Which of the following statements is NOT correct with respect to the poverty line?

I. In India, it is normally estimated after every ten years.

II. The proportion of people below the poverty line is not the same for all social groups and economic categories in India.

(a) Both I and II
(b) Only II
(c) Neither I nor II
(d) Only I

Q30. What is Tat Vadya?

(a) Percussion instruments
(b) Stringed instruments
(c) Solid instruments
(d) Wind instruments

Q31. Who crowned Vanessa Ponce De Leon from Mexico as the winner at the 68th Edition of the Prestigious Miss World Pageant held at Sanya?

(a) Nadia Ferreira
(b) Manya Singh
(c) Lara Dutta
(d) Manushi Chillar

Q32. Which among the following Constitutional Amendment Act of the Indian constitution reduced the age of voting from 21 to 18 for elections to the Lok Sabha and to the Legislative Assemblies of states?

(a) 81st
(b) 61st
(c) 52nd
(d) 72nd

Q33. Which Constitution Amendment Act added provisions related to Municipalities in the Indian Constitution?

(a) 81st Amendment Act 1992
(b) 71st Amendment Act 1992
(c) 74th Amendment Act 1992
(d) 69th Amendment Act 1993

Q34. Who among the following has been appointed as new chief Economic Advisor of India in January 2022?

(a) K.V.S. Subramaniam
(b) V. Anantha Nageswaran
(c) Shaktikanta Das
(d) Raghuram Rajan

Q35. Which among the following statements about secondary memory is incorrect?

(a) It is known as a backup memory.
(b) It is used for storing data.
(c) It is a volatile memory.
(d) These are magnetic and optical memories.

Q36. G20 Foreign Ministers meeting 2022 was held in which of the following countries?

(a) Britain
(b) India
(c) France
(d) Indonesia

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Q37. Who among the following became the first-ever Indian cricket player to play 400 T20s?

(a) Rohit Sharma
(b) Dinesh Karthik
(c) Virat Kohli
(d) Mahendra Singh Dhoni

Q38. Who among the following is one of the recipients of the Dadasaheb Phalke Awards?

(a) Boman Irani
(b) Dharmendra
(c) Sanjay Dutt
(d) Shashi Kapoor

Q39. In which of the following soil conservation methods different crops are grown in alternate rows and are sown at different times to protect the soil from rain wash?

(a) Shelter belts
(b) Contour ploughing
(c) Terrace farming
(d) Intercropping

Q40. It is a tropical as well as a subtropical crop. It grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75 cm. and 100 cm. Which of the crop is being talked about in the information given above?

(a) Sugarcane
(b) Cotton
(c) Maize
(d) Rubber

Q41. Which of the following shortcut key is used to print a file in MS-Word 365?

(a) Ctrl + P
(b) Shift + P
(c) Ctrl + Alt + P
(d) Alt + P

Q42. When was the Bardoli Movement launched?

(a) 1931
(b) 1932
(c) 1928
(d) 1925

Q43. Which of the following is an extinct species?

(a) Hornbill
(b) Andaman wild pig
(c) Pink head duck
(d) Andaman teal

Q44. The leaders of the Shanghai Cooperation Organization (SCO) have endorsed the city of as _____ the first ever tourist and cultural capital of the grouping for the year 2022-23.

(a) Chennai
(b) Ujjain
(c) Varanasi
(d) Ayodhya

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Q45. Which among the following is India's first corporatized port?

(a) Kochi
(b) Kandla
(c) Mangalore
(d) Ennore

Q46. Which of the following team won the Durand Cup 2022?

(a) Bengaluru FC
(b) FC Goa
(c) Mohammedan SC
(d) Mumbai City FC

Q47. When an iron nail is dipped into a ___ coloured copper sulphate solution, its colour changes to ___.

(a) green, blue
(b) blue, green
(c) blue, yellow
(d) yellow, blue

Q48. The collection of all bundles that the consumer can buy with her income at the prevailing market prices is called the _____.

(a) Budget set
(b) Budget constraint
(c) Budget anomaly
(d) Budget line

Q49. Due to deficiency of which mineral/vitamin, does the glands in the neck appear swollen?

(a) Vitamin C
(b) Vitamin D
(c) Iodine
(d) Calcium

Q50. Where is the World Heritage Site, Konark Sun Temple situated in India?

(a) Rajasthan
(b) Madhya Pradesh
(c) Chhattisgarh
(d) Odisha

QUANTITATIVE APTITUDE

Q51. What will be the average of the first 8 positive even numbers divisible by 9?

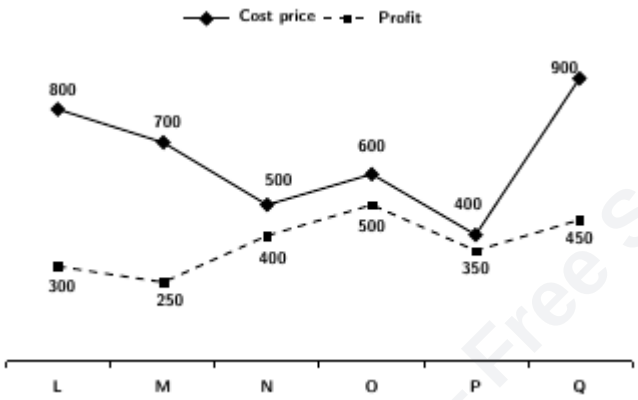
(a) 45
(b) 72
(c) 81
(d) 63

Q52. If $\text{cosec}\ \theta + \cot\ \theta = s$, then what is the value of $\cos\ \theta$?

(a) $(s^2-1)/(s^2+1)$
(b) $(s^2+1)/(s^2-1)$
(c) $(s^2-1)/(2\ s)$
(d) $(2\ s)/(s^2+1)$

Q53. The line chart given below shows the cost price and value of profit of 6 articles L, M, N, O, P and Q.

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Selling price = Cost price + Profit

A1 = The value of average selling price of all articles.

A2 = The value of average cost price of L, M, N and O.

What is the value of (A1 + A2)?

(a) 1875
(b) 1425
(c) 1675
(d) 1025

Q54. If (p - q) = - 6, (q - r) = 5 and (r - p) = 1, then find the value of $(p^3 + q^3 + r^3 - 3pqr)/(p + q + r)$.

(a) 31
(b) 45
(c) 30
(d) 40

Q55. If angle made by a chord on the major arc of a circle is 50 degree, then what will be the angle made by same chord on the minor arc of this circle?

(a) 120 degree
(b) 130 degree
(c) 80 degree
(d) 100 degree

Q56. If $\sin\Theta/(\cot\Theta + \operatorname{cosec}\Theta) = 1$, then what is the value of Θ?

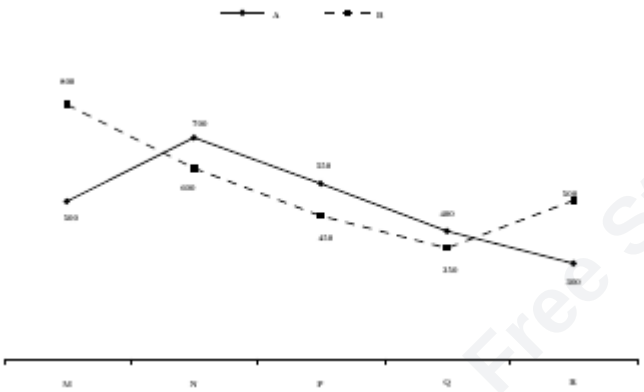
(a) 30°
(b) 90°
(c) 0°
(d) 45°

Q57. A sum of Rs. 3000 is invested in a scheme of simple interest. The rate of interest in this scheme is 10 percent per annum. If Rs. 1200 interest is obtained, then for how many months is the sum invested?

(a) 30 months
(b) 36 months
(c) 40 months
(d) 48 months

Q58. The line chart given below shows the population of two states A and B in 5 years.

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What is the difference between the average population of A and B in all the years?

(a) 30
(b) 40
(c) 50
(d) 60

Q59. The downstream speed of a boat is 25 km/hr and the speed of stream is 3 km/hr. What will be the total time taken by the boat to cover 100 km downstream and 57 km upstream?

(a) 10 hours
(b) 7 hours
(c) 10.5 hours
(d) 8 hours

Q60. How many numbers are there from 17 to 457 which are divisible by both 5 and 3?

(a) 29
(b) 35
(c) 30
(d) 33

Q61. If a = 10 and b = 3, then what is the value of $((a+b)^2)/(a^2-b^2)$?

(a) 182/93
(b) 169/91
(c) 185/91
(d) 185/93

Q62. The product of two consecutive prime numbers is 7387. What is the difference of the two numbers?

(a) 3
(b) 6
(c) 2
(d) 4

Q63. The table given below shows the percentage distribution of the total number of male faculties in six different schools. Numbers of males in any school is shown as the percentage of total number of males in all these schools.

A	**10%**
B	20%
C	24%
D	16%
E	12%
F	18%

Total male faculties in all schools together = 8400

If the ratio of male faculties to female faculties in school A and school B is 2 : 5 and 4 : 3 respectively, then find the difference in total female faculties in school A and school B.

(a) 840
(b) 920
(c) 1500
(d) 760

Q64. ΔKLM is a right-angled triangle. angle M = 90 degrees, KM = 12 cm, and LM = 5 cm. What is the value of Sec L ?

(a) 13/12
(b) 5/12
(c) 12/5
(d) 13/5

Q65. Anuj started a business by investing Rs. 30,000, after 6 months Ajay joined him with a capital of Rs. 45,000. After another 3 months, Ankit joined him with a capital of Rs. 60,000. At the end of the year, profit is Rs. 18,000. Find the share of Anuj in the profit.

(a) Rs. 6,000
(b) Rs. 12,000
(c) Rs. 8,000
(d) Rs. 10,000

Q66. 150 litre mixture of milk and water contains 30 percent milk. How much more milk must be added to make water percentage in the mixture as 40 percent?

(a) 120.5 litres
(b) 157.5 litres
(c) 132.5 litres
(d) 112.5 litres

Q67. In a ΔABC, O is the orthocenter of this triangle. angle B = 55 degrees and angle BOC = 120 degrees. What is the value of angle ACB?

(a) 60 degree
(b) 65 degree
(c) 55 degree
(d) 70 degree

Q68. PQRS is a cyclic quadrilateral In PQRS angle P is opposite to angle R. If angle P and angle R are 3x + 5 and 4x respectively, then what is the value of x?

(a) 28 degree
(b) 35 degree
(c) 25 degree
(d) 30 degree

Q69. A solid cylinder having radius of base as 7 cm and height as 5 cm is bisected from its height to get two identical cylinders. What will be the percentage increase in the total surface area?

(a) 58.33 percent
(b) 64.56 percent
(c) 69.44 percent
(d) 52.56 percent

Q70. Nikhil buys a diamond ring for his wife. Diamond ring is marked at Rs. 20,000 and two successive discounts of 25% and x% respectively are given. After getting two successive discounts, he paid Rs. 12,000. Find the value of x.

(a) 40%
(b) 10%
(c) 20%
(d) 35%

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Q71. Anuj's efficiency is 150 percent of Vinod's efficiency. If Anuj can complete a work in 20 days, then how many days will they together take to complete the same work?

(a) 6 days
(b) 9 days
(c) 15 days
(d) 12 days

Q72. What is the value of $(a + b)^2 + (a - b)^2$?

(a) 8ab
(b) 4ab
(c) $4(a^2 + b^2)$
(d) 2(a2 + b2)

Q73. Sum of the angles made by a chord XY at the centre and on the circumference of the circle is 270 degree. If radius of this circle is 24 cm, then what will be length of this chord?

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

Q74. The table below shows number of workers and their daily wages.

What is the ratio of the total number of workers whose daily wages are less than Rs. 450 to the total number of workers whose daily wages are Rs. 650?

