SSC CHSL Tier-1 2024: Official Paper (Held On: 02 Jul, 2024 Shift 2) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2024 • 100 questions • 60 minutes • Answer key and solutions

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

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ENGLISH LANGUAGE

Q1. The following sentence has been split into segments. Identify the segment that contains a grammatical error. If you don't find any error, mark 'No error' as your answer.

I goes to / attend dance classes at / the National Dance Academy.

(a) the National Dance Academy.
(b) I goes to
(c) attend dance classes at
(d) No error

Q2. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

I noticed that they / did not went to / the museum but entered / a shopping complex.

(a) the museum but entered
(b) a shopping complex.
(c) did not went to
(d) I noticed that they

Q3. Select the option that corrects the following sentence.

He has broken his leg yesterday.

(a) He broke his leg yesterday.
(b) He has broke his leg yesterday.
(c) He have broken his leg yesterday.
(d) He had broke his leg yesterday.

Q4. The given sentence is divided into three segments. Select the option that has the segment with a grammatical error.If there is no error, select 'No error'.

The meeting was called off / due to a medical emergency of / the manager of the company.

(a) No error
(b) due to a medical emergency of
(c) the manager of the company.
(d) The meeting was called off

Directions

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

If we look at the global population, out of every six persons living in this world, one is an Indian and (1)____ a Chinese. The population of Pakistan is very (2)_ and accounts for roughly about one-tenth of China or India. Though China is the largest nation and geographically (3) the largest area among the three nations, its density is the lowest. Scholars point out the one child (4) in China in the late 1970s as the major reason for low population growth. They also state that this measure led to a (5)___ in the sex ratio, the proportion of females per 1000 males.

Q5. Select the most appropriate option to fill in blank number 1.

(a) either
(b) another
(c) second
(d) many

Q6. Select the most appropriate option to fill in blank number 2.

(a) obscure
(b) small
(c) a little
(d) much

Q7. Select the most appropriate option to fill in blank number 3.

(a) grasps
(b) occupies
(c) rents
(d) lodges

Q8. Select the most appropriate option to fill in blank number 4.

(a) standard
(b) average
(c) statute
(d) ordeal

Q9. Select the most appropriate option to fill in blank number 5.

(a) suspension
(b) decline
(c) failure
(d) diminish

Q10. Select the most appropriate option that can substitute the underlined segment in the following sentence.

Rimjhim received a children's very illustrated colourful atlas on her 10^(th) birthday.

(a) a very illustrated colourful atlas children
(b) a colourful very illustrated children's atla
(c) a very colourful illustrated children's atlas
(d) an very illustrated colourful children's atlas

Q11. Select the most appropriate homonym to fill in the blank.

_____is a red-coloured root vegetable.

(a) Beet
(b) Bit
(c) Bead
(d) Beat

Q12. Select the most appropriate spelling of the underlined word in the given sentence.

The prison is euphemistically called a 'rehabillitation centre'.

(a) rehbilitation
(b) rehabilitation
(c) rehabilition
(d) rehabilation

Q13. Select the most appropriate option to fill in the blank.

I was in the _____ of a meeting when somebody called me.

(a) middle
(b) centre

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(c) corner
(d) round

Q14. Select the most appropriate ANTONYM of the given word.
Lethargic
(a) Intelligent
(b) Active
(c) Cute
(d) Exhausted

Q15. Select the most appropriate synonym of the bracketed word in the following sentence to fill in the blank.
The city's infrastructure was ill-equipped to handle the influx of _____(visitors) during the peak season.
(a) natives
(b) citizens
(c) tourists
(d) residents

Q16. Select the most appropriate meaning of the given idiom.
Slip your mind
(a) Forget about something
(b) Immediately think of something
(c) Can't think of anything to say
(d) Think about something for a short time

Q17. Select the most appropriate option that can substitute the underlined words in the following sentence.
I hope you have enjoying yourselves at the party tonight!
(a) enjoys yourselves
(b) enjoy yourselves
(c) are enjoying themselves
(d) will be enjoy himself

Q18. Select the most appropriate synonym of the given word.
Pliable
(a) Probable
(b) Malleable
(c) Severe
(d) Rigid

Q19. Identify the most appropriate synonym of the following word.
Implicate
(a) Complain
(b) Accuse
(c) Interrogate
(d) Confuse

Q20. Identify the incorrectly spelt word and select its correct spelling.
Wether we want to admit it or not, we all wish everyone would like us.
(a) admitt
(b) addmit
(c) whither
(d) whether

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Q21. Select the most appropriate option that can substitute the underlined segment in the given sentence.

Their was a large snake found in the garden last evening.

(a) Their was the larger snake
(b) There was the larger snake
(c) There was not a large snake
(d) There was a large snake

Q22. Select the most appropriate ANTONYM of the word given in brackets to fill in the blank.

The firefighter summoned all her _____ (cowardice) and rushed into the burning building.

(a) erudition
(b) skills
(c) courage
(d) expertise

Q23. Select the most appropriate option to fill in the blank.

Both the criminals were cruel and _____.

(a) warm
(b) sympathetic
(c) diligent
(d) brutal

Q24. Select the most appropriate meaning of the given idiom.

Lose heart

(a) To be suspicious of your success
(b) To get success by believing in yourself
(c) To believe in your success
(d) To stop believing that you can succeed

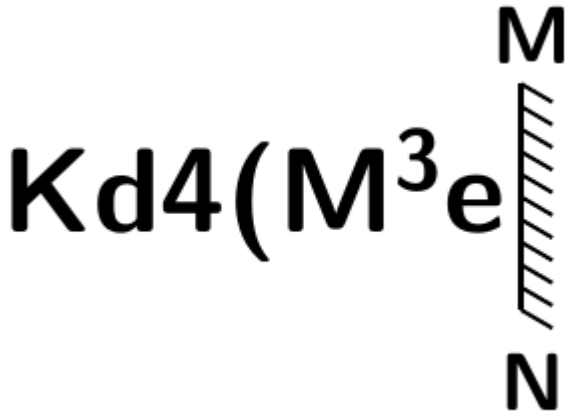
Q25. Select the most appropriate option that can substitute the underlined segment in the given sentence.

Please take many as you want.

(a) too much
(b) so much
(c) much of
(d) as much

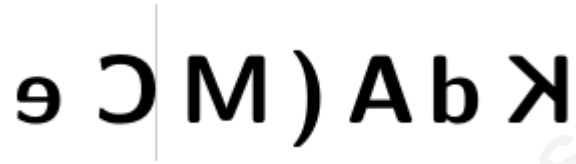
GENERAL INTELLIGENCE

Q26. Select the correct mirror image of the given combination when the mirror is placed at MN as shown below.

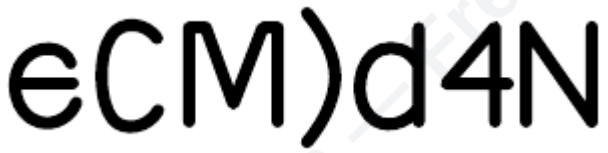


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(a)



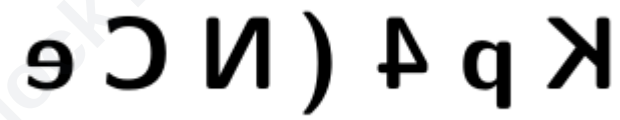
(b)



(c)



(d)



Q27. Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below.

(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)

Honest : Corrupt

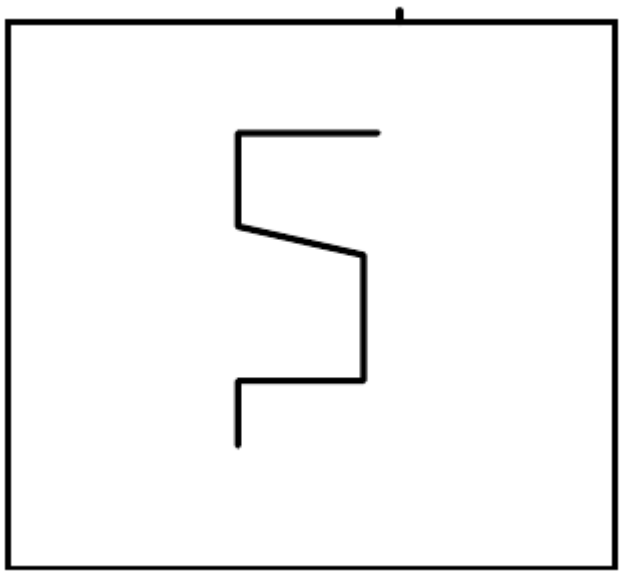
(a) Observe : Watch

(b) Scarce : Rare

(c) Strong : Fragile

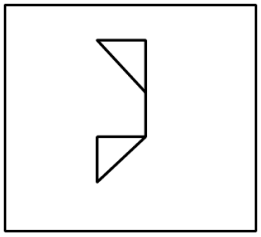
(d) Admire : Respect

Q28. Select the option in which the given figure is embedded (rotation is not allowed).

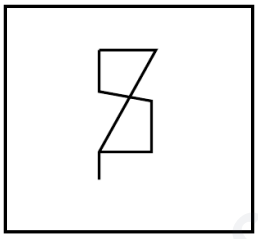


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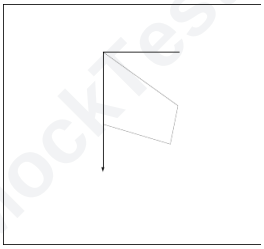
(a)



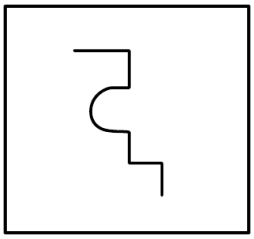
(b)



(c)



(d)



Q29. What should come in place of the question mark (?) in the given series?

3977, 3877, 3777, 3677, 3577, ?

(a) 3277
(b) 3333
(c) 3477
(d) 3377

Q30. HF 16 is related to KI 8 in a certain way. In the same way, RP 10 is related to US 5. To which of the following is NL 6 related, following the same logic?

(a) OQ 2
(b) LJ 3
(c) QS 2
(d) QO 3

Q31. Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below.

(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/consonants/vowels in the word.)