Number of workers	Daily wages (in Rs.)
30	400
45	450
65	500
60	550
55	600
35	650

(a) 5 : 7
(b) 3 : 5
(c) 1 : 4
(d) 6 : 7

Q75. The ratio of incomes of C and D is 3 : 4 respectively. The sum of their expenditure is Rs. 12000. Savings of C is same as that of the expenditure of D. What is the sum of their savings?

(a) Rs. 25000
(b) Rs. 15000
(c) Rs. 20000
(d) Rs. 16000

GENERAL AWARENESS

Q76. Select the word that is closest in meaning (SYNONYM) to the word given below.

Levitate

(a) Float
(b) Laydown
(c) Rusticate
(d) Walk

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Q77. Choose the word that means the same as the given word.

Fabricate

(a) Mimic
(b) Detached
(c) Concoct
(d) Flatten

Q78. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

Vijay and Ajay is here to celebrate 7 years of their friendship.

(a) of their friendship.
(b) No error
(c) to celebrate 7 years
(d) Vijay and Ajay is here

Q79. Rearrange the parts of the sentence in correct order.

It is not uncommon

P. for parents and others in a particular animal

Q. group to teach their young through example how to

R. of drought or other environmental change

S. find food or water when it becomes scarce because

(a) PQSR
(b) SPRQ
(c) QSPR
(d) PQRS

Q80. Select the correct indirect form of the given sentence.

Tina said, "My parents are getting divorced."

(a) Tina said that her parents are getting divorced.
(b) Tina said that her parents were get divorced.
(c) Tina said that her parents have been getting divorce.
(d) Tina said that her parents were getting divorced.

Q81. Rearrange the parts of the sentence in correct order.

P. despite pandemic-related travel complications, the

Q. governments of India and France facilitated interactions

R. NPCIL a binding techno-commercial offer on 22 April 2021

S. between EDF and NPCIL which allowed EDF to submit to

(a) RQSP
(b) QRSP
(c) RPSQ
(d) PQSR

Q82. Select the most appropriate one-word substitution for the given group of words.

A person who attacks or criticizes cherished beliefs or institutions.

(a) Iconoclast
(b) Impregnable
(c) Immoral
(d) Insolvent

Q83. Improve the underlined part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.

His words wield tremendous influence between his followers.

(a) among his followers

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(b) within his followers
(c) No improvement
(d) in his following

Q84. Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.

Everyone (wants to be) successful and rich.

(a) want to be
(b) No correction required
(c) wanting to been
(d) wanted to being

Q85. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

If someone you are talking to is open of learning more, encourage that continued curiosity.

(a) No error
(b) encourage that continued curiosity.
(c) to is open of learning more,
(d) If someone you are talking

Q86. Fill in the blank with an appropriate option.

My heart _____ hard, bumping the broken glass, nicked by sharp edges.

(a) inhibited
(b) lifted
(c) thumped
(d) thundered

Q87. Choose the word that can substitute the given group of words.

The origin or birth of a thing

(a) Genesis
(b) Culmination
(c) Coda
(d) Quietus

Q88. Choose the word that means the same as the given word.

Abandonment

(a) Profanity
(b) Dereliction
(c) Sanctity
(d) Commencement

Q89. Choose the sentence with no spelling error.

(a) New sieds are made through pollination.
(b) New seeds are made through polination.
(c) New seeds are made through pollination.
(d) New seeds are made throuhg pollination.

Q90. Improve the underlined part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.

My new shoes gave me a blistered on my right heel.

(a) me a blisters
(b) I a blister
(c) No improvement
(d) me a blister

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Q91. Select the correct passive form of the given sentence.

Suresh speaks French here.

(a) French is spoken here by Suresh.
(b) French is been spoken here by Suresh.
(c) French was spoken here by Suresh.
(d) French are spoken here by Suresh.

Q92. Select the word that is opposite in meaning (ANTONYM) to the word given below.

Bulwark

(a) Assault
(b) Rampart
(c) Bastion
(d) Fortification

Q93. Choose the incorrectly spelt word.

(a) Remark
(b) Revange
(c) Recruit
(d) Repeal

Q94. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.

To lay someone by the heels

(a) To confine somebody in prison
(b) To gain support
(c) To praise someone
(d) To force someone for something

Q95. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.

To make one's mark

(a) To prove a point
(b) To attain success
(c) To make no effort
(d) To be indifferent

Directions

In the following passage some of the words have been deleted. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

Children learn to walk and talk naturally, (1) _____ that is not the case with reading. Reading strategies are designed to help your child develop a strong reading (2) ____ one built with confidence engagement and joy. As a parent, you are most likely always looking for (3) _ that make your child want to learn. We are here to help you and your child on their journey as a (4) ____ reader. Try some reading strategy suggestions below for kids (5) _____ are beginning to read all the way to those reading advanced chapter books.

Q96. Select the most appropriate option to fill in blank number 1.

(a) because
(b) rather
(c) when
(d) but

Q97. Select the most appropriate option to fill in blank number 2.

(a) presumption
(b) foundation
(c) corporation

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(d) fluctuation

Q98. Select the most appropriate option to fill in blank number 3.

(a) blueprints
(b) fashions
(c) techniques
(d) lines

Q99. Select the most appropriate option to fill in blank number 4.

(a) budding
(b) dying
(c) ripened
(d) sulking

Q100. Select the most appropriate option to fill in blank number 5.

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

ANSWER KEY

1	c	2	b	3	d	4	b	5	c	6	d	7	b	8	a	9	b	10	d
11	a	12	b	13	a	14	d	15	c	16	c	17	c	18	a	19	b	20	d
21	a	22	c	23	d	24	c	25	b	26	a	27	b	28	a	29	d	30	b
31	d	32	b	33	c	34	b	35	c	36	d	37	a	38	d	39	d	40	a
41	a	42	c	43	c	44	c	45	d	46	a	47	b	48	a	49	c	50	d
51	c	52	a	53	c	54	a	55	b	56	b	57	d	58	c	59	b	60	a
61	b	62	b	63	a	64	d	65	c	66	d	67	b	68	c	69	a	70	c
71	d	72	d	73	d	74	d	75	d	76	a	77	c	78	d	79	a	80	d
81	d	82	a	83	a	84	b	85	c	86	c	87	a	88	b	89	c	90	d
91	a	92	a	93	b	94	a	95	b	96	d	97	b	98	c	99	a	100	c

SOLUTIONS

Q1. Answer: (c) Lamb : Sheep

The relationship established in "Caterpillar : Butterfly" is "Young form : Mature form". A caterpillar is the immature form (larva) of a butterfly.

Following this logic, from the given options, a lamb is the young form of a sheep. Therefore, "Lamb : Sheep" follows the same relationship.

As for the other options:

• "Tadpole : Cat" is incorrect because a tadpole (young form of a frog or toad) does not mature into a cat.

• "Hen : Chick" and "Deer : Fawn" have the relationship reversed. A chick is a young hen and a fawn is a young deer, so they do not match the initial relationship pattern.

Hence,the correct answer is "Lamb : Sheep".

Q2. Answer: (b) [figure]

From the given open Dice:

Z and W is the opposite sides.

X and P is the opposite sides.

Y and R is the opposite sides.

And, two opposite sides can not be the adjacent surfaces, so it can't be shows in a dice.
Now,
Option 1)
→ Can not be made, because Z and W is the opposite sides.
Option 2)
→ Can be made, because all the surfaces are adjacent sides.
Option 3)
→ Can not be made, because X and P is the opposite sides.
Option 4)
→ Can not be made, because Y and R is the opposite sides.
Hence, the correct answer is "Option 4".

Q3. Answer: (d) BSCW

The logic followed here is:
So, 'BSCW' will replace the question mark in the given series.
Hence, the correct answer is "BSCW".

Q4. Answer: (b) [figure]

The logic followed here is:
Dogs, Cats and Elephant all are different types of Animals.
Hence, the correct answer is "Option 2".

Q5. Answer: (c) Only I

BODMAS Table:
Given equation I: 4 × 3 - 7 + 8 ÷ 2 = 23
Now, if '7 and 4' are interchanged, then:
=> 7 × 3 - 4 + 8 ÷ 2 = 23
=> 7 × 3 - 4 + 4 = 23
=> 21 - 4 + 4 = 23
=> 25 - 4 = 23
=> 21 ≠ 23.
LHS ≠ RHS.
Given equation II: 7 × 5 - 9 ÷ 3 + 4 = 24
Now, if '7 and 4' are interchanged, then:
=> 4 × 5 - 9 ÷ 3 + 7 = 24
=> 4 × 5 - 3 + 7 = 24
=> 20 - 3 + 7 = 24
=> 27 - 3 = 24
=> 24 = 24
LHS = RHS.
Here, Only 'Equation I' are incorrect after interchanging the given symbol.
Hence, the correct answer is "Option 3".

Q6. Answer: (d) 61

BODMAS Rule:
According to the question:

Symbols	•	•	×	÷
Meaning	÷	×	•	•

Now,
Given equation: 64 ÷ 13 + 65 - 15 × 48 + 8 = ?
After replacing the symbols:
=> 64 + 13 ÷ 65 × 15 - 48 ÷ 8 = ?

=> 64 + 3 - 6 = ?

=> 67 - 6 = 61.

Hence, the correct answer is "61".

Q7. Answer: (b) 344

The logic followed here is:

Logic: (1st number)^3 + 1 = 2nd number.

Now,

For, 9 : 730

=> 9^3 + 1

=> 729 + 1 = 730.

For, 5 : 126

=> 5^3 + 1

=> 125 + 1 = 126.

Similarly, for 7 : ?

=> 7^3 + 1

=> 343 + 1 = 344.

Hence, the correct answer is "Option 2".

Q8. Answer: (a) Maternal uncle

Family Chart:

Given:

E is the brother of F.

D is the wife of E.

G is the mother of H.

F is the sister of G.

So, E is the Maternal uncle of H.

Hence, the correct answer is "Option 1".

Q9. Answer: (b) Dense : Opaque

The relationship in "Captivity : Imprisonment" is one of synonyms - words that have very similar meanings.

Following this logic, "Dense : Opaque" are also synonyms as they both can mean "not allowing light to pass through".

As for the other options:

• "Cheap : Dear" and "Accept : Deny", "Agree : Disagree" are pairs of antonyms - words with opposite meanings. Therefore, they do not follow the same relationship.

Hence, the correct answer is "Dense : Opaque".

Q10. Answer: (d) 17

The triangles are:

So, there are '17' triangles in the given figure.

Hence, the correct answer is "17".

Q11. Answer: (a) DGCIPB

The logic followed here is:

'ANSWER' is coded as 'APPWGO',

Similarly, for 'DEFINE'

So, 'DEFINE' is coded as 'DGCIPB'.

Hence, the correct answer is "Option 1".

Q12. Answer: (b) Pencil - Rub

In the pairs "Question - Answer", "Cup - Saucer", and "Chair - Table", the two words are directly related and often used together in a complementary way.

A question is often followed by an answer.

• A cup is often placed on a saucer.

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• A chair is often paired with a table.

However, the pair "Pencil - Rub" doesn't follow the same pattern of complementary use. While you might use an eraser (not 'rub') to remove pencil markings, the word 'rub' itself doesn't have a direct, complementary relationship to 'pencil'. Therefore, "Pencil - Rub" is the odd one out.

Hence, the correct answer is "Pencil - Rub".

Q13. Answer: (a) (486, 32, 538)

The logic followed here is :-

(392, 29, 449) => 392 + 449 = 841 = 29^2

(395, 31, 566) => 395 + 566 = 961 = 31^2

1) (486, 32, 538)

=> 486 + 566 = 1024 = 322

2) (391, 45, 834)

=> 391 + 834 = 1225 = 352 ≠ 45^2

3) (487, 34, 809)

=> 487 + 809 = 1296 = 36^2 ≠ 34^2

4) (562, 35, 594)

=> 562+ 594 = 1156= 342 ≠ 352

Hence, the correct answer is "Option 1"

Q14. Answer: (d) [figure]

Mistake Points

The logic followed here is

Hence, the correct answer is "Option 4".

Q15. Answer: (c) All conclusion follows

Given Statements:

I. Some H are D.

II. AII D are M.

The least possible Venn diagram for the given statement is:

Conclusions:

I. Some M are D - True (Because, All D are M, it also means Some M are D)

II. Some H are M - True (Because, those part of H that is D is also M)

III. Some D are H - True (Because, Some H are D, so Some D are H)

So, All conclusion follows.

Hence, the correct answer is "Option 3".

Q16. Answer: (c) 1658 - 3216

The logic followed here is:

Logic: 1st number × 2 = 2nd number.

Now, checking the options:

Option 1) 3926 - 7852 → 3926 × 2 = 7852.

Option 2) 7624- 15248 → 7624 × 2 = 15248.

Option 3) 1658 - 3216 → 1658 × 2 = 3316 ≠ 3216.

Option 4) 5826 - 11652 → 5826 × 2 = 11652.

So, '1658 - 3216' is odd among the given options.

Hence, the correct answer is "Option 3".

Q17. Answer: (c) 480 - 2860

The logic followed here is:

Logic: 1st number × 6 = 2nd number.

Now, checking the options:

Option 1) 260 - 1560 → 260 × 6 = 1560.

Option 2) 540 - 3240 → 540 × 6 = 3240.

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Option 3) 480 - 2860 → 480 × 6 = 2880 ≠ 2860.
Option 4) 320 - 1920 → 320 × 6 = 1920.
So, '480 - 2860' is odd among the given options.
Hence, the correct answer is "Option 3".

Q18. Answer: (a) [figure]

The logic here followed is
Hence, the correct answer is "Option 1".

Q19. Answer: (b) 109

The logic followed here is:
So, '109' will complete the series.
Hence, the correct answer is "Option 2".

Q20. Answer: (d) QU

NR : OT =>
N + 1 = O
R + 2 = T
Similarly,
P + 1 = Q
S + 2 = U
Hence, the correct answer is "Option 4".

Q21. Answer: (a) [figure]

The logic followed here is:
Logic: The Triangles are rotated by 90 degree in clockwise direction, and increase by an triangle in each next images.
Hence, the correct answer is "Option 1".

Q22. Answer: (c) SVY

The pattern followed here is:
1) RTW
2) FHK
3) SVY
4) KMP
Hence, the correct answer is "SVY".

Q23. Answer: (d) [figure]

The image embedded in given figure is as shown below:
Hence, "Option 4" is the correct answer.

Q24. Answer: (c) 9

The logic followed here is:
Here,
'WOULD + ALL' is coded as '8',
Number of Letters in WOULD + Number of Letters in ALL
→ 5 + 3 = 8.
'MAJOR + EXAMS' is coded as '10'
Number of Letters in MAJOR + Number of Letters in EXAMS
→ 5 + 5 = 10.
Similarly, for 'COMMON + NOW'
Number of Letters in COMMON + Number of Letters in NOW
→ 6 + 3 = 9.
Hence, the correct answer is "9".

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Q25. Answer: (b) 5, 3, 2, 1, 4

The correct dictionary order for the give words are:

5. Mig

3. Might

2. Migrant

1. Migrate

4. Migrator

So, the correct sequence is '5, 3, 2, 1, 4'.

Hence, the correct answer is "Option 2".

Q26. Answer: (a) 1600

The correct answer is 1600.

Key Points:

• In 1600, the East India Company acquired a charter from the ruler of England, Queen Elizabeth I, granting it the sole right to trade with the East, without competition from other British traders.

• But that royal charter could not stop other European powers such as the Portuguese, Dutch, and French.

• And all those European companies wanted to buy the same things from India - fine qualities of cloth and spices.

• As competition grew, profits fell, and the European trading companies started building forts and fighting each other.

• With more business came more conflicts with Indian rulers, and it became difficult for European traders to keep their business separate from Indian politics.

Additional Information:

• Portuguese (1498) were 1st company that came to India with Vasco da Gama who had discovered the sea route to India via Cape of Good Hope(Africa).

• Dutch East India Company came in 1595.

• English East India Company came to India in 1600.

• Danish East India Company came to India in 1616.

• French East India Company was the last company came to India in 1664.

Q27. Answer: (b) CaO

Correct Answer CaO

Key Points

• Calcium oxide (CaO) has a highest boiling point.

• It undergoes a process called calcination, where it is heated to very high temperatures (around 2,572°C or 4,662°F) to convert it into calcium oxide.

• However, calcium oxide does not boil as a pure substance at atmospheric pressure since it undergoes thermal decomposition before reaching its boiling point.

• Calcium oxide (CaO), also known as quicklime or burnt lime, is an inorganic compound composed of calcium and oxygen.

• Chemical Formula: CaO

• Molar Mass: 56.08 g/mol

Physical Properties:

• Appearance: Calcium oxide is a white, caustic, crystalline solid at room temperature.

• Melting Point: The melting point of calcium oxide is approximately 2,572°C (4,662°F), indicating its solid state at normal conditions.

• Boiling Point: Calcium oxide does not have a distinct boiling point because it undergoes thermal decomposition before reaching its boiling point.

• When heated, calcium oxide decomposes into calcium hydroxide and releases oxygen gas.

Additional InformationCacl2:

• Calcium chloride (CaCl2) is a compound that has a relatively high boiling point compared to many other common substances.

• Calcium chloride (CaCl2) is an inorganic compound composed of calcium and chloride ions.

• It is commonly used in various industrial, commercial, and scientific applications.

Physical Properties:

• Appearance: Calcium chloride is typically a white crystalline solid.

• Melting Point: The melting point of calcium chloride is around 772°C (1422°F), indicating its solid state at room temperature.

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• Boiling Point: The boiling point of calcium chloride is approximately 1,935°C (3,515°F), which is relatively high compared to many other substances.

• Solubility: Calcium chloride is highly soluble in water, and it forms a clear, colorless solution.

• The solubility of calcium chloride increases with increasing temperature.

Nacl:

• Sodium chloride (NaCl) is a common compound that is widely known as table salt. Here are some details about sodium chloride:

• Chemical Formula: NaCl

• Molar Mass: 58.44 g/mol

Physical Properties:

• Appearance: Sodium chloride is a crystalline solid that is typically white or colorless.

• Melting Point: The melting point of sodium chloride is approximately 801°C (1,474°F).

• This is the temperature at which it transitions from a solid to a liquid state.

• Boiling Point: The boiling point of sodium chloride is approximately 1,413°C (2,575°F).

• This is the temperature at which it transitions from a liquid to a gaseous state.

Q28. Answer: (a) Both I and II

Correct Answer Both I and II

Key PointsVicky Ostwal:

• Vicky Ostwal is an Indian cricketer who plays for the Maharashtra cricket team and the Delhi Capitals in the Indian Premier League (IPL).

• He is a left-arm orthodox spinner and a right-handed batsman.

• Member of the India U-19 team that won the 2022 Under-19 Cricket World Cup

• Leading wicket-taker for India in the 2022 Under-19 Cricket World Cup, with 12 wickets in six matches.

• Named in the ICC's Most Valuable Team of the 2022 Under-19 Cricket World Cup

• Bought by the Delhi Capitals for Rs. 20 lakhs in the 2023 IPL auction.

Anshu Malik:

• Anshu Malik is an Indian freestyle wrestler who won the silver medal in the women's 57 kg event at the 2021 World Wrestling Championships held in Oslo, Norway.

• She is the first Indian wrestler to win a silver medal at the World Championships in the women's division.

• Silver medal at the 2021 World Wrestling Championships.

• Bronze medal at the 2020 Asian Wrestling Championships.

• Silver medal at the 2020 Matteo Pellicone Ranking Series.

• Gold medal at the 2016 Cadet Wrestling Championships.

• Silver medal at the 2018 Junior Wrestling Championships.

• Malik is a recipient of the Arjuna Award in 2021, India's highest sporting honor.

• She is also a member of the Target Olympic Podium Scheme, a government program that supports India's top athletes.

Q29. Answer: (d) Only I

Correct Answer Only I

Key Points:

• Poverty means that the income level from employment is so low that basic human needs can't be met.

• The poverty line varies with time and place.

• A poor household is defined as one with an expenditure level below a specific poverty line.

• As per the Rangarajan committee report (2014), the poverty line is estimated as a Monthly Per Capita Expenditure of Rs. 1407 in urban areas and Rs. 972 in rural areas.

• A common method used to measure poverty is based on income.

• Poverty line estimation in India is based on consumption expenditure and not on income levels.

• Poverty is measured based on consumer expenditure surveys by the National Sample Survey Organisation.

• The incidence of poverty is measured by the poverty ratio, which is the ratio of the number of poor to the total population expressed as a percentage. It is also known as the head-count ratio.

• Alagh Committee (1979) determined a poverty line based on a minimum daily requirement of 2400 and 2100 calories for an adult in Rural and Urban areas respectively.

• The measurement limits of the poverty line may be based on the consumption levels of the population.

• The poverty line in India is not calculated on a regular ten-year basis. Instead, it is periodically updated by the Government of India. Statement I is Incorrect.

• The poverty line is defined as the minimum level of income or consumption necessary to meet basic needs and lead a decent life.

Additional Information:

• In 2011, the Suresh Tendulkar Committee defined the poverty line on the basis of monthly spending on food, education, health, electricity and transport.

• According to this estimate, a person who spends Rs. 27.2 in rural areas and Rs. 33.3 in urban areas a day are defined as living below the poverty line.

Q30. Answer: (b) Stringed instruments

Correct Answer Stringed instruments

Key PointsTat Vadya

• These are stringed instruments.

• Sound is produced by way of vibrating strings or strings stretched between two points.

• These instruments are further classified into plucked, bowed, fretted, and non-fretted instruments.

• The length of the string and the tension in it determines the pitch of the note and the duration of the sound.

• Examples- Sitar, Sarod, Saraswati Vina (South Indian Vina), Surbahar, Gotuvadyam, Rudra Vina,Vichitra Vina, Ektar, Tanpura, Dotar ,Santoor, Surmandal, Bulbul Tarang, Nakula Vina ,Magadi Vina ,Getchu Vadyam (Gettuvadyam) ,Gopichand (ektar), Seni Rabab, Been and Sarangi.

Q31. Answer: (d) Manushi Chillar

The correct answer is Option 4.

Key Points

• Miss World 2017 Manushi Chillar Of India Crowned Vanessa Ponce De Leon From Mexico As The Winner At The 68th Edition Of The Prestigious Miss World Pageant Held At Sanya, China.

• Nicolene Pichapa From Thailand Stood With Runner Up Position At The Same Pageant.

Additional Information

• The Miss World pageant is indeed the oldest existing international beauty pageant, first created in the United Kingdom by Eric Morley in 1951.

• Eric Morley played a significant role in the organization and development of the pageant until his death in 2000.

• Following his passing, his widow, Julia Morley, took over and has co-chaired the Miss World pageant since then.

• Julia Morley has continued to contribute to the pageant's growth and oversee its operations, maintaining its status as one of the most prestigious beauty pageants globally.

Q32. Answer: (b) 61st

The correct answer is Option 2.

Key Points

• The Constitutional Amendment Act that reduced the age of voting from 21 to 18 for elections to the Lok Sabha and the Legislative Assemblies of states is the 61st Constitutional Amendment Act of 1988.

• This amendment lowered the voting age in India, making it more inclusive and allowing a larger section of the population to participate in the electoral process.

Additional Information

• Constitutional amendment acts are generally regarded as important tools for adapting a constitution to the changing needs and aspirations of a society.

• However, due to the significance and potential long-lasting effects of constitutional changes, they often require careful deliberation, public consultation, and broad consensus to ensure that they truly reflect the will of the people and maintain the integrity of the constitutional framework.

Q33. Answer: (c) 74th Amendment Act 1992

The correct answer is Option 3.

Key Points

• The Constitution Amendment Act that added provisions related to municipalities in the Indian Constitution is the 74th Amendment Act of 1992.