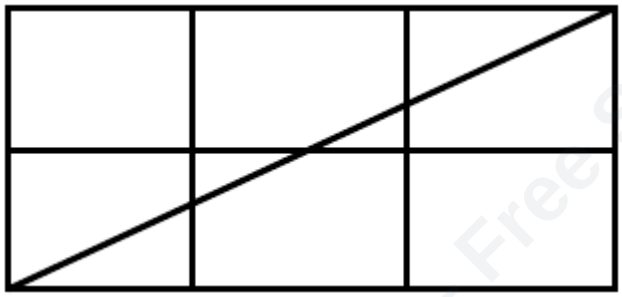
Problem : Solution

(a) Talk : Speak
(b) Time : Money
(c) Success : Fame

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(d) Lost : Found

Q32. How many triangles are there in the following figure?



(a) 6
(b) 5
(c) 10
(d) 7

Q33. If the seventh day of a month is three days earlier than Friday, then what day will it be on the 20^(th) day of the month?

(a) Monday
(b) Tuesday
(c) Wednesday
(d) Thursday

Q34. Which of the following letter-clusters can replace the question mark (?) in the given series to make it logically complete?

PQR, RTV, TWZ, VZD, ?

(a) XCH
(b) OPS
(c) YCZ
(d) WXT

Q35. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(5, 7, 74)

(6, 4, 52)

(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) (9, 5, 206)
(b) (9, 5, 405)
(c) (6, 2, 52)
(d) (11, 5, 146)

Q36. What will come in the place of '?' in the following equation if '+' and '–' are interchanged and '×' and '÷' are interchanged?

21 + 23 – 46 × 23 ÷ 21 = ?

(a) 78
(b) 65
(c) 90
(d) 40

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Q37. If 'E' stands for '×', 'O' stands for '+', 'U' stands for '-' and 'V' stands for '÷', what will come in place of the question mark (?) in the following equation?

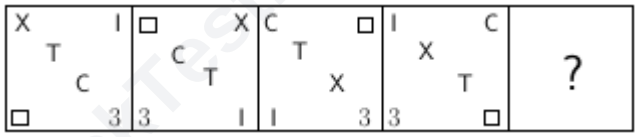
12 V 2 O 36 E 48 U 53 = ?

(a) 6234
(b) 1681
(c) 3142
(d) 1650

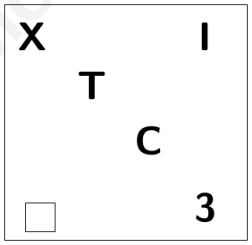
Q38. 99 is related to 77.3 following a certain logic. Following the same logic, 84.4 is related to 62.7. To which of the following is 72.6 related, following the same logic?

(a) 52.7
(b) 50.9
(c) 54.2
(d) 57.3

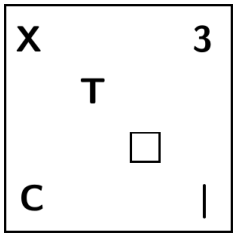
Q39. Identify the figure given in the options that when put in place of the question mark (?) will logically complete the series.



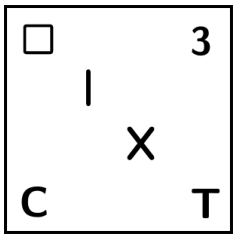
(a)



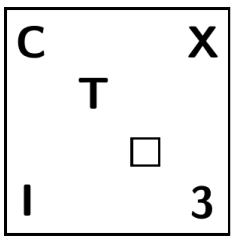
(b)



(c)



(d)



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Q40. In a certain code language, 'no way out' is written as 'rp ab lm' and 'out of house' is written as 'mr rp bd'. How is 'out' written in the given language?

(a) mr
(b) lm
(c) rp
(d) ab

Q41. Three statements are followed by conclusions numbered I, II. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.

Statements:

All shirts are pants.

Some dresses are pants.

Some pants are ties.

Conclusion (I): Some dresses are ties.

Conclusion (II): Some ties are shirts.

(a) Only conclusion (II) follows.
(b) Both conclusions (I) and (II) follow.
(c) Only conclusion (I) follows.
(d) Neither conclusion (I) nor (II) follows.

Q42. If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark (?) in the following equation?

44 B 5 C 68 D 144 A 4 = ?

(a) 256
(b) 250
(c) 254
(d) 252

Q43. Three of the following four are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

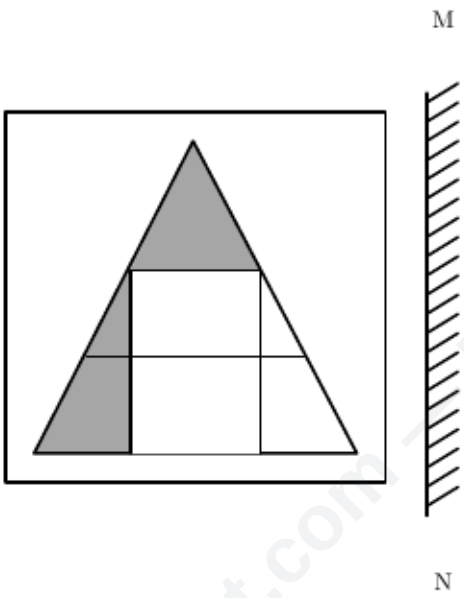
(a) BFJ
(b) LPT
(c) GJN
(d) RVZ

Q44. In a certain code language, ‘love to god’ is coded as ‘xr od yk’ and ‘god bless you’ is coded as ‘ts ap od’. How is ‘god’ coded in the given language?

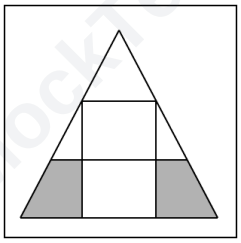
(a) yk
(b) tc
(c) ap
(d) od

Q45. Select the correct mirror image of the given figure when the mirror is placed at MN, as shown.

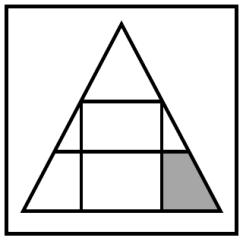
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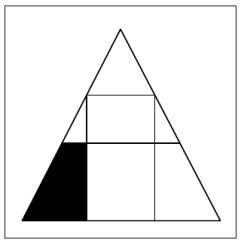
(a)



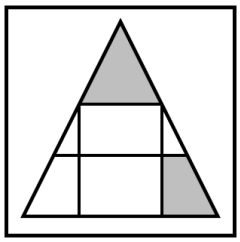
(b)



(c)

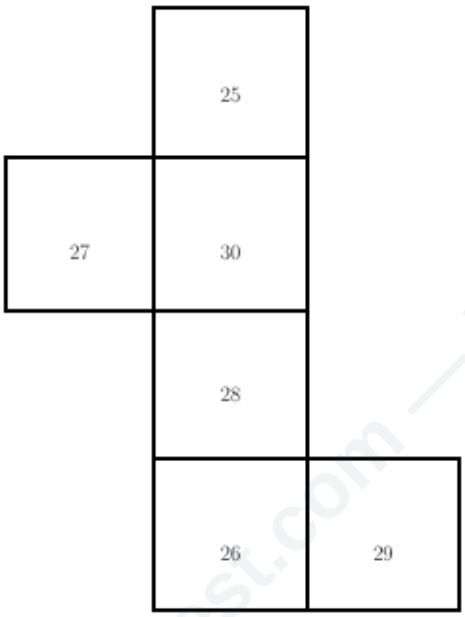


(d)



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Q46. What would be the number on the opposite side of '30' if the given sheet is folded to form a cube?



(a) 26
(b) 28
(c) 29
(d) 27

Q47. Which of the following numbers will replace the question mark (?) in the given series?

67 100 146 179 225 258 ?

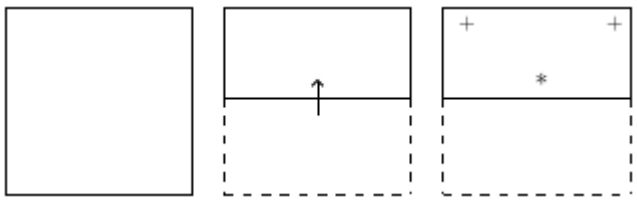
(a) 292
(b) 318
(c) 325
(d) 304

Q48. In a certain code language,

'M & N' means 'M is the wife of N',
'M @ N' means 'M is the brother of N',
'M $ N' means 'M is the father of N',
'M # N' means 'M is the sister of N'.
Based on this, how is D related to H, if 'D & E $ F # G @ H'?

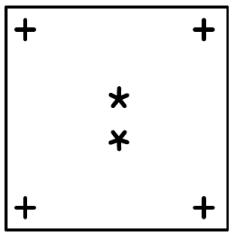
(a) Father's sister
(b) Sister
(c) Father's mother
(d) Mother

Q49. A paper is folded and cut as shown below. How will it appear when unfolded?

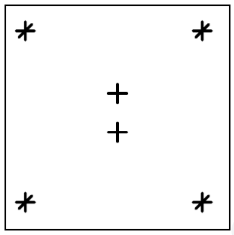


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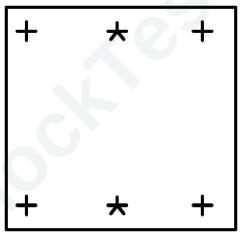
(a)



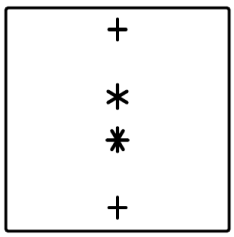
(b)



(c)



(d)



Q50. What should come in place of the question mark (?) in the given series based on the English alphabetical order?

YAU, DFZ, IKE, NPJ, ?

(a) SUO
(b) SOU
(c) RUS
(d) SRU

QUANTITATIVE APTITUDE

Q51. The average monthly expenditure of a family was Rs. 2,500 during the first 4 months, Rs. 2,750 during the next 5 months and Rs. 3,550 during the last 3 months of a year. If the total saving during the year was Rs. 5,500, what was the average monthly income of the family?

(a) Rs. 3,325
(b) Rs. 4,375
(c) Rs. 7,355
(d) Rs. 5,790

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Q52. Moving at 6/7 of its usual speed, a bus is 20 minutes late. What is its usual time to cover the journey?

(a) 4 hours
(b) 2 hours
(c) 3 hours
(d) 1.5 hours

Q53. Read the given information and answer the question that follows.

The following table gives the percentage of marks obtained by seven students in six different subjects in an examination.

The number in the brackets gives the maximum marks in each subject.

Student	**Subject (Max. Marks)**					
Maths	Chemistry	Physics	Geography	History	Computer Science	
	(150)	(130)	(120)	(100)	(60)	(40)
Ayush	90	50	90	60	70	80
Aman	100	80	80	40	80	70
Sajal	90	60	70	70	90	70
Rohit	80	65	80	80	60	60
Muskan	80	65	85	95	50	90
Tanvi	70	75	65	85	40	60
Tarun	65	35	50	77	80	80

What is the total raw score obtained by Rohit?