• This amendment is also known as the Constitution (Seventy-fourth Amendment) Act, 1992. It introduced significant changes and provisions related to urban local governance in India.

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• The 74th Amendment Act provided a constitutional framework for the establishment, functioning, and powers of municipalities, which are referred to as "Nagar Palikas" or "Nagar Nigams" in India.

• These provisions aim to empower local self-government bodies and promote decentralization of power and decision-making at the urban level.

Q34. Answer: (b) V. Anantha Nageswaran

The correct answer is Option 2.

Key Points

• V. Anantha Nageswaran took charge on 28 January 2022.

• He is a former executive with Credit Suisse Group AG and Julius Baer Group.

• He will succeed Krishnamurthy Subramanian.

• The Chief Economic Adviser (CEA) in the Finance Ministry, advises the govt on economic matters and traditionally scripts the economic survey presented in Parliament a day before the Union budget presentation.

Additional Information

• Indian Entrepreneur and writer Jaithirth Rao, popularly known as Jerry Rao, has come out with a book on Mahatma Gandhi titled “Economist Gandhi: The Roots and the Relevance of the Political Economy of the Mahatma” in October 2021.

• Noted Economist and former Chief Economic Adviser to the Government of India, Dr. Shankar Acharya has authored a new book titled “An Economist at Home and Abroad: A Personal Journey” in November 2021.

• French-born economist Pierre-Olivier Gourinchas has been named as the chief economist of the International Monetary Fund (IMF).

• International Monetary Fund Chief Economist, Gita Gopinath has taken over from Geoffrey Okamoto as the institution’s No. 2 official in December 2021, she is the Deputy Managing Director of the International Monetary Fund.

Q35. Answer: (c) It is a volatile memory.

The correct answer is Option 3.

Key Points

• Secondary memory, also known as auxiliary memory or non-volatile memory, is a type of computer memory that retains data even when the power is turned off.

• It is non-volatile, meaning it does not lose its data when the power supply is disconnected.

• Secondary memory is used for long-term storage of data and files, such as hard disk drives (HDDs), solid-state drives (SSDs), magnetic tapes, and optical discs like CDs and DVDs.

• In contrast, volatile memory, such as random access memory (RAM), is temporary and loses its data when the power is removed.

Additional Information

• Memory refers to the electronic storage space where data and instructions are stored for processing by the computer's central processing unit (CPU). Computer memory is an essential component that allows the computer to perform tasks and store information.

• Here are the main types of memory in a computer system:

• Random Access Memory (RAM): RAM is the primary type of computer memory used for temporary data storage while the computer is running. It provides fast access to data and instructions that are actively used by the CPU. RAM is volatile, meaning its contents are lost when the computer is powered off or restarted.

• Read-Only Memory (ROM): ROM is a type of memory that stores permanent instructions or data that cannot be modified or erased. It contains firmware or software instructions that are necessary for booting up the computer and initializing essential components. ROM retains its contents even when the computer is powered off.

• Cache Memory: Cache memory is a small, high-speed memory that resides closer to the CPU. It serves as a buffer between the CPU and main memory (RAM). Cache memory stores frequently accessed data and instructions, allowing the CPU to quickly retrieve them without accessing the slower main memory. It helps improve overall system performance.

• Virtual Memory: Virtual memory is a technique used by operating systems to extend the available memory beyond the physical RAM capacity. It uses a portion of the computer's hard drive as an extension of RAM. Virtual memory allows running more programs and handling larger datasets than what can fit in physical memory alone.

• Flash Memory: Flash memory is a non-volatile memory used for long-term data storage in devices like USB drives, solid-state drives (SSDs), and memory cards. It retains data even when the power is turned off. Flash memory is popular

Q36. Answer: (d) Indonesia

The correct answer is Indonesia.

Key Points

• The first G20 Foreign Ministers' Meeting of 2022 was held in Bali, Indonesia on July 7-8, 2022.

• The meeting was chaired by Indonesian Foreign Minister Retno Marsudi.

• The main topics of discussion at the meeting were the global economic recovery, the COVID-19 pandemic, and the situation in Ukraine.

Mistake Points

• The G20 Foreign Ministers' Meeting of 2023 was held in New Delhi, India on March 1-2, 2023.

• The meeting was chaired by Indian Foreign Minister S. Jaishankar.

Additional Information

• G20

• The G20, or Group of Twenty, is an intergovernmental forum comprising 19 countries and the European Union (EU).

• The G20 was established in 1999 in response to the financial crises that arose in a number of emerging economies in the 1990s.

• The forum was created to provide a forum for dialogue and cooperation between the world's major economies on key economic issues.

• The G20 is made up of the following countries:

• Argentina

• Australia

• Brazil

• Canada

• China

• France

• Germany

• India

• Indonesia

• Italy

• Japan

• Mexico

• Russia

• Saudi Arabia

• South Africa

• South Korea

• Turkey

• United Kingdom

• United States

• European Union

Q37. Answer: (a) Rohit Sharma

The correct answer is Rohit Sharma.

Key Points

• Rohit Sharma became the first-ever Indian cricket player to play 400 T20s.

• He achieved the feat on March 8, 2023, during the third T20I match against Sri Lanka in Lucknow.

• Rohit Sharma is also the only Indian cricketer to have scored more than 1000 runs in T20I cricket.

• He has scored 10544 runs in 400 matches.

Additional Information

• T20 cricket was first played in England in 2003, and the first T20 international was played between England and Australia in 2005.

• The format quickly became popular, and the International Cricket Council (ICC) introduced a T20 World Cup in 2007.

• India won the inaugural ICC Men's T20 World Cup in 2007.

Q38. Answer: (d) Shashi Kapoor

The correct answer is Shashi Kapoor.

Key Points

• Shashi Kapoor

• Shashi Kapoor received the Dadasaheb Phalke Award in 2014.

• He was the 46th recipient of the award, which is the highest honor in Indian cinema.

• The award was presented to him by the then Information and Broadcasting Minister Arun Jaitley.

• Shashi Kapoor was a versatile actor who starred in over 175 films over a 40-year career.

Additional Information

• Dadasaheb Phalke Award

• The award was instituted in 1969 and is named after Dadasaheb Phalke, who is considered the "Father of Indian Cinema" for directing the first Indian feature film, Raja Harishchandra, in 1913.

• The award is presented annually at the National Film Awards ceremony and consists of a Swarna Kamal (Golden Lotus) medallion, a shawl, and a cash prize of Rs. 1,000,000.

• As of 2023, there have been 52 recipients of the Dadasaheb Phalke Award. Some of the most notable recipients include:

• Devika Rani (1969)

• Satyajit Ray (1976)

• Lata Mangeshkar (1989)

• Raj Kapoor (1987)

• Amitabh Bachchan (2018)

• A. R. Rahman (2012)

• S. S. Rajamouli (2018)

• Rajinikanth (2019)

• Asha Parekh (2020)

• Rekha (2023)

Q39. Answer: (d) Intercropping

The correct answer is Intercropping.

Key Points

• Intercropping

• Intercropping, on the other hand, involves planting different crops in proximity (in alternate rows or otherwise).

• This technique helps reduce the risk of soil erosion as well as protects the soil from rain wash.

• When crops are sown at different times, the soil surface remains covered for a longer period of time, thereby reducing the direct impact of rainfall.

Additional Information

• Shelterbelt

• Shelter belts are rows of trees or shrubs planted in a line to protect an area from wind.

• They are also known as windbreaks.

• Shelter belts can be used to protect crops, livestock, and homes from the wind.

• They can also help to reduce soil erosion and improve air quality.

• Contour farming

• Contour farming or contour plowing involves tilling the soil following the contours of the land, rather than up and down the slope.

• Plowing along the natural contours of the land, this method reduces runoff, prevents soil erosion, and allows the soil to retain water better.

• It's a particularly useful method in hilly or sloped areas where water erosion can be a significant issue.

• Terrace farming

• Terrace farming is a method of farming that involves building terraces on sloping land to create level surfaces for cultivation.

• Terraces slow down the flow of water and prevent erosion, and they also provide a more stable surface for crops to grow on.

• Terrace farming is a traditional agricultural practice that has been used for centuries in many parts of the world, and it is still widely used today in some areas.

Q40. Answer: (a) Sugarcane

The correct answer is Sugarcane.

Key Points

• Sugarcane

• It is a member of the grass family Poaceae.

• Sugarcane is a perennial plant.

• Sugarcane is a major source of sugar, and it is also used to make ethanol, paper, and other products.

• Sugarcane is a tropical plant.

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Additional Information

• Cotton

• Cotton is the most important natural fiber in the world.

• Cotton is used to make a wide variety of products, including clothing, home textiles, and industrial products.

• Cotton plants are annual plants, and they grow best in warm, sunny climates with well-drained soil.

• Maize

• Maize is a cereal grain that is native to the Americas.

• Maize is a staple food for millions of people.

• Maize is a versatile crop that can be used to make a variety of products, including food, feed, fuel, and bioethanol.

• Rubber

• Rubber is a natural or synthetic polymer.

• Natural rubber is produced from the sap of rubber trees.

• Synthetic rubber is made from petroleum products.

• Rubber has a number of properties that make it a valuable material.

Q41. Answer: (a) Ctrl + P

The correct answer is Ctrl + P.

Key Points

• Ctrl + P is used to print the document.

Additional Information Word shortcut keys

• Ctrl + A -- Select all contents of the page.

• Ctrl + B -- Bold highlighted selection.

• Ctrl + C -- Copy selected text.

• Ctrl + X -- Cut selected text.

• Ctrl + N -- Open new/blank document.

• Ctrl + O -- Open options.

• Ctrl + P -- Open the print window.

• Ctrl + F -- Open find box.

• Ctrl + I -- Italicise highlighted selection.

• Ctrl + K -- Insert link.

• Ctrl + U -- Underline highlighted selection.

• Ctrl + V -- Paste.

• Ctrl + Y -- Redo the last action performed.

• Ctrl + Z -- Undo last action.

• Ctrl + G -- Find and replace options.

• Ctrl + H -- Find and replace options.

• Ctrl + J -- Justify paragraph alignment.

• Ctrl + L -- Align selected text or line to the left.

• Ctrl + Q -- Removes all formatting from a highlighted paragraph

• Ctrl + E -- Align selected text or line to the centre.

• Ctrl + R -- Align selected text or line to the right.

• Ctrl + M -- Indent the paragraph.

• Ctrl + T -- Hanging indent.

• Ctrl + D -- Font options.

• Ctrl + Shift + F -- Change the font.

• Ctrl + Shift + > -- Increase selected font +1.

• Ctrl +] -- Increase selected font +1.

• Ctrl + [-- Decrease selected font -1.

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• Ctrl + Shift + * -- View or hide non printing characters.
• Ctrl + (Left arrow) -- Move one word to the left.
• Ctrl + (Right arrow) -- Move one word to the right.
• Ctrl + (Up arrow) -- Move to the beginning of the line or paragraph.
• Ctrl + (Down arrow) -- Move to the end of the paragraph.
• Ctrl + Del -- Delete word to the right of the cursor.

• Ctrl + Backspace -- Delete word to the left of the cursor.
• Ctrl + End -- Move cursor to end of the document.
• Ctrl + Home -- Move cursor to the beginning of the document.
• Ctrl + Space -- Reset highlighted text to default font.
• Ctrl + 1 -- Single-space lines.
• Ctrl + 2 -- Double-space lines.
• Ctrl + 5 -- 1.5-line spacing.

• Ctrl + Alt + 1 Change text to heading 1.
• Ctrl + Alt + 2 Change text to heading 2.
• Ctrl + Alt + 3 Change text to heading 3.
• F1 -- Open help.
• Shift + F3 -- Change case of selected text.
• Shift + Insert -- Paste.

• F4 -- Repeat the last action performed (Word 2000+).
• F7 -- Spell check selected text and/or document.
• Shift + F7 -- Activate the thesaurus.
• F12 -- Save as.
• Ctrl + S -- Save.
• Shift + F12 -- Save.
• Alt + Shift + D -- Insert the current date.
• Alt + Shift + T -- Insert the current time.
• Ctrl + W -- Close document.