(a) 440.5
(b) 444.5
(c) 425
(d) 430.5

Q54. If 35 is the mean proportional of 25 and x, then what is value of x?

(a) 49
(b) 47
(c) 48
(d) 46

Q55. The volume of a cube is reduced to 72.9%. By how much is the side of the cube reduced?

(a) 10%
(b) 8.5%
(c) 9%
(d) 9.5%

Q56. A hemisphere has a radius of 6.2 cm. Find its total surface area (use π = 3.14) (round off to two decimal places).

(a) 276.35 cm2
(b) 282.25 cm2
(c) 358.52 cm2
(d) 362.10 cm2

Q57. If ΔABC and ΔPQR are similar. AB = 8 cm, PQ = 12 cm, QR = 18 cm and RP = 24 cm, then the perimeter of ΔABC is _____ cm.

(a) 36
(b) 54

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(c) 27
(d) 42

Q58. 47 masons can dig a 35 m long trench in one day. How many masons should be employed for digging a 105 m long trench of the same type in one day?
(a) 70
(b) 141
(c) 94
(d) 128

Q59. Two equal circles are drawn on a square in such a way that opposite side of the square forms the diameter of each circle. If the remaining area of the square is 42 cm^2, what is the measurement (in cm) of the diameter of each circle?
(a) 2.5
(b) 14
(c) 7
(d) 3.5

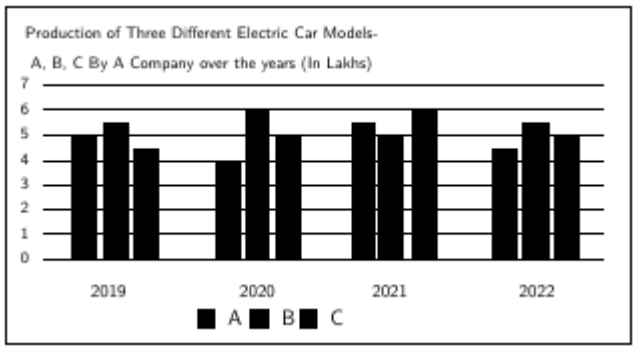
Q60. If the brick size is 25 cm × 12 cm × 9 cm, then how many bricks are required to construct a wall of length 10 m, breadth 22.5 cm and height 6 m?
(a) 8000
(b) 5000
(c) 4500
(d) 6000

Q61. The distance between the centres of two circles of radii 4 cm and 2 cm is 10 cm. The length (in cm) of a transverse common tangent is:
(a) 8
(b) 6
(c) 11
(d) 13

Q62. When a number is increased by 8, it becomes 120% of itself. The number is:
(a) 60
(b) 40
(c) 50
(d) 30

Q63. Given that $\sin\theta = 15/17$. Evaluate $(15\cot\theta + 17\sin\theta)/(8\tan\theta + 16\sec\theta)$, where $0° < \theta < 90°$.
(a) 49/23
(b) 23/49
(c) 49/26
(d) 26/23

Q64. An electric vehicle company produces three different car models: A, B and C. The production of three different models over a period of four years has been shown in the bar graph below.



What is the difference between the average production of Model A in 2019, 2021 and 2022 and the average production of Model B in 2020, 2021 and 2022?

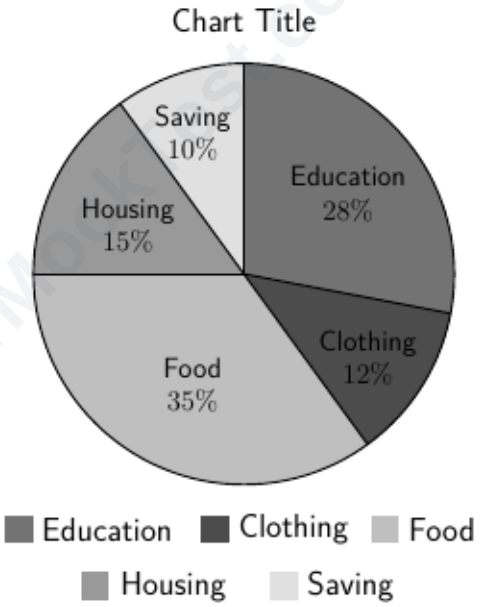
(a) 50,000 cars
(b) 80,000 cars
(c) 45,000 cars
(d) 95,000 cars

Q65. The sum of the five consecutive even numbers is 2720. The sum of the third and fifth numbers is:

(a) 1092
(b) 1192
(c) 1292
(d) 1392

Q66. Study the given pie-chart and answer the question that follows.

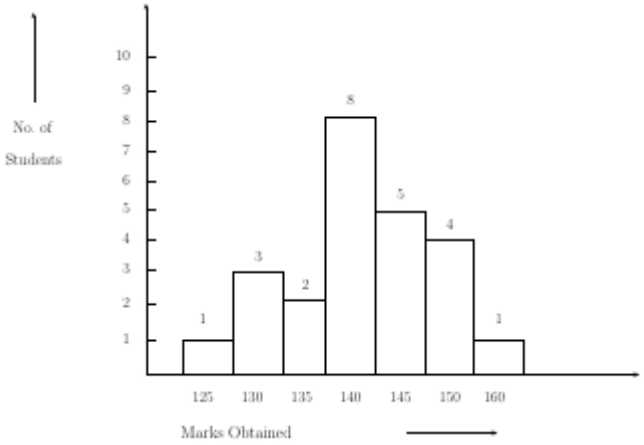
The pie-chart shows the monthly expenditure incurred by a family on various items and their savings.



If the total expenditure is Rs. 84,000, then what is the expenditure on food (in Rs.)?

(a) 27400
(b) 19400
(c) 29400
(d) 23500

Q67. Study the given bar-graph and answer the question that follows.



How many students obtained less than the average marks of the class?

(a) 10

(b) 14
(c) 11
(d) 6

Q68. If the side of a square is increased by 5%, then the percentage increase in its area will be:

(a) 10.5%
(b) 10.25%
(c) 10%
(d) 11%

Q69. From the salary of a software engineer, if 15% is used as house rent, 25% of the remaining is spent on household items, 25% of the remaining as income tax, and 15% of the remaining on clothing, then he is left with Rs. 10,404. Find his total salary.

(a) Rs. 24,600
(b) Rs. 23,600
(c) Rs. 25,600
(d) Rs. 22,600

Q70. On dividing a certain number by 304, we get 43 as the remainder. If the same number isdivided by 16, what will be the remainder?

(a) 12
(b) 15
(c) 11
(d) 8

Q71. What is the effective discount percentage if a shopkeeper offers a scheme discount buy five and get one free'?

(a) 15.67%
(b) 16.67%
(c) 15.33%
(d) 16.33%

Q72. The simple interest on a sum of money for 11/2 years at 10% per annum is Rs. 30 more than the simple interest on the same sum for 1 year at 12% per annum. Find the sum.

(a) Rs. 1,000
(b) Rs. 1,250
(c) Rs. 1,200
(d) Rs. 1,050

Q73. Consider two concentric circles having radii 17 cm and 15 cm. What is the length (in cm)of the chord, of the bigger circle, which is a tangent to the smaller circle?

(a) 8
(b) 16
(c) 10
(d) 12

Q74. If 70% of the cost price of an article is equal to 40% of its selling price, what is the profit percentage?

(a) 85%
(b) 20%
(c) 75%
(d) 45%

Q75. Simplify the following expression.

(3 - 3 × 3 + 3 ÷ 3 + 3 × 5) × 2 of 5 + (2 + 2 ÷ 2 + 2 × 2 - 2)

(a) 105
(b) 102

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(c) 106
(d) 100

GENERAL AWARENESS

Q76. In April 2023, Government of India launched Vibrant Village Programme from Kibithoo village which is located in _____.
(a) Arunachal Pradesh
(b) Assam
(c) Bihar
(d) Meghalaya

Q77. What will happen when you select the cell contents of a particular row in MS-Excel and then click the Delete button?
(a) Entries in all the selected cells will be deleted
(b) First five cell entries will be deleted
(c) Only first three cells will be deleted
(d) Entire row will be deleted

Q78. Who is the only Indian woman who has been ranked world's no.1 for badminton?
(a) Saina Nehwal
(b) Jwala Gutta
(c) Rituparna Das
(d) P V Sindhu

Q79. What is the main objective of Fiscal Responsibility and Budget Management Act (FRBMA), 2003?
(a) To reduce fiscal deficit
(b) To reduce subsidies
(c) To increase excise duty
(d) To increase exports

Q80. Which famous book was written by 'Haripala'?
(a) Gita Govinda
(b) Sangeet Ratnakara
(c) Sangeeta Sudhakara
(d) Sangeet Darpan

Q81. Orographic rainfall occurs when _____.
(a) the air masses collide at Intertropical Conversion Zone
(b) a cyclone makes a landfall
(c) hot air rises up in conventional currents
(d) saturated air mass comes across a mountain

Q82. The Industrial Policy Resolution, 1948 mainly categorised the large-scale industries into _____ fragments.
(a) five
(b) three
(c) two
(d) four

Q83. When was the Bharat Nirman Programme launched by the Government of India?
(a) 2014
(b) 2000
(c) 2005
(d) 2010

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Q84. Which of the following statements are INCORRECT vis-à-vis features of the Indian Constitution?

1) The Constitution empowers the Prime Minister to proclaim three types of emergencies.
2) A reservation policy is there to uplift the disadvantaged sections of society.
3) The Supreme Court has no power of judicial review.
4) The Constitution provides for universal adult suffrage.

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

Q85. 'Chhau' is a popular dance of which of the following state?

(a) Gujarat
(b) Haryana
(c) Jharkhand
(d) Kerala

Q86. The Reserve Bank of India was fully nationalised and owned by the Government of India in which of the following years?

(a) 1947
(b) 1948
(c) 1949
(d) 1950

Q87. Which of the following is the festival of Kerala that heralds the harvest season, lasts for 10 days, and has snake boat races etc?

(a) Thrissur Pooram
(b) Vishu
(c) Onam
(d) Thiruvathira

Q88. On what type of data can MS Excel functions operate?

(a) Range of cells or groups of cells
(b) External data sources only
(c) Entire worksheets only
(d) Individual cells only

Q89. According to Census of India 2011, how many districts are there in India?

(a) 630
(b) 640
(c) 620
(d) 610

Q90. Which of the following is an example of a ‘solid in a liquid’ type of solution?

(a) Brass
(b) Vinegar
(c) Tincture of iodine
(d) Bronze

Q91. The fifth edition of the Khelo India Youth Games were organised in Bhopal city in which year?

(a) 2020
(b) 2022
(c) 2023
(d) 2021

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Q92. Which folk music does NOT belong to Nagaland?

(a) Hereileu
(b) Heliamleu
(c) Nyioga
(d) Neuleu

Q93. Which of the following was NOT a venue for the 66^(th) National School Games 2022-23?

(a) Gwalior
(b) Delhi
(c) Ludhiana
(d) Bhopal

Q94. Which of the following groups of places in India has little differences in day and night temperatures?

(a) Bhopal and Indore
(b) Jammu and Kashmir
(c) Jaipur and Jaisalmer
(d) Chennai and Thiruvananthapuram

Q95. In September 2022 the book 'Ambedkar and Modi: Reformer's Ideas Performer's Implementation' has been written by which of the following personalities?

(a) APJ Abdul Kalam
(b) Ram Nath Kovind
(c) Pratibha Patil
(d) Sarvepalli Radhakrishnan

Q96. How do the muscle cells help in movement?

(a) The blood flow of the cells helps in movement.
(b) The thickness of the cell layer helps in movement.
(c) The lining of the vessels inside help in movement.
(d) The contraction and relaxation of these cells result in movement.

Q97. In July 2021, which state government passed a resolution supporting an ad hoc committee report that favoured the creation of a legislative council?

(a) Bihar
(b) Odisha
(c) Telangana
(d) West Bengal

Q98. Which of the following is NOT a poverty alleviation programme in India?

(a) Prime Minister Rozgar Yojana
(b) Rashtriya Ucchatar Shiksha Abhiyan
(c) Swarna Jayanti Shahari Rozgar Yojana
(d) Integrated Rural Development Program

Q99. Article 20 of the Constitution of India is related to _____.

(a) abolition of titles
(b) protection in respect of conviction for offenses
(c) freedom to manage religious affairs
(d) equality of opportunities in matters of public employment

Q100. Mahabalipuram temple was built under the reign of which of the following dynasties?

(a) Rashtrakuta
(b) Chola
(c) Pallava
(d) Pratihara

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ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) I goes to

The correct answer is '2' i.e. this part of the sentence has an error.

Key Points

• In the second part of the given sentence, the verb 'goes' is incorrect.

• The subject 'I' is first person singular and should be used with the verb 'go' to form 'I go'.

• Therefore, the correct form of the verb should be 'go' instead of 'goes'.

Hence, the correct answer is option 2.

Correct sentence: I go to attend dance classes at the National Dance Academy.

Additional Information

• The subject 'I' always takes the base form of the verb without the 's' ending.

• In English, the third person singular pronouns (he, she, it) are the ones that take a verb with an 's' ending in the present simple tense.

Q2. Answer: (c) did not went to

The correct answer is '3' i.e. this part of the sentence has an error.

Key Points

• In the third part of the given sentence, the phrase 'did not went' is incorrect.

• The correct form should be 'did not go' because when using 'did' in the past tense, the base form of the verb 'go' should be used, not the past form 'went'.

• Therefore, the correct phrase should be 'did not go'.

Hence, the correct answer is option 3.

Correct sentence: I noticed that they did not go to the museum but entered a shopping complex.

Additional Information

• Whenever 'did' is used in a question or negative sentence in the past tense, the main verb should be in its base form.

• Example: She did not eat the cake. (Not: She did not ate the cake.)

• Similarly: Did they go to the museum? (Not: Did they went to the museum?)

Q3. Answer: (a) He broke his leg yesterday.

The correct answer is '1' i.e., He broke his leg yesterday.

Key Points

• The original sentence "He has broken his leg yesterday" is incorrect due to the use of the present perfect tense with a specific past time reference ('yesterday').

• The correct way to refer to a specific time in the past ('yesterday') is by using the simple past tense.

• Therefore, we should say "He broke his leg yesterday.".

Hence, the correct answer is option 1.

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Correct sentence: He broke his leg yesterday.

Additional Information

• The present perfect tense (has/have + past participle) is used to describe actions that have occurred at an unspecified time before now, not specific past times like 'yesterday'.

• Example: He has broken his leg. (unspecified time)

• Simple past is used for actions completed at a specific time in the past.

• Example: He broke his leg last week. (specific time)

Q4. Answer: (a) No error

The correct answer is Option 1.

Key Points

• The sentence "The meeting was called off due to a medical emergency of the manager of the company." is grammatically correct as it stands.

• The use of "due to a medical emergency of the manager of the company" is appropriate and conveys the intended meaning correctly.

Therefore, there is no grammatical error in the sentence, and the correct answer is Option 1 (No error).

Additional Information

• Option 2 ("due to a medical emergency of") is correct as it stands and does not contain an error.

• Option 3 ("the manager of the company.") is also correct and grammatically sound.

• Option 4 ("The meeting was called off") is a grammatically correct segment as well.

Q5. Answer: (b) another

The solution is in Hindi. Read it online.

Q6. Answer: (b) small

The solution is in Hindi. Read it online.

Q7. Answer: (b) occupies

The solution is in Hindi. Read it online.

Q8. Answer: (c) statute

The solution is in Hindi. Read it online.

Q9. Answer: (b) decline

The solution is in Hindi. Read it online.

Q10. Answer: (c) a very colourful illustrated children’s atlas

The correct answer is '3' i.e., a very colourful illustrated children’s atlas.

Key Points

• The original sentence "Rimjhim received a children’s very illustrated colourful atlas on her 10th birthday" is incorrect due to the improper order of adjectives.

• The order of adjectives in English typically follows this sequence: quantity, quality, size, age, shape, color, proper adjective (often nationality, other place of origin, or material), and purpose or qualifier.

• Accordingly, "very" (emphasizer) should come first, then "colourful" (quality), and finally "illustrated" (participle acting as an adjective).

• Therefore, the phrase should be "a very colourful illustrated children’s atlas."

Hence, the correct answer is option 3.

Correct sentence: Rimjhim received a very colourful illustrated children’s atlas on her 10th birthday.

Additional Information

• The rules for the correct order of adjectives ensure clear and natural-sounding descriptions in English.

• Example: She bought a beautiful large old round wooden table.

• This sequence helps in maintaining a logical and readable structure in sentences that include multiple adjectives.

Q11. Answer: (a) Beet

The correct answer is '1' i.e., Beet.

Key Points

• The sentence "_____ is a red-coloured root vegetable" requires a word describing a specific red-coloured root vegetable.

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• The word "Beet" refers to the beetroot, which is a red-coloured root vegetable.
• The other options do not fit the context:
• "Bit" is a small piece or amount of something.
• "Bead" is a small, decorative object with a hole for threading or stringing.
• "Beat" refers to striking something repeatedly or a rhythmic movement.

Hence, the correct answer is option 1.

Correct sentence: Beet is a red-coloured root vegetable.

Additional Information

• Homonyms are words that sound the same but have different meanings, such as "beet" and "beat." Correct usage depends on the context.
• Example: They played to the beat of the drums. / He bought a beet from the market.
• Understanding homonyms enhances clarity and precision in language use.

Q12. Answer: (b) rehabilitation

The solution is in Hindi. Read it online.

Q13. Answer: (a) middle

The solution is in Hindi. Read it online.

Q14. Answer: (b) Active

The solution is in Hindi. Read it online.

Q15. Answer: (c) tourists

The solution is in Hindi. Read it online.

Q16. Answer: (a) Forget about something

The solution is in Hindi. Read it online.

Q17. Answer: (b) enjoy yourselves

The correct answer is '2' i.e., "enjoy yourselves".

Key Points

• The original sentence "I hope you have enjoying yourselves at the party tonight!" is incorrect due to the grammatical structure.
• The phrase should be in the present simple tense, which is more appropriate for expressing a hope or wish.
• Therefore, the correct substitution is "enjoy yourselves".

Hence, the correct answer is option 2.

Correct sentence: I hope you enjoy yourselves at the party tonight!

Additional Information

• The other options do not fit the context:
• "enjoys yourselves" is incorrect as "enjoys" is singular and doesn't agree with "yourselves".
• "are enjoying themselves" changes the subject to "themselves" instead of "you".
• "will be enjoy himself" has a grammatical error and also changes the subject to "himself".
• Using the correct verb form ensures clarity and proper sentence structure.

Q18. Answer: (b) Malleable

The solution is in Hindi. Read it online.

Q19. Answer: (b) Accuse

The solution is in Hindi. Read it online.

Q20. Answer: (d) whether

The solution is in Hindi. Read it online.

Q21. Answer: (d) There was a large snake

The correct answer is '4' i.e., "There was a large snake".

Key Points

• The original sentence "Their was a large snake found in the garden last evening" is incorrect because "Their" is a possessive adjective, not appropriate for indicating existence or location.

• The correct word to use in this context is "There," which is used to indicate the existence of something or its location.

Hence, the correct answer is option 4.

Correct sentence: There was a large snake found in the garden last evening.

Additional Information

• The other options do not fit the context:

• "Their was the larger snake" is incorrect as "Their" is a possessive adjective and "the larger snake" changes the meaning.

• "There was the larger snake" is incorrect as "the larger snake" implies a comparative which is unnecessary here.

• "There was not a large snake" changes the meaning of the sentence to indicate no snake was found.

• Using "There" correctly indicates the existence of something, ensuring clarity and grammatical correctness.

Q22. Answer: (c) courage

The solution is in Hindi. Read it online.

Q23. Answer: (d) brutal

The solution is in Hindi. Read it online.

Q24. Answer: (d) To stop believing that you can succeed

The solution is in Hindi. Read it online.

Q25. Answer: (d) as much

The correct answer is '4' i.e., "as much".

Key Points

• The original sentence "Please take many as you want" is incorrect because "many" is used with countable nouns and does not fit the context of the sentence.

• The correct phrase to use here is "as much," which fits the construction "as much as you want," used to indicate an unspecified amount.

Hence, the correct answer is option 4.

Correct sentence: Please take as much as you want.

Additional Information

• The other options do not fit the context:

• "too much" implies an excessive amount, which is not suitable in this context.

• "so much" does not fit grammatically within the given sentence structure.

• "much of" is incorrect and does not fit the context of the sentence.

• Using "as much" correctly indicates no limitation on the amount, ensuring the sentence is grammatically correct and clear.

Q26. Answer: (a) [figure]

The correct mirror image of the given figure is:

Hence, the correct answer is "Option 1".