Q42. Answer: (c) 1928

The correct answer is 1928.

Key Points

• In India, the Bardoli movement was a tax-free movement.
• In the year 1928, the Bardoli Satyagraha took place.
• This movement was known as one of the biggest incidents of the Civil Disobedience movement, which was a part of India's war for independence.
• Sardar Vallabhbhai Patel eventually headed the movement, and its success helped pave the way for Patel to become one of the most prominent leaders of the independence struggle.

Additional Information

• Sardar Vallabhbhai Patel initially wrote to the Governor of Bombay, requesting that the taxes be reduced during the year during which the tragedies were occurring.
• The Governor, on the other hand, ignored the letter and responded by announcing the collection.
• The Bombay Presidency ignored the plight of the farmers and increased tax rates by 22%.
• Patel then informed all of the farmers in the Bardoli taluka to refuse to pay their taxes.
• The government had commissioned the Maxwell-Broomfield Commission to investigate the situation.
• Following a thorough investigation, the tax increase was determined to be only 6.03%.
• Gandhiji also supported the movement through his writings in the periodical 'Young India.'

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Q43. Answer: (c) Pink head duck

The correct answer is Pink head duck.

Key Points

• Extinct Species:

• Species that are not found after searches of known or likely areas where they may occur.

• A species may be extinct from a local area, region, country, continent, or the entire earth.

• Examples:

• Pink head duck

Additional Information

• Based on the International Union for Conservation of Nature and Natural Resources (IUCN), we can classify the plant and animal species as:

• Normal Species:

• Species whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents, etc.

• Endangered Species:

• Species that are in danger of extinction.

• The survival of such species is difficult if the negative factors that have led to a decline in their population continue to operate.

• Examples:

• Blackbuck, Crocodile, Indian wild ass, Indian rhino, Lion-tailed macaque, Sangai (brow-antlered deer in Manipur)

• Vulnerable Species:

• Species whose population has declined to levels from where it is likely to move into the endangered category in the near future if the negative factors continue to operate.

• Examples:

• Blue sheep, Asiatic elephant, Gangetic dolphin

• Rare Species:

• Species with a small population may move into the endangered or vulnerable category if the negative factors affecting them continue to operate.

• Examples:

• Himalayan brown bear, Wild Asiatic buffalo, Desert fox and Hornbill

Q44. Answer: (c) Varanasi

The correct answer is Varanasi.

Key Points

• Varanasi will be the first city in Shanghai Cooperation Organisation (SCO) region to be granted the rotating title of ‘Cultural & Tourism capital of SCO’.

• It will become the Capital for 2022-23 under a new rotating initiative by the SCO to promote people-to-people contacts and tourism among the member states.

Additional Information

• The Shanghai Cooperation Organisation (SCO) is a Eurasian political, economic and security alliance.

• In terms of geographic scope and population, it is the world's largest regional organization.

• It covers approximately 60% of the area of Eurasia, 40% of the world's population, and more than 30% of global GDP.

• The SCO currently comprises eight Member States (China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan).

• The Shanghai Cooperation Organisation:

• Headquarters: Beijing, China

• Founded: 15 June 2001

• Founders: Russia, China, Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan

Q45. Answer: (d) Ennore

The correct answer is Ennore.

Key Points According to the Ministry of Ports, Shipping, and Waterways, around 95 percent of India's trading by volume and 70 percent by value is done through maritime transport. It is serviced by 13 major ports (12 Government-owned and one private) and 187 notified minor and intermediate ports.

First corporatized port of India:

• Kamarajar port located at Ennore in Tamil Nadu is the only corporate port owned by the Indian government.

• Kamarajar Port Ltd was formed as a company under the Companies Act when it was opened in 2001.
• Ennore Port is located on the Coromandel Coast about 18 km north of Chennai Port, Chennai, it is the 12th major port of India.
• It is the first port in India which is a public company.
• The Kamarajar Port Limited is the only corporatized major port and is registered as a company.

Additional Information

Corporatized port of India:

• The process of corporatization means that there is a change in legal structure.
• It should not be confused with privatization or disinvestment.
• Thus, no major impact can be expected by a mere change in the legal structure.
• Under the Major Port Trusts Act of 1963, the ports trusts are managed by the Boards of Trustees.
• Major Port Authorities Bill 2020 was recently introduced in the Lok Sabha by the Ministry of Shipping.
• The Bill aims to replace the Major Port Trusts Act, 1963.
• It seeks to provide for the regulation, operation, and planning of Major Ports in India and to vest the administration, control, and management of such ports upon the Boards of Major Port Authorities.
• This will empower the Major Ports to perform with greater efficiency on account of full autonomy in decision making and by modernizing the institutional framework of Major Ports.

Q46. Answer: (a) Bengaluru FC

The correct answer is Bengaluru FC.

Key Points

• The Durand Cup is one of the oldest football tournaments in the world and the oldest in India.
• It's named after its founder, Sir Mortimer Durand, who started the tournament in 1888.
• The tournament has been held annually, except for some breaks during the World Wars.
• In the 2022 Durand Cup, Bengaluru FC emerged as the winner.
• Bengaluru FC is a professional football club based in Bengaluru, India, that competes in the Indian Super League (ISL).
• The team was established in 2013 and has been successful in Indian football, with several major titles to their name.
• In the 2022 Durand Cup final, Bengaluru FC faced Mumbai City FC.
• The match saw Bengaluru FC come out on top with a 2-1 victory, thus securing their win of the prestigious Durand Cup title1.
• This was a significant achievement for Bengaluru FC and its captain, Sunil Chhetri, one of India's most celebrated football players.
• This victory added another feather to their cap and marked a key moment in their history.

Q47. Answer: (b) blue, green

The correct answer is blue, green.

Key Points

• When an iron nail is dipped into a solution of copper sulfate, the color of the solution changes due to a displacement reaction that occurs because iron is more reactive than copper.
• The blue colour of copper sulphate solution changes to green because of the formation of iron (II) sulfate.
• This is a type of single replacement reaction where iron replaces copper in the compound because iron is more reactive than copper.
• The equation for this reaction is:
• Fe(s) + CuSO4 (aq) -> FeSO4 (aq) + Cu(s)
• The green colour is due to the formation of FeSO4 or iron (II) sulfate in solution.

Q48. Answer: (a) Budget set

The correct answer is Budget set.

Key Points

• The collection of all bundles that the consumer can buy with her income at the prevailing market prices is called the Budget set.
• The budget set represents all the combinations of goods and services that the consumer can afford given the prices and their income.
• This set is subject to the budget constraint, which is the limitation on the consumer's income that they cannot surpass.

Additional Information

• Budget constraint:
• A budget constraint represents the limit on the consumption bundles that a consumer can afford.

• It is a line that maps out every combination of goods and services that a consumer can purchase if they spend all of their income.

• The budget constraint is determined by the consumer's income, the price of one good, and the price of the other good.

• Budget anomaly:

• This term isn't commonly used in the field of economics.

• An "anomaly" typically refers to something that deviates from the norm or from expectations.

• In the context of a budget, it could hypothetically refer to an unexpected or unusual occurrence in relation to the budget, but it's not a standard term you'd find in economic theory or analysis.

• Budget line:

• This is another term for the budget constraint.

• It's a graphical representation of all the combinations of goods that a consumer can afford with a given income, given the prices of those goods.

• The budget line shows the boundary of the budget set.

• If prices or income change, the budget line will shift.

Q49. Answer: (c) Iodine

The correct answer is Iodine.

Key Points

• The swelling of glands in the neck is most commonly associated with a deficiency of Iodine

• When there's a deficiency of iodine in the diet, the thyroid gland in the neck swells up, a condition known as goiter.

• Iodine is essential for the production of thyroid hormones, which regulate various body functions such as metabolism and growth.

• When the body doesn't get enough iodine, the thyroid gland works harder to try to produce these hormones, leading to swelling.

Additional Information

• Vitamin C:

• This vitamin is essential for many functions in the body, including the maintenance of skin, blood vessels, bones and cartilage, and the protection of cells.

• It's also crucial for wound healing.

• Scurvy is the classic disease related to Vitamin C deficiency, characterized by bleeding gums and skin spots.

• However, it doesn't cause a swollen neck gland.

• Vitamin D:

• This vitamin helps the body absorb calcium, which is vital for bone health.

• Deficiency of Vitamin D can cause rickets in children (characterized by soft, weak bones) and osteomalacia in adults (leading to bone pain and muscle weakness), but it doesn't lead to a swollen neck gland.

• Calcium:

• This mineral is essential for building and maintaining strong bones.

• A deficiency in calcium can lead to conditions like osteoporosis and hypocalcemia, which can cause muscle cramps, convulsions, and abnormal heart rhythms.

• However, a deficiency in calcium doesn't cause swelling of the neck glands.

Q50. Answer: (d) Odisha

The correct answer is Odisha.

Key Points

• The Konark Sun Temple is a 13th-century Hindu temple dedicated to the sun god Surya.

• It is located in Konark, a town in the Puri district of Odisha, India.

• The temple is a UNESCO World Heritage Site and is one of the most popular tourist destinations in India.

• Sun Temple of Konark was built by King Narasimhadeva I of the Eastern Ganga Dynasty about 1250 CE.

• This temple is dedicated to the Hindu god Surya and located 35 km northeast from Puri.

Additional Information

State	Temple
Rajasthan	• Amber Fort - Chittorgarh Fort - Jaisalmer Fort - Ranakpur Jain Temple - Udaipur City Palace
Madhya Pradesh	• Khajuraho Temples - Gwalior Fort - Ujjain Mahakaleshwar Temple - Omkareshwar Temple

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Chhattisgarh	• Kanger Ghati National Park - Bastar Tribal Area
Odisha	• Konark Sun Temple - Jagannath Temple - Lingaraj Temple - Puri Jagannath Temple

Q51. Answer: (c) 81

Shortcut Trick

Numbers divisible by both 2 and 9 must be multiples of LCM(2, 9) = 18.

The first 8 such numbers form an Arithmetic Progression (AP): 18, 36, ..., (18 × 8).

Average of an AP = (First term + Last term) ÷ 2

Average = (18 + 144) ÷ 2 = 162 ÷ 2 = 81

Therefore The correct answer is 81.

Alternate Method

Given: First 8 positive even numbers divisible by 9.

Formula Used: Average of n terms in AP = [a + l] / 2, where a is the first term and l is the last term.

=> A number is even and divisible by 9 if it is a multiple of 18.

=> First term (a) = 18 × 1 = 18

=> 8^(th) term (l) = 18 × 8 = 144

=> Average = (18 + 144) ÷ 2

=> Average = 162 ÷ 2

=> Average = 81

Therefore The correct answer is 81.

Additional Information

Average of first n multiples

The average of the first n multiples of a number K is given by the formula: K × (n + 1) ÷ 2.

Divisibility Rule of 18

A number is divisible by 18 if it is even (divisible by 2) and the sum of its digits is divisible by 9.

Arithmetic Progression Average

For any series in AP, the average is always the middle term (if n is odd) or the mean of the two middle terms (if n is even).

Q52. Answer: (a) $(s^2-1)/(s^2+1)$

calculation:

To find the value of cos θ given the equation cosec θ + cot θ = s, we can use trigonometric identities to express cosec θ and cot θ in terms of cos θ.