Q27. Answer: (c) Strong : Fragile

The logic followed here is:

Logic: Antonyms

Here,

Honest : Corrupt → Honest is an antonym of Corrupt.

Similarly,

Strong : Fragile → Strong is an antonym of Fragile.

Hence, the correct answer is "Option 3".

Q28. Answer: (b) [figure]

Let's check each option,

No.	Question	Option	Answer
1)			Not Embedded
2)			Embedded
3)			Not Embedded

4)			Not Embedded

Hence, the correct answer is "Option 2".

Q29. Answer: (c) 3477

The logic followed here is,

Hence, the correct answer is "3477".

Q30. Answer: (d) QO 3

The logic followed here is,

HF 16 is related to KI 8,

RP 10 is related to US 5,

Similarly,

NL 6 is related to,

Hence, the correct answer is "QO 3".

Q31. Answer: (d) Lost : Found

The logic followed here is:

Logic: Problem and its corresponding Solution.

Here,

Problem : Solution → Solution is the answer to a Problem.

Similarly,

Lost : Found → Found is the answer to Lost.

Hence, the correct answer is "Option 4".

Q32. Answer: (c) 10

Let's count the number of triangles in the given figure,

Hence, the correct answer is "10".

Q33. Answer: (a) Monday

According to the given information,

If the seventh day of a month is three days earlier than Friday.

→ Seventh day of a month = Friday - 3 = Tuesday.

Number of days between 7^(th) day of a month and 20th day of the month = 13 days = 1 week 6 days.

So, 20th day of the month = Tuesday + 6 days = Monday.

Hence, the correct answer is "Monday".

Q34. Answer: (a) XCH

The logic followed here is,

Hence, the correct answer is "XCH".

Q35. Answer: (d) (11, 5, 146)

The logic followed here is:

Logic: (Square of 1st number + Square of 2nd number) = 3rd number.

Now,

For, (5, 7, 74)

=> $(5^2 + 7^2) = 25 + 49 = 74$.

For, (6, 4, 52)

=> $(6^2 + 4^2) = 36 + 16 = 52$.

Similarly, for the options:

Option 1: (9, 5, 206)

=> $(9^2 + 5^2) = 81 + 25 = 106$ (not 206).

Option 2: (9, 5, 405)

=> $(9^2 + 5^2) = 81 + 25 = 106$ (not 405).

Option 3: (6, 2, 52)

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=> $(6^2 + 2^2) = 36 + 4 = 40$ (not 52).

Option 4: (11, 5, 146)

=> $(11^2 + 5^2) = 121 + 25 = 146$ (correct).

Hence, the correct answer is "Option 4".

Q36. Answer: (d) 40

Given equation: 21 + 23 – 46 × 23 ÷ 21 = ?

Sign	•	×
Interchange with	•	÷

After interchanging the signs, the equation we get:

→ 21 – 23 + 46 ÷ 23 × 21 = ?

→ 21 – 23 + 2 × 21 = ?

→ 21 – 23 + 42 = ?

→ 63 – 23 = 40

Hence, the correct answer is "40".

Q37. Answer: (b) 1681

Given Equation: 12 V 2 O 36 E 48 U 53 = ?

BODMAS Rule:

Decoding the given information:

Alphabet	E	O	U	V
Meaning	×	•	•	÷

Now replacing the sign from left to right using BODMAS Rule, we get:

=> 12 ÷ 2 + 36 × 48 - 53 = ?

=> 6 + 36 × 48 - 53 = ?

=> 6 + 1728 - 53 = ?

=> 1734 - 53 = 1681.

Hence, the correct option is "Option 2".

Q38. Answer: (b) 50.9

Logic: 1st number - 21.70 = 2nd number.

=> 72.6 - 21.70 = 50.9.

Q39. Answer: (a) [figure]

The logic followed here is:

Logic: Step 1 and Step 2 are being followed on alternate basis in subsequent terms.

Hence, the correct answer is "Option 1".

Q40. Answer: (c) rp

According to the given information,

Here, we can see that the code for 'out' is 'rp'.

Hence, the correct answer is "rp".

Q41. Answer: (d) Neither conclusion (I) nor (II) follows.

The least possible venn diagram is shown below,

Conclusion (I): Some dresses are ties → False (Because there is no direct relation given between dresses and ties, so it is possible but not definite).

Conclusion (II): Some ties are shirts → False (Because there is no direct relation given between ties and shirts, so it is possible but not definite).

Hence, the correct answer is "Neither conclusion (I) nor (II) follows".

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Q42. Answer: (d) 252

Given Equation: 44 B 5 C 68 D 144 A 4 = ?

BODMAS Rule:

Decoding the given information:

Alphabet	A	B	C	D
Meaning	÷	×	•	•

Now replacing the sign from left to right using BODMAS Rule, we get:

=> 44 × 5 + 68 - 144 ÷ 4 = ?

=> 44 × 5 + 68 - 36 = ?

=> 220 + 68 - 36 = ?

=> 288 - 36 = 252.

Hence, the correct option is "Option 4".

Q43. Answer: (c) GJN

Let's check each option,

1) BFJ

2) LPT

3) GJN

4) RVZ

Here, we can see that all options followed a pattern except GJN.

Hence, the correct answer is "GJN".

Q44. Answer: (d) od

According to the given information,

Here, we can see that the code for 'god' is 'od'.

Hence, the correct answer is "od".

Q45. Answer: (d) [figure]

The correct mirror image of the given figure is:

Hence, the correct answer is "Option 4".

Q46. Answer: (a) 26

Opposite surface of the open dice can be found by the below methods: -

• Alternate surfaces are opposite to each other.

• No two opposite surface are touched by side or by corners.

So, by using the above rule we can find the opposite surface of open dice.

Below are the opposite surfaces: -

Here, we can see that the number on the opposite side of '30' is '26'.

Hence, the correct answer is "26".

Q47. Answer: (d) 304

The logic followed here is,

Hence, the correct answer is "304".

Q48. Answer: (d) Mother

Preparing the family tree using the following symbols,

Given equation: D & E $ F # G @ H

Code	&	@	$	#
Relation	Wife	Brother	Father	Sister

The family tree can be drawn as per the given information,

Here, we can see that D is the mother of H.

Hence, the correct answer is "Mother".

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Q49. Answer: (a) [figure]

When the paper is unfolded, we get:

Hence, the correct answer is "Option 1".

Q50. Answer: (a) SUO

The logic followed here is,

Hence, the correct answer is "SUO".

Q51. Answer: (a) Rs. 3,325

Given:-

First 4 month average monthly expenditure of a family = 2,500 Rs.

Next 5 month average monthly expenditure of a family = 2,750 Rs.

Last 3 month average monthly expenditure of a family = 3,550 Rs.

Total saving of a family during a year = 5,500 Rs.

Concept Use :-

Average = Sum ~of ~all~ the ~quantity over Total ~number ~of ~quantity

Income = Saving + Expenditure

Calculation :-

=> First 4 month total expenditure of a family = (First 4 month average monthly expenditure of a family) × (Number of month)

=> First 4 month total expenditure of a family = (2500 Rs) ×(4) = 10,000 Rs.

=> Next 5 month total expenditure of a family = (Next 5 month average monthly expenditure of a family) × (Number of month)

=> Next 5 month total expenditure of a family = (2750 Rs) × (5) = 13,750 Rs.

=> Last 3 month total expenditure of a family = (Last 3 month average monthly expenditure of a family) × (Number of month)

=> Last 3 month total expenditure of a family = (3550 Rs) × (3) = 10,650 Rs.

Now,

=> Total Income of a family in a year = (Total saving of a family during a year) + (First 4 month total expenditure of a family) + (Next 5 month total expenditure of a family) + (Last 3 month total expenditure of a family)

=> Total Income of a family in a year = 5,500 Rs + 10,000 Rs + 13,750 Rs + 10,650 Rs = 39,900 Rs.

=> Average monthly income of a family = (Total Income of a family in a year) / (Total number of month in a year)

=> Average monthly income of a family = 39900/12 = 3325 Rs

Q52. Answer: (b) 2 hours

Given :-

Moving at 6/7 of its usual speed, a bus is 20 minutes late.

Concept Use :-

Speed = Distance over Time

Let,

Usual time 'T',Speed 's',Distance 'D'

=> S = D/T

=> D = S × T .....(1)

Calculation :-

=> New speed of bus =(6/7) × S

=> New time =(T + 20/60) hr

=> D =(6S/7) × (T + 20/60) .....(2)

Now,

From equation (1) and (2)

=> S × T = (6S/7) × (T + 20/60)

=> S × 7/6S = (T + 20/60) / T

=> 7/6 = 1 +1/3T

=>(7/6) - 1 = 1/3T

=> 1/6 = 1/3T

=> 3T = 6

=> T = 2 hours

Q53. Answer: (a) 440.5

Given:

Maximum marks in each subject.

Maths → 150

Chemistry → 130

Physics → 120

Geography → 100

History → 60

Computer science → 40

Rohit has obtained the following percentage of marks in each subject.

Maths →80%

Chemistry →65%

Physics →80%

Geography →80%

History →60%

Computer science →60%

Concept used:

Marks% = (obtained marks/total marks)×100

Calculation:

=>Total raw score obtained by Rohit

= 150 × (80/100) + 130 × (65/100) + 120 × (80/100) + 100 × (80/100) + 60 × (60/100) + 40 × (60/100)

=>Total raw score obtained by Rohit

= (120 + 84.5 + 96 + 80 + 36 + 24)

=>Total raw score obtained by Rohit = 440.5

Total raw score obtained by Rohit is 440.5.

Q54. Answer: (a) 49

Given :-

35 is the mean proportional of 25 and x

Concept Use :-

Mean proportional of a and b = √ab

Calculation :-

=> Mean proportional of 25 and X = √25 × X

=> 35 = √25 x

Now,

Squaring on both side

=> $(35)^2 = (\sqrt{25x})^2$

=> 35 × 35 = 25x

=> x = 49

Q55. Answer: (a) 10%

Given:

Original volume percentage = 100%

Reduced volume percentage = 72.9%

Formula used:

Volume of a cube = $Side^3$

If the side is reduced by x%, then the volume is reduced by $(1 - x/100)^3$

Calculation:

Let the original side be S.

Reduced volume = (0.729) × S^3

Let the new side be S'

$S'^3 = 0.729 \times S^3$

=> $(S'/S)^3 = 0.729$

=> $S'/S = 0.9$

=> $S' = 0.9S$

The side of the cube is reduced by 10%.

Therefore The correct answer is 10%.

Q56. Answer: (d) 362.10 cm2

Given :-

Radius of hemisphere is 6.2 cm

Concept Use :-

Total surface area of hemisphere = $3\Pi r^2$

Calculation :-

=> Total surface area of hemisphere = $3\Pi r^2$

=> Total surface area of hemisphere = $3 \times 3.14 \times (6.2)^2$

=> Total surface area of hemisphere = $362.10\ cm^2$

Q57. Answer: (a) 36

Shortcut Trick

The ratio of the perimeters of two similar triangles is equal to the ratio of their corresponding sides.

Perimeter of ΔPQR = PQ + QR + RP = 12 + 18 + 24 = 54 cm

Ratio of corresponding sides = AB / PQ = 8 / 12 = 2 / 3

Perimeter of $\Delta ABC = 54 \times (2 / 3) = 36$ cm

Therefore The correct answer is 36 cm.

Alternate Method

Given:

AB = 8 cm

PQ = 12 cm

QR = 18 cm

RP = 24 cm

$\Delta ABC \sim \Delta PQR$

Formula Used:

For two similar triangles, the ratio of their perimeters is equal to the ratio of their corresponding sides:

Perimeter(ΔABC) / Perimeter(ΔPQR) = AB / PQ = BC / QR = CA / RP

Calculations:

=> Perimeter of ΔPQR = PQ + QR + RP

=> Perimeter of ΔPQR = 12 + 18 + 24 = 54 cm

=> Perimeter(ΔABC) / Perimeter(ΔPQR) = AB / PQ

=> Perimeter(ΔABC) / 54 = 8 / 12

=> Perimeter(ΔABC) / 54 = 2 / 3

=> Perimeter(ΔABC) = 54 × (2 / 3)

=> Perimeter(ΔABC) = 18 × 2 = 36 cm

Option Analysis:

Option (1) 36: This is the correct perimeter of ΔABC as calculated above.

Option (2) 54: This is the perimeter of ΔPQR, not ΔABC.

Option (3) 27: This value is incorrect because the ratio of perimeters must be 2:3, which gives 36 cm, not 27 cm.

Option (4) 42: This value is incorrect because it does not satisfy the similarity ratio of 2:3 with the perimeter of ΔPQR (54 cm).

Therefore The correct answer is 36 cm.

Additional Information

Properties of Similar Triangles

If two triangles are similar, the ratio of their corresponding sides is equal to the ratio of their perimeters, altitudes, medians, and angle bisectors.

Area Ratio Theorem

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The ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides: Area(ΔABC) / Area(ΔPQR) = (AB / PQ)².

Criteria for Similarity

Two triangles are similar if they satisfy any of the following criteria: Angle-Angle (AA), Side-Angle-Side (SAS), or Side-Side-Side (SSS).

Q58. Answer: (b) 141

Shortcut Trick

Since the time remains constant (1 day), the number of masons is directly proportional to the length of the trench.

Work ratio = 105 m ÷ 35 m = 3

Therefore, required masons = Initial masons × 3

Required masons = 47 × 3 = 141

Therefore The correct answer is 141 masons.

Alternate Method

Given:

Initial masons (M1) = 47

Initial trench length (W1) = 35 m

Initial days (D1) = 1 day

Final trench length (W2) = 105 m

Final days (D2) = 1 day

Formula Used:

MDH Rule: (M1 × D1) ÷ W1 = (M2 × D2) ÷ W2

Work = 35 m

47 Masons

Work = 105 m

141 Masons

× 3

× 3

Calculation:

=> (47 × 1) ÷ 35 = (M2 × 1) ÷ 105

=> 47 ÷ 35 = M2 ÷ 105

=> M2 = (47 × 105) ÷ 35

=> M2 = 47 × 3

=> M2 = 141

Therefore The correct answer is 141 masons.

Additional Information

Chain Rule (MDH Concept)

The relationship between Men (M), Days (D), Hours (H), and Work (W) is given by (M1 × D1 × H1) ÷ W1 = (M2 × D2 × H2) ÷ W2.

Direct Proportion

If two quantities are directly related (e.g., Work and Men), an increase in one results in a proportional increase in the other. In this case, M prop. to W.

Inverse Proportion

If two quantities are inversely related (e.g., Men and Days), an increase in one results in a proportional decrease in the other. In that case, M prop. to 1 ÷ D.

Q59. Answer: (b) 14

Given :-

Two equal circles are drawn on a square in such a way that opposite side of the square forms the diameter of each circle. If the remaining area of the square is 42 cm2

Concept Use :-

Area of square = (side of square)²

Area of circle = π r²

Area of semicircle = 1/2 (Π r²)

Calculation :-

Let side of square 's' and radius of circle 'r'

=> Area of two semicircle + Remaining area of square = Area of square

=> 2 × 1/2 (Π r^2) + 42 cm^2 = $(2r)^2$ [s =2r]

=>$(22/7)r^2$ + 42 = $4r^2$

=> $4r^2$ - $(22/7)r^2$ = 42

=> r = 7cm

Now,

=> Diameter of each circle = 2r = 2 × 7

=> Diameter of each circle = 14cm

Q60. Answer: (b) 5000

Given :-

Brick size is 25 cm × 12 cm × 9 cm

wall of length 10 m, breadth 22.5 cm and height 6 m

Concept Use :-

Volume = Length × Breadth × Height

Calculation :-

=> Volume of brick = 25 cm × 12 cm × 9 cm

=> Volume of brick = 2700 cm^3

Now,

=> Volume of wall = 1000 cm × 22.5 cm × 600 cm (1 meter = 100 centimeter)

=> Volume of wal = 13500000 cm^3

=> Number of bricks = Volume of wall / Volume of brick

=> Number of bricks = 13500000/2700

=> Number of bricks = 5,000

Q61. Answer: (a) 8

Given :-

The distance between the centres of two circles of radii 4 cm and 2 cm is 10 cm

Concept Use :-

Length of a transverse common tangent = $\sqrt{(d^2 - (r1 + r2)^2)}$

where d is the distance b/w the centers of two circle, r1 and r2 is radius of circle

Calculation :-

=> Length of a transverse common tangent = √(d2 - (r1 +r2)2)

=> Length of a transverse common tangent = $\sqrt{[(10)^2 - (4 + 2)^2]}$

=> Length of a transverse common tangent = √(100 -36) = √64 = 8 cm

=> Length of a transverse common tangent = 8cm

Q62. Answer: (b) 40

Given :-

Number is increased by 8, it becomes 120% of itself.

Calculation:-

Let a number is 'p'

=> p + 8 = p × (120/100) (According to question)

=> 5p + 40 = 6p

=> p = 40

Q63. Answer: (b) 23/49

Given :-

sinθ = 15/17

p = 15, h = 17

Concept use :-

sinθ = p/h
cosθ = b/h
tanθ = p/b
cotθ = b/p
secθ = h/b
where,
p = Perpendicular
b → Base
h → Hypotenuse
Calculation :-
(15 cot θ+17 sin θ)/(8 tan θ+16 sec θ) .....(1)
Now,
According to pythagoras theorem formula
=> $h^2 = p^2 + b^2$
=> $b = \sqrt{(17^2 - 15^2)}$
=> $b = \sqrt{(289 - 225)} = 8$
Now,
cotθ = b/p = 8/15
tanθ = p/b = 15/8
secθ = h/b = 17/8
Put the value of sinθ ,tanθ, cotθ and secθ in equation (1)
(15 × 8/15+17× 15/17)/(8× 15/8+16 ×17/8)
=> (8 + 15) / (15 + 34) = 23/49

Q64. Answer: (a) 50,000 cars

Given :-
An electric vehicle company produces three different car models: A, B and C.
Concept Use :-
Average = (Sum of all the quantity) / (Total number of quantity)
Calculation :-
=>Total production of Model A in 2019, 2021 and 2022 = 500000 + 550000 + 450000 = 1500000
=> Average production of Model A in 2019, 2021 and 2022 = 1500000/3 = 500000
Now,
=> Total production of Model B in 2020, 2021 and 2022 = 600000 + 500000 + 550000 = 1650000
=>Average production of Model B in 2020, 2021 and 2022 = 1650000/3 = 550000
Now,
=> The difference between the average production of Model A and Model B = 550000 - 500000 = 50,000 Cars

Q65. Answer: (a) 1092

Shortcut Trick
For any odd number of terms in an Arithmetic Progression (like consecutive even numbers), the Average is always the Middle term.
Average (3^(rd) number) = Total Sum ÷ Number of terms = 2720 ÷ 5 = 544
Since the numbers are consecutive even, the common difference is 2.
5^(th) number = 3^(rd) number + (2 × 2) = 544 + 4 = 548
Required Sum = 3^(rd) number + 5^(th) number = 544 + 548 = 1092
Therefore The correct answer is 1092.
Alternate Method
Given: Sum of 5 consecutive even numbers = 2720.
Let the five consecutive even numbers be x, x + 2, x + 4, x + 6, and x + 8.
=> Sum = x + (x + 2) + (x + 4) + (x + 6) + (x + 8) = 2720
=> 5x + 20 = 2720

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=> 5x = 2720 − 20
=> 5x = 2700
=> x = 2700 ÷ 5 = 540
The numbers are:
3^(rd) number = x + 4 = 540 + 4 = 544
5^(th) number = x + 8 = 540 + 8 = 548
=> Required Sum = 544 + 548 = 1092
Therefore The correct answer is 1092.
Additional Information
Consecutive Even/Odd Numbers
Consecutive even or odd numbers always have a constant difference of 2, forming an Arithmetic Progression.
Average of AP
For an AP with 'n' terms, Average = (First term + Last term) ÷ 2. If 'n' is odd, the average is exactly the middle term.
Sum of First n Even Numbers
The sum of the first 'n' consecutive even numbers starting from 2 is given by the formula: $S_n = n(n + 1)$.

Q66. Answer: (c) 29400

Given :-
Total expenditure is Rs. 84,000
Calculation :-
=> Expenditure on food = 84000 × (35/100)
=> Expenditure on food = 29,400

Q67. Answer: (b) 14

Concept Use :-
Average = (Sum of all the quantity) / (Total number of quantity)
Calculation :-
=> Average marks of the students ={ (125 × 1) + (130 × 3) + (135 × 2) + (140 × 8) + (145 × 5) + (150 × 4) + (160 × 1) }/ 24
=> Average marks of the students = (125 + 390 + 270 + 1120 +725 + 600 + 160) / 24 = 141.25
=> Students obtained less than the average marks = 1 + 3 + 2 + 8 = 14

Q68. Answer: (b) 10.25%

Given:
Increase in side of square = 5%
Formula used:
Percentage increase in area = (New Area - Old Area) / Old Area × 100
If side increases by x%, then:
Percentage increase in area = $(2x + x^2/100)\%$
Calculation:
x = 5%
=> Percentage increase in area = $(2 \times 5 + (5)^2/100)\%$
=> Percentage increase in area = (10 + 0.25)%
=> Percentage increase in area = 10.25%
Therefore The correct answer is 10.25%.