Recall the following trigonometric identities:

cosec θ = 1/sin θ

cot θ = cos θ / sin θ

Substituting these identities into the given equation, we have:

1/sin θ + cos θ/sin θ = s

Now, we can combine the fractions on the left side:

(1 + cos θ)/sin θ = s

To find the value of cos θ, we need to isolate it on one side of the equation. Let's rearrange the equation:

1 + cos θ = s × sin θ

Now, let's square both sides of the equation to eliminate the denominator:

$(1 + \cos \theta)^2 = (s \times \sin \theta)^2$

Since $\sin^2 \theta = 1 - \cos^2 \theta$ (from the Pythagorean identity), we can substitute it in the equation:

$(1 + \cos \theta)^2 = s^2 \times (1 - \cos^2 \theta)$

$(1 + \cos \theta)^2 = s^2 \times (1 - \cos \theta)\ (1 + \cos \theta)$

$\cos \theta + \cos \theta\ s^2 = s^2 - 1$

$\cos \theta\ (1 + s^2) = s^2 - 1$

$\cos \theta = (s^2 - 1)/(1 + s^2)$

Therefore, the value of cos θ is $(s^2 - 1)/(1 + s^2)$

Q53. Answer: (c) 1675

Calculation:

The selling price of all articles

(1100 + 950 + 900 + 1100 + 750 + 1350) = 6150

A1 = Average = 6150/6 = 1025

A2 = The value of the average cost price of L, M, N and O

(800 + 700 + 500 + 600)/4 = 2600/4

=> 650

A1 + A2 = 1025 + 650 = 1675

Therefore Option 3 is the correct answer.

Q54. Answer: (a) 31

Shortcut Trick

The algebraic identity for the given expression is:

$(p^3 + q^3 + r^3 - 3pqr) / (p + q + r) = ½ \times [(p - q)^2 + (q - r)^2 + (r - p)^2]$

Substitute the given differences: $½ \times [(-6)^2 + 5^2 + 1^2]$

=> $½ \times [36 + 25 + 1] = 62 / 2 = 31$

Therefore The correct answer is 31.

Alternate Method

Given:

$(p - q) = -6$

$(q - r) = 5$

$(r - p) = 1$

Formula Used:

$p^3 + q^3 + r^3 - 3pqr = (p + q + r) \times ½ \times [(p - q)^2 + (q - r)^2 + (r - p)^2]$

Calculations:

=> Target = $(p^3 + q^3 + r^3 - 3pqr) / (p + q + r)$

=> Target = $[(p + q + r) \times ½ \times \{(p - q)^2 + (q - r)^2 + (r - p)^2\}] / (p + q + r)$

=> Target = $½ \times [(-6)^2 + 5^2 + 1^2]$

=> Target = $½ \times [36 + 25 + 1]$

=> Target = 62 / 2

=> Target = 31

Therefore The correct answer is 31.

Additional Information

The Cube Identity

$a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$. This is a fundamental expansion used in algebraic simplifications.

Sum of Squares Alternative

The expression $(a^2 + b^2 + c^2 - ab - bc - ca)$ can always be written as $½[(a - b)^2 + (b - c)^2 + (c - a)^2]$, which is useful when differences are known.

Special Case: a + b + c = 0

If the sum of the variables is zero, then $a^3 + b^3 + c^3 = 3abc$. This is frequently tested in competitive exams.

Special Case: a = b = c

If all three variables are equal, then the value of the expression $a^3 + b^3 + c^3 - 3abc$ is always zero.

Q55. Answer: (b) 130 degree

Concept Used:

In a circle, the following property holds: the angle that a chord subtends on the major arc is 180 degrees minus the angle that the same chord subtends on the minor arc. This is due to the fact that any point on a circle defines an angle of 360 degrees.

Calculation:

So, if the angle made by a chord on the major arc is angle ACB = 50°,

then the angle that the same chord makes on the minor arc of the

circle would be angle ACB = 180 - 50 = 130°.

Therefore Option 2 is the correct answer.

Q56. Answer: (b) 90°

Given:

sin Θ/(cot Θ + cosec Θ) = 1

Calculation:

sin Θ/(cot Θ + cosec Θ) = 1

sin Θ/(cosΘ//sinΘ + 1/sinΘ) = 1

$\sin^2 \Theta/(\cos \Theta+1) = 1$

$1 - \cos^2 \Theta/(\cos \Theta +1) = 1$

(1 - cos Θ)(cos Θ +1) (//(cos Θ +1) = 1

(1 - cos Θ) = 1

cos Θ = 0

Θ = 90°

Therefore Option 2 is the correct answer.

Q57. Answer: (d) 48 months

Given:

P = Rs. 3000

R = 10% per annum

I = Rs. 1200

Concept Used:

I = PRT / 100

where:

I = interest

P = principal amount (the initial amount of money)

R = annual interest rate (in percentage)

T = time the money is invested for (in years).

Calculation:

We are asked to find T (the time of investment), but in months instead of years. So representing T in years, the equation becomes:

1200 = 3000 × 10 × T / 100

Which simplifies to:

1200 = 300T

Solving for T gives:

T = 1200/ 300

T = 4 years

Since the question is asking for the time in months, we convert this to months by multiplying by 12 (since there are 12 months in a year):

T = 4 × 12 = 48 months.

So, the sum is invested for 48 months.

Q58. Answer: (c) 50

Calculation:

Average population of A = (500 + 700 + 550 + 400 + 300)/5

=> 2450/5 = 490

Average population of B = (800 + 600 + 450 + 350 + 500)/5

=> 2700/5 = 540

Difference between the average population of A and B in all the years = 540 - 490 = 50

Therefore Option 3 is the correct answer.

Q59. Answer: (b) 7 hours

Shortcut Trick

Upstream Speed = Downstream Speed − 2 × Stream Speed = 25 − (2 × 3) = 19 km/hr

Downstream Time = 100 ÷ 25 = 4 hours

Upstream Time = 57 ÷ 19 = 3 hours

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Total Time = 4 + 3 = 7 hours
Therefore The correct answer is 7 hours.
Alternate Method
Given:
Downstream speed = 25 km/hr
Speed of stream = 3 km/hr
Formula used:
Downstream Speed = Speed of boat in still water + Speed of stream
Upstream Speed = Speed of boat in still water − Speed of stream
Time = Distance ÷ Speed
Upstream
19 km/hr
Still Water
22 km/hr
Downstream
25 km/hr
• 3 (Stream)
− 3 (Stream)
Calculations:
=> Speed of boat in still water = Downstream speed − Speed of stream
=> Boat speed in still water = 25 − 3 = 22 km/hr
=> Upstream speed = Boat speed in still water − Speed of stream
=> Upstream speed = 22 − 3 = 19 km/hr
=> Time taken for 100 km downstream = 100 ÷ 25 = 4 hours
=> Time taken for 57 km upstream = 57 ÷ 19 = 3 hours
=> Total time = 4 + 3 = 7 hours
Therefore The correct answer is 7 hours.
Additional Information
Speed in Still Water
It is the average of Downstream and Upstream speeds: B = (D + U) ÷ 2.
Speed of Stream
It is half the difference between Downstream and Upstream speeds: S = (D − U) ÷ 2.
Relative Speed in Boats
Downstream speed is always greater than upstream speed by twice the stream speed: D − U = 2S.

Q60. Answer: (a) 29

Shortcut Trick
Numbers divisible by both 5 and 3 must be divisible by their LCM, which is 15.
Multiples of 15 up to 457 => 457 ÷ 15 = 30 (quotient)
Multiples of 15 up to 16 (before 17) => 16 ÷ 15 = 1 (quotient)
Total numbers in range [17, 457] = 30 − 1 = 29.
Therefore The correct answer is 29.
Alternate Method
Given: Range = 17 to 457; Divisible by both 3 and 5.
Formula Used: n = [(l − a) ÷ d] + 1; where l = last term, a = first term, d = common difference.
=> LCM(3, 5) = 15
=> First multiple after 17 = 30 (a)
=> Last multiple before 457 = 450 (l)
=> Common difference = 15 (d)
=> n = [(450 − 30) ÷ 15] + 1
=> n = [420 ÷ 15] + 1
=> n = 28 + 1 = 29

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Therefore The correct answer is 29.

Additional Information

Divisibility by Multiple Factors

If a number is divisible by two co-prime numbers x and y, it must be divisible by their product x × y.

Arithmetic Progression (AP)

To find the number of terms in a finite AP, use n = [(l − a)/d] + 1, where l is the last term, a is the first term, and d is the difference.

Counting Multiples Shortcut

The number of multiples of k in the range [1, N] is simply the floor value of N ÷ k.

Q61. Answer: (b) 169/91

Given:

a = 10 and b = 3

Calculation:

=> $((a+b)^2)/(a^2-b^2)$

=> $((a+b)^2)/(a-b)(a+b)$

=> (a+b)/(a-b)

Put the values of a and b

=> (10+3)/(10-3)

=> 13/7 = 169/91

Therefore Option 2 is the correct answer.

Q62. Answer: (b) 6

Shortcut Trick

Find the approximate square root of the product: √7387 ≈ 85.9.

Identify the consecutive prime numbers immediately below and above 86.

The prime numbers are 83 and 89.

Verify the product: 83 × 89 = 7387.

Calculate the difference: 89 − 83 = 6.

Therefore The correct answer is 6.

Alternate Method

Given:

Product of two consecutive prime numbers = 7387

Calculations:

=> Let the two consecutive prime numbers be p1 and p2.

=> p1 × p2 = 7387

=> To find the numbers, approximate the square root: √7387

=> We know $80^2 = 6400$ and $90^2 = 8100$.

=> Since $85^2 = 7225$, the root is slightly greater than 85.

=> Primes near 86 are 83 and 89.

=> $83 \times 89 = (86 - 3)(86 + 3) = 86^2 - 3^2 = 7396 - 9 = 7387$.

=> Difference = 89 − 83 = 6.

Therefore The correct answer is 6.

Additional Information

Prime Numbers

A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself.

Twin Primes

Twin primes are pairs of prime numbers that have a difference of 2, such as (3, 5), (11, 13), or (71, 73).

Consecutive Primes

Consecutive primes are prime numbers that follow each other in order without any other prime numbers between them.

Square Root Method for Factors

If the product of two numbers is P, at least one of the factors must be less than or equal to √P.

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Q63. Answer: (a) 840

Calculation:
Firstly, let's find out the actual number of male faculties in Schools A and B:
For School A, the number of males is 10% of 8400, which equals 840.
For School B, the number of males is 20% of 8400, which equals 1680.
The ratio of male to female faculties in School A is 2 : 5
So, the number of female faculties in School A
=> (5/2) × 840 = 2100.
In School B, the ratio of male to female faculties is 4:3,
So, number of female faculties in School B
=>(3/4) × 1680 = 1260.
Difference = 2100 - 1260 = 840.
So, the difference in total female faculties in School A and School B is 840.
Therefore Option 1 is the correct answer.

Q64. Answer: (d) 13/5

Given:
angle M = 90 degrees,
KM = 12 cm and
LM = 5 cm
Concept Used:
Sec θ = Hypotenuse/Base
Pythagoras Theorem
Hypotenuse² = Perpendicular² + Base²
Calculation:
In the given triangle,
=> Perpendicular = KM = 12 cm
=> Base = LM = 5 cm
=> Hypotenuse² = 12² + 5²
=> Hypotenuse = 13
Sec L = Hypotenuse/Base
=> 13/5
Therefore Option 4 is the correct answer.

Q65. Answer: (c) Rs. 8,000

Calculation:
According to the question:
Anuj invest for 12 months.
Ajay invest for 6 months
and Ankit invest for 3 months
So the ratio of investment is
30000 × 12 : 45000 × 6 : 60000 × 3
4 : 3 : 2
The ratio of Anuj is
18000 × 4/9 = 8000
Therefore, Anuj's share in the profit is Rs. 8,000.
Therefore Option 3 is the correct answer.

Q66. Answer: (d) 112.5 litres

Shortcut Trick
Since only milk is added, the quantity of water remains constant.
Initial Water % = 100% − 30% = 70%
Initial Water = Final Water => 150 × 70% = (New Total) × 40%

New Total = (150 × 70) ÷ 40 = 262.5 litres.

Milk added = 262.5 − 150 = 112.5 litres.

Therefore The correct answer is 112.5 litres.

Alternate Method

Given:

Initial volume = 150 litres

Initial Milk percentage = 30%

Target Water percentage = 40%

Step 1: Calculate initial water quantity.