Q69. Answer: (c) Rs. 25,600

Shortcut Trick
Let the total salary be 100%.
Remaining salary after all deductions => 100 × (85/100) × (75/100) × (75/100) × (85/100) = 10,404
Total Salary = 10,404 × (100/85) × (100/75) × (100/75) × (100/85)
Total Salary = 10,404 × (20/17) × (4/3) × (4/3) × (20/17) = 25,600
Therefore The correct answer is Rs. 25,600.
Alternate Method

Given:

House Rent = 15% | Household = 25% (Remaining) | Tax = 25% (Remaining) | Clothing = 15% (Remaining)

Formula Used:

Final Value = Initial Value × (100 − r1)/100 × (100 − r2)/100 ...

Calculations:

=> Let total salary be S.

=> S × (1 − 0.15) × (1 − 0.25) × (1 − 0.25) × (1 − 0.15) = 10,404

=> S × (0.85) × (0.75) × (0.75) × (0.85) = 10,404

=> S × (17/20) × (3/4) × (3/4) × (17/20) = 10,404

=> S × (26,01/64,00) = 10,404

=> S = (10,404 × 6400) ÷ 2601

=> S = 4 × 6400 = 25,600

Therefore The correct answer is Rs. 25,600.

Additional Information

Successive Percentage Change

When values are deducted from the remaining balance, we use the multiplying factor (100 − r)/100 for each step.

Base Change Rule

If expenses are given as a % of the total, they are simply added; if given as a % of remaining, they are multiplied.

Q70. Answer: (c) 11

Given :-

On dividing a certain number by 304, we get 43 as the remainder.

Concept Use :-

Dividend = Divisor × Quotient + Remainder

Divisor = 304

Remainder = 43

Calculation:-

Let a certain number(Divisor) is 'p' and quotient is 'q'

=> Dividend = Divisor × Quotient + Remainder

=> p = 304 × q + 43

=> p = 16 × 19 × q + 16 × 2 + 11

=> p = 16(19q + 2) + 11 [16(19q + 2) is divisible by 16]

=> Remainder = 11

Q71. Answer: (b) 16.67%

Given :-

buy five and get one free

Concept Use :-

Discount(d) = Marked price(m.p) - Selling price(s.p)

Discount % = (Discount/Marked price) × 100

Calculation :-

=> Total m.p = 5 + 1 = 6

=> d = 1 [free]

=> d% = (1/6) × 100

=> d% = 16.66

=> Effective discount percentage = 16.67 %

Q72. Answer: (a) Rs. 1,000

Given:

Time 1 (t1) = 1¹/2 years = 1.5 years

Rate 1 (r1) = 10% per annum

Time 2 (t2) = 1 year

Rate 2 (r2) = 12% per annum

Difference in interest = Rs. 30
Formula used:
Simple Interest (SI) = (P × r × t) / 100
Calculation:
Let the sum be P.
SI1 = (P × 10 × 1.5) / 100 = 0.15P
SI2 = (P × 12 × 1) / 100 = 0.12P
According to the problem:
SI1 - SI2 = 30
=> 0.15P - 0.12P = 30
=> 0.03P = 30
=> P = 30 / 0.03
=> P = 1000
Therefore The sum is Rs. 1000.

Q73. Answer: (b) 16

Given:
Radius of the bigger circle (R) = 17 cm
Radius of the smaller circle (r) = 15 cm
Formula used:
Length of the chord = $2 \times \sqrt{(R^2 - r^2)}$
Calculation:
Length of the chord = $2 \times \sqrt{(17^2 - 15^2)}$
=> Length of the chord = $2 \times \sqrt{(289 - 225)}$
=> Length of the chord = $2 \times \sqrt{64}$
=> Length of the chord = 2 × 8
=> Length of the chord = 16 cm
Therefore The length of the chord is 16 cm.

Q74. Answer: (c) 75%

Given :-
70% of the cost price of an article is equal to 40% of its selling price.
Concept Use :-
Profit (p) = Selling price (s.p) - Cost price (c.p)
p% = (p/c.p) × 100
Calculation :-
Let c.p and s.p is x and y
=> p = s.p - c.p .....(1)
=> 70% × c.p = 40% × s.p [According to question]
=> (70/100) × x =(40/100) × y
=> 7x = 4y
=> y = 7x/4
Now,
Put the value of y in equation (1)
=> p = (7x/4) - x
=> p = 3x/4
Now,
=> p% = (3x/4/x) × 100
=> p% = 75%
Alternate Method :-
=> 70% × c.p = 40% × s.p
=> s.p/c.p = 70%/40%

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=> p% = (30/40) × 100

=> p% = 75%

Q75. Answer: (a) 105

Given :-

(3 - 3 × 3 + 3 ÷ 3 + 3 × 5) × 2 of 5 + (2 + 2 ÷ 2 + 2 × 2 - 2)

Concept Use :-

BODMAS

B → Bracket

O → of

D → Divide

M → Multiply

A → Addition

S → Subtraction

Calculation :-

(3 - 3 × 3 + 3 ÷ 3 + 3 × 5) × 2 of 5 + (2 + 2 ÷ 2 + 2 × 2 - 2)

(3 - 3 × 3 + 1 + 3 × 5) × 2 of 5 + (2 + 1 + 2 × 2 - 2)

(3 - 9 +1 +15) × 2 of 5 + (2 + 1 + 4 - 2)

(19-9) ×2 of 5 + (7 - 2)

10 ×2 of 5 + 5

10 × 10 + 5

100 + 5

105

Q76. Answer: (a) Arunachal Pradesh

The correct answer is Arunachal Pradesh

Key Points

• The Government of India launched the Vibrant Village Programme in April 2023.

• The programme was initiated from Kibithoo village.

• Kibithoo village is located in the state of Arunachal Pradesh.

• The Vibrant Village Programme aims to promote the development of border villages to enhance the quality of life for residents.

• This initiative is part of the government's effort to ensure inclusive growth and development in remote and border areas.

Additional Information

• Arunachal Pradesh is located in the northeastern part of India and shares international borders with China, Bhutan, and Myanmar.

• The state is known for its diverse culture, scenic beauty, and strategic importance due to its location.

• The Vibrant Village Programme is one of several initiatives aimed at strengthening infrastructure and improving livelihoods in border areas.

• This programme includes the development of roads, housing, tourism, and other essential services.

Q77. Answer: (a) Entries in all the selected cells will be deleted

The correct answer is Entries in all the selected cells will be deleted

Key Points

• When you select the cell contents of a particular row in MS-Excel and then click the Delete button, entries in all the selected cells will be deleted.

• This action will clear the content of the cells but will not delete the entire row.

• To delete the entire row, you would need to right-click on the row number and select "Delete" from the context menu.

• The Delete button only affects the content within the selected cells, not the structure of the worksheet.

Additional Information

• MS-Excel provides various methods to delete data, including using the Delete key, right-click context menu, and ribbon options.

• Understanding the difference between deleting cell contents and deleting rows or columns is essential for efficient data management.

• Using the Clear options under the Home tab, you can also clear formats, comments, and hyperlinks in addition to cell content.

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• To ensure data integrity, always double-check the selected area before performing delete operations.

Q78. Answer: (a) Saina Nehwal

The correct answer is Saina Nehwal

Key Points

• Saina Nehwal is the only Indian woman who has been ranked as the world's No. 1 in badminton.

• She achieved this milestone in April 2015, making history for Indian badminton.

• Saina Nehwal has consistently performed at an international level, winning several prestigious tournaments and medals.

• Her achievements have significantly contributed to the popularity and growth of badminton in India.

Additional Information

• Saina Nehwal was born on 17th March 1990 in Hisar, Haryana, India.

• She has been honored with several awards including the Padma Bhushan, Padma Shri, and the Rajiv Gandhi Khel Ratna.

• Her success has inspired many young athletes in India to pursue badminton professionally.

• Besides her world No. 1 ranking, Saina has also won a bronze medal at the 2012 London Olympics.

Q79. Answer: (a) To reduce fiscal deficit

The correct answer is To reduce fiscal deficit

Key Points

• The main objective of the Fiscal Responsibility and Budget Management Act (FRBMA), 2003 is to reduce the fiscal deficit of the government.

• The act aims to ensure inter-generational equity in fiscal management and long-term macroeconomic stability.

• It provides a legal institutional framework for reducing the fiscal deficit and improving fiscal discipline.

• FRBMA mandates the government to present to the Parliament a medium-term fiscal policy statement, a fiscal policy strategy statement, and a macro-economic framework statement annually along with the budget.

• The act also sets targets for reducing government debt and maintaining prudent levels of public spending and borrowing.

Additional Information

• The FRBMA was enacted by the Parliament of India in August 2003.

• The act was amended in 2018 to replace the fiscal deficit targets with a fiscal roadmap and to introduce a debt-to-GDP ratio target.

• According to the act, the central government is required to limit the fiscal deficit to 3% of GDP by the end of a specified period.

• The act also aims to eliminate revenue deficit and bring down the public debt-to-GDP ratio to a sustainable level over the medium term.

• Effective implementation of the FRBMA is crucial for achieving fiscal consolidation and enhancing the credibility of the government's fiscal policy.

Q80. Answer: (c) Sangeeta Sudhakara

The correct answer is Sangeeta Sudhakara

Key Points

• Sangeeta Sudhakara is a famous book written by Haripala.

• Haripala is known for his contributions to the field of music and his work, Sangeeta Sudhakara, is a significant text in Indian classical music literature.

• The book provides insights into the musical traditions and practices of the time and is considered an important source for the study of Indian music.

Additional Information

• Gita Govinda is a 12th-century work composed by the poet Jayadeva, not Haripala.

• Sangeet Ratnakara was written by Sharngadeva in the 13th century and is another significant text in Indian music.

• Sangeet Darpan is also a notable work in the field of music, but it was not authored by Haripala.

Q81. Answer: (d) saturated air mass comes across a mountain

The correct answer is saturated air mass comes across a mountain

Key Points

• Orographic rainfall occurs when a saturated air mass comes across a mountain.