=> Initial Water % = 100% − 30% = 70%

=> Quantity of Water = (70 ÷ 100) × 150 = 105 litres.

Step 2: Calculate the new total volume when water is 40%.

=> 40% of New Total = 105 litres

=> New Total = (105 × 100) ÷ 40

=> New Total = 262.5 litres.

Step 3: Calculate the quantity of milk to be added.

=> Added Milk = New Total − Initial Total

=> Added Milk = 262.5 − 150 = 112.5 litres.

Therefore The correct answer is 112.5 litres.

Additional Information

Rule of Constant Component

In mixture problems, identify the component whose quantity does not change. Use the equation: Initial Total × Initial % = Final Total × Final % for that fixed component.

Alligation Method

This can also be solved by alligation using milk percentages: 30% (Initial) and 100% (Added Milk) to get a mean of 60% (since water is 40%).

Inverse Proportion in Mixtures

If the quantity of one component is constant, the total volume of the mixture is inversely proportional to the percentage concentration of that component.

Q67. Answer: (b) 65 degree

Shortcut Trick

The angle at the orthocenter angle BOC and the opposite vertex angle angle A are supplementary.

angle A = 180° − angle BOC = 180° − 120° = 60°.

In ΔABC, the sum of all angles is 180°.

angle ACB = 180° − (angle A + angle B) = 180° − (60° + 55°) = 65°.

Therefore The correct answer is 65 degree.

Alternate Method

Given:

In ΔABC, O is the orthocenter.

angle B = 55°

angle BOC = 120°

Formula Used:

1. Angle at orthocenter: angle BOC = 180° − angle A

2. Angle sum property: angle A + angle B + angle C = 180°

Calculations:

=> angle BOC = 180° − angle A

=> 120° = 180° − angle A

=> angle A = 180° − 120° = 60°

=> In ΔABC, angle A + angle B + angle C = 180°

=> 60° + 55° + angle ACB = 180°

=> 115° + angle ACB = 180°

=> angle ACB = 180° − 115° = 65°

Therefore The correct answer is 65 degree.

Additional Information

Orthocenter Properties

The orthocenter is the intersection point of the altitudes. The angle subtended by any side at the orthocenter and the interior angle at the opposite vertex are supplementary (sum = 180°).

Orthocentric System

In any triangle ABC with orthocenter O, each of the four points (A, B, C, or O) is the orthocenter of the triangle formed by the other three points.

Euler Line

In a non-equilateral triangle, the orthocenter (O), centroid (G), and circumcenter (C) are collinear, with the centroid dividing the segment OC in the ratio 2 : 1.

Q68. Answer: (c) 25 degree

Shortcut Trick

In a cyclic quadrilateral, the sum of opposite angles is always 180°.

Given: angle P + angle R = 180°

=> (3x + 5) + 4x = 180

=> 7x + 5 = 180

=> 7x = 175

=> x = 25

Therefore The correct answer is 25 degree.

Alternate Method

Given:

angle P = 3x + 5

angle R = 4x

Quadrilateral PQRS is cyclic, where P and R are opposite vertices.

According to the Cyclic Quadrilateral Theorem, the sum of either pair of opposite angles is 180°.

=> angle P + angle R = 180°

=> (3x + 5) + 4x = 180

=> 7x + 5 = 180

=> 7x = 180 − 5

=> 7x = 175

=> x = 175 ÷ 7

=> x = 25

Therefore The correct answer is 25 degree.

Additional Information

Cyclic Quadrilateral Property

A quadrilateral is cyclic if and only if its vertices lie on a circle, and its opposite angles sum to 180°.

Exterior Angle Property

The exterior angle of a cyclic quadrilateral is equal to the interior opposite angle.

Ptolemy's Theorem

For a cyclic quadrilateral, the product of the diagonals is equal to the sum of the products of the opposite sides: (PQ × RS) + (QR × PS) = PR × QS.

Q69. Answer: (a) 58.33 percent

Shortcut Trick

When a solid cylinder is bisected parallel to the base, two new circular faces are added to the total surface area.

Percentage Increase = [(Area of 2 new faces) ÷ (Initial Total Surface Area)] × 100

Simplified formula: Percentage Increase = [r ÷ (r + h)] × 100

Applying values: [7 ÷ (7 + 5)] × 100 = 7/12 × 100 = 58.33%.

Therefore The correct answer is 58.33 percent.

Alternate Method

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Given:

Radius (r) of the cylinder = 7 cm

Height (h) of the cylinder = 5 cm

Formula Used:

Total Surface Area (TSA) of a cylinder = $2\pi r(r + h)$

Area of circular base = πr^2

Calculations:

=> Initial TSA = $2 \times \pi \times 7 \times (7 + 5) = 14 \times 12 \times \pi = 168\pi$ cm²

=> When bisected, two identical cylinders are formed, creating two extra circular surfaces.

=> Extra Area Added = $2 \times (\pi \times 7^2) = 2 \times 49 \times \pi = 98\pi$ cm²

=> Percentage Increase = [(Extra Area) ÷ (Initial TSA)] × 100

=> Percentage Increase = $(98\pi \div 168\pi) \times 100$

=> Percentage Increase = $(7 \div 12) \times 100 = 58.333...$

Therefore The correct answer is 58.33 percent.

Additional Information

Curved Surface Area (CSA)

The area of the side surface of the cylinder, excluding the top and bottom bases, is $2\pi rh$.

Volume of Cylinder

The amount of space occupied by the cylinder is given by $V = \pi r^2 h$. Bisection does not change the total volume.

Vertical Bisection

If a cylinder is cut vertically through the center of its bases, the extra area added is two rectangles, each with area (diameter × height).

Multiple Horizontal Cuts

If a cylinder is cut into 'n' identical parts horizontally, the number of new circular faces added is $2(n - 1)$.

Q70. Answer: (c) 20%

Given:

Diamond ring is marked at Rs. 20,000.

Two successive discounts of 25% and x% respectively are given.

He paid Rs. 12,000.

Calculation:

Let's break this down into steps:

First, Nikhil is given a discount of 25%. This means he pays 75% of the original price (because 100% - 25% = 75%).

So, the price after the first discount is:

20000 × 75% = Rs. 15,000.

Nikhil is then given another discount, of x% on the remaining price of Rs. 15,000. After this discount, the price he pays is Rs. 12,000.

We can set up an equation to find x. If we let x be the second discount, then 100% - x% of the price he pays after the first discount equals the final price. This can be written as:

15000 × (100% - x%) = 12000.

This simplifies to:

15000 - 15000 × (x/100) = 12000.

Rearranging and solving for x gives us:

15000 × (x/100) = 15000 - 12000,

so

150x = 3000,

x = 3000 / 150,

x = 20.

So, the second discount is 20%.

Therefore Option 3 is the correct answer.

Q71. Answer: (d) 12 days

Shortcut Trick

Ratio of efficiency (Anuj : Vinod) = 150 : 100 = 3 : 2.

Total Work = Anuj's efficiency × Anuj's days = 3 × 20 = 60 units.

Combined efficiency of Anuj and Vinod = 3 + 2 = 5 units/day.

Days taken together = 60 ÷ 5 = 12 days.

Therefore The correct answer is 12 days.

Alternate Method

Given:

Efficiency of Anuj = 150% of Efficiency of Vinod

Time taken by Anuj = 20 days

Formula Used:

Total Work = Efficiency × Time

Time Taken = Total Work ÷ Efficiency

=> Let Vinod's efficiency be 2 units/day.

=> Anuj's efficiency = 150% of 2 = 3 units/day.

=> Total Work = Anuj's efficiency × Anuj's time = 3 × 20 = 60 units.

=> Time taken by Vinod = 60 ÷ 2 = 30 days.

Person	Days	Total Work	Efficiency
Anuj	20	60	3
Vinod	30	2	

=> Combined Efficiency of Anuj and Vinod = 3 + 2 = 5 units/day.

=> Time taken together = 60 ÷ 5 = 12 days.

Therefore The correct answer is 12 days.

Additional Information

Efficiency and Time Relation

Efficiency is inversely proportional to the time taken to complete a work. If the efficiency ratio is a : b, then the time ratio will be b : a.

Combined Work Formula

If two individuals take 'x' and 'y' days respectively, the time taken to complete the work together is (x × y) ÷ (x + y) days.

Work-Efficiency Constant

Total Work = E1 × T1 = E2 × T2. This formula is useful for calculating unknown time when efficiencies are known.

Q72. Answer: (d) 2(a2 + b2)

Calculation:

To find the value of the expression $(a + b)^2 + (a - b)^2$, we can expand it and simplify.

Expanding $(a + b)^2$ using the formula $(a + b)^2 = a^2 + 2ab + b^2$, we get:

$(a + b)^2 = a^2 + 2ab + b^2$

Expanding $(a - b)^2$ using the formula $(a - b)^2 = a^2 - 2ab + b^2$, we get:

$(a - b)^2 = a^2 - 2ab + b^2$

Now, let's substitute these expressions back into the original expression:

$(a + b)^2 + (a - b)^2 = (a^2 + 2ab + b^2) + (a^2 - 2ab + b^2)$

Expanding further:

$(a + b)^2 + (a - b)^2 = a^2 + 2ab + b^2 + a^2 - 2ab + b^2$

Combining like terms, we have:

$(a + b)^2 + (a - b)^2 = (a^2 + a^2) + (2ab - 2ab) + (b^2 + b^2)$

Simplifying, we get:

$(a + b)^2 + (a - b)^2 = 2a^2 + 2b^2$

Therefore, the value of $(a + b)^2 + (a - b)^2$ is $2a^2 + 2b^2$.

2(a2 + b2).

Therefore Option 4 is the correct answer.

Q73. Answer: (d) 48 cm

Given:

The sum of the angles made by a chord XY at the centre and on the circumference of the circle is 270 degrees.

The radius of this circle is 24 cm

Concept Used:

The angle formed by the chord at the centre is double the angle formed by the same chord on the circumference.

Calculation:

Let the angle formed by the chord on the circumference be θ.

Then the angle formed by the same chord on the centre is 2θ.

According to the question,

$2\theta + \theta = 270$

$\theta = 90°$

It means the chord is the diameter as the diameter makes the 90° angle on the circumference.

Length of this chord = Diameter = 2 × 24 = 48 cm

Therefore Option 4 is the correct answer.

Q74. Answer: (d) 6 : 7

Calculation:

The total number of workers whose daily wages are less than Rs. 450 = 30

Total number of workers whose daily wages are Rs. 650 = 35

Ratio = 30 : 35 = 6 : 7

Therefore Option 4 is the correct answer.

Q75. Answer: (d) Rs. 16000

Shortcut Trick

Income of C = Expenditure of C + Savings of C.

Given Savings of C = Expenditure of D, so Income of C = Expenditure of C + Expenditure of D = Rs. 12000.

Ratio of Incomes is 3 : 4 => 3 units = Rs. 12000 => 1 unit = Rs. 4000.

Total Income (3 + 4 = 7 units) = 7 × 4000 = Rs. 28000.

Total Savings = Total Income − Total Expenditure = 28000 − 12000 = Rs. 16000.

Therefore The correct answer is Rs. 16000.

Alternate Method

Given:

Ratio of Incomes of C and D = 3 : 4

Sum of Expenditures ($E_C + E_D$) = Rs. 12000

Savings of C (S_C) = Expenditure of D (E_D)

Formula:

Income = Expenditure + Savings

Calculations:

=> Let Income of C = 3x and Income of D = 4x.

=> Savings of C = Income of C − Expenditure of C

=> $S_C = 3x - E_C$

=> Since $S_C = E_D$, then $E_D = 3x - E_C$

=> $E_C + E_D = 3x$

=> Given $E_C + E_D = 12000$, so $3x = 12000$

=> $x = 12000 \div 3 = 4000$

=> Total Income = $3x + 4x = 7x = 7 \times 4000$ = Rs. 28000

=> Total Savings = Total Income − Total Expenditure

=> Total Savings = 28000 − 12000 = 16000

Therefore The correct answer is Rs. 16000.

Additional Information

Fundamental Budget Equation

The relationship between income, expenditure, and savings is always Income = Expenditure + Savings. For multiple individuals, Total Income = Total Expenditure + Total Savings.

Ratio Distribution

If a total value V is divided in ratio a : b, then the parts are [a/(a+b)] × V and [b/(a+b)] × V. Here, the units method (1 unit = Total/Total units) is the fastest way to solve.

Savings Equality Cases

When one person's savings equals another's expenditure, it directly links the first person's income to the sum of both people's expenditures.

Q76. Answer: (a) Float

The solution is in Hindi. Read it online.

Q77. Answer: (c) Concoct

The solution is in Hindi. Read it online.

Q78. Answer: (d) Vijay and Ajay is here

The correct answer is 'Option 4'.

Key Points

• In the original sentence, there is a subject-verb agreement error.

• The subject "Vijay and Ajay" is plural, so the verb should also be in the plural form "are" instead of the singular form "is."

• This ensures proper subject-verb agreement.

Therefore, the correct sentence is: 'Vijay and Ajay are here to celebrate 7 years of their friendship'.

Q79. Answer: (a) PQSR

The correct answer is 'Option 1'.

Key Points

• The sentence discusses the behavior observed in a particular animal group where parents and others teach their young how to find food or water when it becomes scarce due to drought or other environmental changes.

• This order of the sentence provides a logical flow of information, starting with the subject (P) introducing the parents and others, followed by the purpose of teaching through example (Q).

• Then, it describes the specific situation (S) where food or water becomes scarce, and finally, it mentions the cause or reason (R) for the scarcity, which is drought or other environmental change.

Therefore, the correct answer is: 'PQSR'.

Q80. Answer: (d) Tina said that her parents were getting divorced.

The correct answer is 'Option 4'.

Key Points

• When reporting someone's statement in indirect speech, we usually change the verb tense to reflect the shift in time.

• In this case, the original statement is in the present tense ("My parents are getting divorced"), so when we report it indirectly, we need to change the verb tense to past tense.

• 'Option 4' correctly changes the verb tense to past tense, reflecting the shift from the original statement.

• The past progressive tense ("were getting divorced") indicates an ongoing action in the past.

Therefore, the correct sentence is: "Tina said that her parents were getting divorced".

Q81. Answer: (d) PQSR

The correct answer is 'Option 4'.

Key Points

• The sentence discusses the interactions facilitated by the governments of India and France, the submission of a binding techno-commercial offer by NPCIL on 22 April 2021, and how this happened despite pandemic-related travel complications.

• Let's break down the given options:

• P: despite pandemic-related travel complications, the (correctly connects with the challenges mentioned)

• Q: governments of India and France facilitated interactions (correctly introduces the interactions facilitated by the governments)

• S: between EDF and NPCIL which allowed EDF to submit to (correctly follows the mention of EDF and its submission)

• R: NPCIL a binding techno-commercial offer on 22 April 2021 (correctly concludes the sentence with the mention of the offer)

Therefore, the correct arrangement is: 'PQSR'

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Q82. Answer: (a) Iconoclast

The solution is in Hindi. Read it online.

Q83. Answer: (a) among his followers

The correct answer is 'among his followers'.

Key Points

• The preposition "between" is used when referring to two entities.

• When referring to more than two entities, "among" is used.

• So, the correct phrase is "among his followers."

Therefore, the correct sentence is: His words wield tremendous influence among his followers.

Additional Information

• Within: "Within" refers to something that is contained or exists inside a particular boundary or limits.

• In: "In" indicates being inside or within the boundaries of something.

Q84. Answer: (b) No correction required

The correct answer is 'Option 2'.

Key Points

• The original sentence "Everyone wants to be successful and rich" is grammatically correct and conveys the intended meaning.

• The verb "wants" is in the third-person singular form, which agrees with the subject "Everyone".

• This means that the sentence is already in the correct form and does not require any correction or replacement.

Therefore, the correct sentence is: Everyone wants to be successful and rich.

Q85. Answer: (c) to is open of learning more,

The correct answer is 'option 3'.

Key Points

• The correct phrase should be "open to learning more" instead of "open of learning more."

• The preposition "to" is used to indicate the direction or goal of an action, while "of" is used to show possession or origin.

• In this case, the intended meaning is to encourage someone to be receptive and willing to learn more.

• Therefore, the correct phrase should be "open to learning more."

Therefore, the corrected sentence would be: "If someone you are talking to is open to learning more, encourage that continued curiosity."

Q86. Answer: (c) thumped

The solution is in Hindi. Read it online.

Q87. Answer: (a) Genesis

The solution is in Hindi. Read it online.

Q88. Answer: (b) Dereliction

The solution is in Hindi. Read it online.

Q89. Answer: (c) New seeds are made through pollination.

The correct answer is 'New seeds are made through pollination.'

Key Points

• The word "pollination" is correctly spelt in this sentence.

• Pollination refers to the process in which pollen is taken from one plant or part of a plant to another so that new plant seeds can be produced.

• Example - Many species of tree depend on the wind for pollination.

• The other sentences contain misspelt words.

Therefore, the correct sentence is: 'New seeds are made through pollination.'

Additional Information

• "New sieds are made through pollination." (Spelling error: "sieds" should be "seeds.")

• "New seeds are made through polination." (Spelling error: "polination" should be "pollination.")

• "New seeds are made throuhg pollination." (Spelling error: "throuhg" should be "through.")

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Q90. Answer: (d) me a blister

The correct answer is 'Option 4'.

Key Points

• In the given sentence, the verb "gave" is used to indicate that the shoes caused a blister on the speaker's right heel.

• The noun form of the word "blister" should be used to maintain grammatical correctness.

• Therefore, the correct phrase should be "gave me a blister" instead of "gave me a blistered."

Therefore, the correct sentence is: 'My new shoes gave me a blister on my right heel.'

Q91. Answer: (a) French is spoken here by Suresh.

The correct answer is 'Option 1'

Key Points

• In the given sentence, we have an active form where the subject "Suresh" is performing the action of speaking French.

• To convert this sentence into the passive form, we need to make the object "French" the subject and the subject "Suresh" the object of the sentence.

• In the passive voice, the structure is: Object + is/are + past participle + by + subject.

Therefore, the correct sentence is: 'French is spoken here by Suresh.'

Q92. Answer: (a) Assault

The solution is in Hindi. Read it online.

Q93. Answer: (b) Revange

The solution is in Hindi. Read it online.

Q94. Answer: (a) To confine somebody in prison

The solution is in Hindi. Read it online.

Q95. Answer: (b) To attain success

The correct answer is 'Option 2'.

Key Points

• The idiom "to make one's mark" means to achieve success or recognition in a particular field or endeavor.

• It implies leaving a lasting impression or making a significant impact on something or someone.

• When someone "makes their mark," they have accomplished something noteworthy or influential that sets them apart from others.

Therefore, the correct answer is: 'To attain success'

Q96. Answer: (d) but

The correct answer is 'Option 4' i.e. 'But'.

Key Points

• The most appropriate option to fill in blank number 1 is 4) but.

• The word "but" is used to introduce a contrast or contradiction in the sentence.

• In this context, it is used to indicate that the natural process of learning to walk and talk does not apply to reading.

• The sentence before the blank states that children learn to walk and talk naturally, implying that it is an innate ability.

• However, the use of "but" highlights that the same natural process does not apply to reading.

Therefore, the correct sentence is: Children learn to walk and talk naturally, (1) but that is not the case with reading. Reading strategies are designed to help your child develop a strong reading (2) _____ one built with confidence engagement and joy. As a parent, you are most likely always looking for (3) _ that make your child want to learn. We are here to help you and your child on their journey as a (4) ____ reader. Try some reading strategy suggestions below for kids (5) _____ are beginning to read all the way to those reading advanced chapter books.

Additional Information

• Because: This option does not fit well in the sentence because it does not provide a contrasting idea. It would imply that the reason for children learning to walk and talk naturally is because of reading, which is not the intended meaning.

• Rather: This option does not fit well in the sentence because it does not provide a contrasting idea. It would imply that children learn to walk and talk naturally instead of reading, which is not the intended meaning.

• When: This option does not fit well in the sentence because it does not provide a contrasting idea. It would imply a temporal relationship between learning to walk and talk and reading, which is not the intended meaning.

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Q97. Answer: (b) foundation

The correct answer is 'Option 2' i.e. 'Foundation'.

Key Points

• In the context of the sentence, the phrase "a strong reading foundation" indicates the basis or groundwork upon which a child's reading skills are developed.

• A reading foundation includes fundamental skills and abilities necessary for reading, such as letter recognition, phonics, vocabulary, and comprehension.

• The sentence highlights that reading strategies are designed to help children develop a strong reading foundation, one that is built with confidence, engagement, and joy.

Therefore, the correct sentence is: Children learn to walk and talk naturally, (1) but that is not the case with reading. Reading strategies are designed to help your child develop a strong reading (2) foundation one built with confidence engagement and joy. As a parent, you are most likely always looking for (3) ___ that make your child want to learn. We are here to help you and your child on their journey as a (4) ____ reader. Try some reading strategy suggestions below for kids (5) _____ are beginning to read all the way to those reading advanced chapter books.

Additional Information

• Explanation of other options:

• Presumption: This option does not fit well in the sentence. A presumption refers to a belief or assumption made without sufficient evidence, and it does not convey the idea of building or developing something.

• Corporation: This option does not fit well in the sentence. Corporation refers to a business organization, and it is not appropriate in the context of developing reading skills.

• Fluctuation: This option does not fit well in the sentence. Fluctuation refers to irregular changes or variations, and it does not convey the idea of building or developing a strong reading foundation.

Q98. Answer: (c) techniques

The correct answer is 'Option 3' i.e. 'Techniques'.

Key Points

• In the context of the sentence, the word "techniques" refers to specific methods or approaches used to achieve a particular result, in this case, making a child want to learn.

• As a parent, you are likely always looking for effective techniques that can spark your child's interest and motivation to learn.

• The sentence suggests that reading strategies are one such set of techniques designed to engage children and foster their enthusiasm for reading.

Therefore, the correct sentence is: Children learn to walk and talk naturally, (1) but that is not the case with reading. Reading strategies are designed to help your child develop a strong reading (2) foundation one built with confidence engagement and joy. As a parent, you are most likely always looking for (3) techniques that make your child want to learn. We are here to help you and your child on their journey as a (4) _____ reader. Try some reading strategy suggestions below for kids (5) _____ are beginning to read all the way to those reading advanced chapter books.

Additional Information

• Blueprints: This option does not fit well in the sentence. Blueprints are detailed plans or designs used in construction or engineering, and they do not convey the idea of methods or approaches to make a child want to learn.

• Fashions: This option does not fit well in the sentence. Fashions refer to popular trends or styles, and it does not convey the idea of specific techniques or methods to promote learning.

• Lines: This option does not fit well in the sentence. "Lines" usually refers to a series of words or phrases, and it does not convey the idea of techniques or methods for enhancing a child's desire to learn.

Q99. Answer: (a) budding

The solution is in Hindi. Read it online.

Q100. Answer: (c) who

The correct answer is 'Option 3' i.e. 'Who'.

Key Points

• The word "who" is used to refer to people.

• In this context, it is referring to the kids who are beginning to read all the way to those reading advanced chapter books.

• It emphasizes that the reading strategy suggestions below are intended for children, highlighting their active involvement in the reading process.

Therefore, the correct sentence is: Children learn to walk and talk naturally, (1) but that is not the case with reading. Reading strategies are designed to help your child develop a strong reading (2) foundation one built with confidence engagement and joy. As a parent, you are most likely always looking for (3) techniques that make your child want to learn. We are here to help you and

your child on their journey as a (4)budding reader. Try some reading strategy suggestions below for kids (5) who are beginning to read all the way to those reading advanced chapter books.

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