• This type of rainfall is caused by the upliftment of moist air over a mountain barrier.

• As the air ascends the mountain, it cools and condenses to form clouds, leading to precipitation on the windward side of the mountain.

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• The leeward side of the mountain, however, receives less rainfall and is often referred to as the rain shadow area.

• Orographic rainfall is common in regions with significant topographical variations, such as the Western Ghats in India and the Andes in South America.

Additional Information

• Orographic rainfall is one of the three main types of rainfall, the other two being convectional and cyclonic (or frontal) rainfall.

• This type of rainfall is particularly important for agriculture and water resources in mountainous regions.

• Regions experiencing orographic rainfall often have lush vegetation on the windward side and drier conditions on the leeward side.

• Understanding the patterns of orographic rainfall is crucial for effective water management and planning in hilly and mountainous areas.

Q82. Answer: (d) four

The correct answer is four

Key Points

• The Industrial Policy Resolution of 1948 categorized large-scale industries into four main fragments.

• This policy was the first comprehensive industrial policy statement by the Government of India, aiming to lay down the pattern of industrial development.

• The four categories were: industries with exclusive state monopoly, basic and strategic industries, industries requiring regulation and control, and other industries.

• This categorization was intended to balance the roles of the public and private sectors in the industrial development of the country.

• The resolution was a significant step in outlining the government's approach to industrial development in post-independence India.

Additional Information

• The Industrial Policy Resolution, 1948 aimed to promote a mixed economy where both public and private sectors would work together to achieve balanced industrial growth.

• It laid the foundation for subsequent industrial policies and was instrumental in shaping India's economic structure.

• The resolution also emphasized the importance of protecting small-scale industries and ensuring fair competition.

• It was followed by the Industrial Policy Resolution of 1956, which further elaborated on the role of the public sector in industrial development.

• This policy framework was crucial in guiding India's industrial strategy during the early years of independence.

Q83. Answer: (c) 2005

The correct answer is 2005

Key Points

• Bharat Nirman Programme was launched in the year 2005.

• The programme aims to build rural infrastructure and covers six key areas: water supply, housing, roads, telecommunication, irrigation, and electrification.

• It is a comprehensive plan to improve the quality of life in rural India and bridge the rural-urban divide.

• The programme is implemented by various ministries and departments of the Government of India, ensuring coordinated efforts for rural development.

• Bharat Nirman is an initiative to provide basic amenities and create opportunities for sustainable livelihoods in rural areas.

Additional Information

• The Bharat Nirman Programme was a time-bound plan for action in rural infrastructure by the Government of India in partnership with the State Governments and Panchayati Raj Institutions.

• The programme was a significant step towards achieving the goals of inclusive growth and rural development.

• It was launched during the tenure of Prime Minister Dr. Manmohan Singh.

• The programme has had a substantial impact on improving rural infrastructure and living standards in India.

• Effective implementation of the programme has been crucial in ensuring the holistic development of rural areas in the country.

Q84. Answer: (c) 1 and 3

The correct answer is 1 and 3

Key Points

• The Constitution of India does not empower the Prime Minister to proclaim emergencies; this power lies with the President of India.

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• The Supreme Court of India does have the power of judicial review, allowing it to strike down laws that violate the Constitution.

• The reservation policy is indeed a feature of the Indian Constitution aimed at uplifting disadvantaged sections of society.

• The Constitution provides for universal adult suffrage, granting the right to vote to all citizens aged 18 and above.

Additional Information

• The Constitution of India was adopted by the Constituent Assembly on 26th November 1949 and came into effect on 26th January 1950.

• It lays down the framework defining fundamental political principles, establishes the structure, procedures, powers, and duties of government institutions, and sets out fundamental rights, directive principles, and the duties of citizens.

• The Constitution of India is the longest written constitution of any country in the world.

• It declares India a sovereign, socialist, secular, and democratic republic, assuring its citizens justice, equality, and liberty, and endeavors to promote fraternity.

• The Seventh Schedule of the Constitution contains three lists which delineate the subjects under the Union, State, and Concurrent lists.

• Amendments to the Constitution can be made through a process outlined in Article 368.

• The Union List has been amended several times to meet the evolving needs of the nation.

Q85. Answer: (c) Jharkhand

The correct answer is Jharkhand

Key Points

• Chhau is a traditional dance form originating from the state of Jharkhand.

• It is also popular in the neighboring states of West Bengal and Odisha.

• The dance is characterized by its vibrant costumes, elaborate masks, and vigorous movements.

• Chhau dance is traditionally performed during festivals and special occasions, often depicting stories from Indian epics like the Mahabharata and Ramayana.

• There are three main styles of Chhau dance: Seraikella Chhau, Mayurbhanj Chhau, and Purulia Chhau, each named after the region where it is performed.

Additional Information

• The UNESCO has inscribed Chhau dance in the Representative List of the Intangible Cultural Heritage of Humanity.

• Chhau dance combines elements of martial arts, acrobatics, and athletics, making it a unique and dynamic form of artistic expression.

• The masks used in Chhau dance are crafted by skilled artisans and are integral to the dance, representing various characters and deities.

• Chhau dance is often accompanied by traditional music played on instruments like the dhol, dhumsa, and shehnai.

Q86. Answer: (c) 1949

The correct answer is 1949

Key Points

• The Reserve Bank of India (RBI) was fully nationalised and became owned by the Government of India in the year 1949.

• The nationalisation of RBI was a significant step in the Indian economic policy aimed at strengthening the country’s financial system.

• Following the nationalisation, the RBI began to play a more active role in the formulation of the economic policy of the Government of India.

• Nationalisation allowed the government to better control and direct the monetary policy to meet the needs of economic development.

• RBI was initially set up as a private entity in 1935 under the Reserve Bank of India Act, 1934.

Additional Information

• The Reserve Bank of India is the central banking institution of India, which controls the issuance and supply of the Indian rupee.

• RBI plays a crucial role in the development strategy of the Government of India.

• It also manages the country's main payment systems and works to promote its economic development.

• The objectives of nationalising the RBI included better coordination of monetary policy with fiscal policy and ensuring the stability of the financial system.

• The nationalisation of RBI marked the beginning of the era of state-owned financial institutions in India.

Q87. Answer: (c) Onam

The correct answer is Onam

Key Points

• Onam is the festival of Kerala that heralds the harvest season.

• The festival lasts for 10 days and is celebrated with various activities such as snake boat races, traditional dances, and elaborate feasts.

• Onam is celebrated to commemorate the homecoming of the legendary King Mahabali.

• It is one of the most significant festivals in Kerala and is marked by a spirit of unity and joy among the people.

Additional Information

• Onam is typically celebrated in the month of Chingam, the first month of the Malayalam calendar, which usually falls in August or September.

• The festival features Pookalam (floral decorations), Onasadya (a grand feast), and various cultural programs.

• Onam is a time when people from all communities come together to celebrate the rich cultural heritage of Kerala.

• The traditional attire for Onam includes the Kasaragod saree for women and the Mundu for men.

• Onam is also associated with the famous Vallam Kali (snake boat race), which is a major attraction during the festival.

Q88. Answer: (a) Range of cells or groups of cells

The correct answer is Range of cells or groups of cells

Key Points

• Range of cells or groups of cells can be used with MS Excel functions.

• MS Excel functions are designed to perform calculations and data manipulation on a specified range of cells, which can span across rows, columns, or a combination of both.

• Functions like SUM, AVERAGE, and VLOOKUP can operate on a range of cells to compute results based on the data within those cells.

• Using ranges allows for more dynamic and flexible data analysis, enabling users to aggregate, filter, and analyze large datasets efficiently.

Additional Information

• MS Excel is a powerful spreadsheet application developed by Microsoft.

• It supports a wide range of functions and formulas that can be used for various types of data analysis, reporting, and visualization.

• Excel also allows for the integration of external data sources, enabling users to import and analyze data from various databases and web services.

• Excel worksheets can contain multiple sheets, each with its own set of data and calculations, facilitating complex data management tasks.

• Advanced features like pivot tables, charts, and conditional formatting further enhance Excel's data analysis capabilities.

Q89. Answer: (b) 640

The correct answer is 640 districts

Key Points

• According to the Census of India 2011, there are 640 districts in India.

• The Census of India is a comprehensive exercise that takes place every ten years, providing vital data on the demographic, social, and economic aspects of the country.

• The data collected through the census is crucial for planning and policy-making at both the national and state levels.

• The census also helps in the allocation of resources and the implementation of various government schemes and programs.

Additional Information

• The Census of India is conducted by the Office of the Registrar General and Census Commissioner, India, under the Ministry of Home Affairs.

• The first synchronous census in India was held in 1881, and since then, it has been conducted every ten years.

• The census covers various parameters such as population size, density, distribution, and various socio-economic indicators.

• The data collected through the census is essential for the formulation of policies and programs aimed at the development and welfare of the people.

Q90. Answer: (c) Tincture of iodine

The correct answer is Tincture of iodine

Key Points

• Tincture of iodine is an example of a 'solid in a liquid' type of solution.
• In tincture of iodine, iodine (solid) is dissolved in alcohol (liquid).
• This type of solution is where a solid solute is dissolved in a liquid solvent, forming a homogeneous mixture.
• Other examples of 'solid in a liquid' solutions include sugar in water and salt in water.

Additional Information

• Brass and bronze are examples of solid solutions (alloys) where both solute and solvent are in the solid state.
• Vinegar is an example of a liquid in a liquid solution, where acetic acid is dissolved in water.
• Solutions can be classified based on the states of solute and solvent, such as solid in liquid, gas in liquid, liquid in liquid, etc.

Q91. Answer: (c) 2023

The correct answer is 2023

Key Points

• The fifth edition of the Khelo India Youth Games was organized in Bhopal city in the year 2023.
• The Khelo India Youth Games is a part of the Khelo India programme, which aims to revive the sports culture in India at the grassroots level by building a strong framework for all sports played in our country and establishing India as a great sporting nation.
• The event brings together young athletes from across the country to compete in a variety of sports, promoting sportsmanship and the spirit of competition.
• Bhopal, the capital city of Madhya Pradesh, played host to the games, providing a platform for young athletes to showcase their talent and compete at a national level.

Additional Information

• The Khelo India programme was launched by the Government of India in 2018 to promote sports at the grassroots level and identify young talent.
• The programme includes various initiatives such as the Khelo India School Games, Khelo India Youth Games, Khelo India University Games, and the Khelo India Winter Games.
• It also provides financial assistance to athletes, coaches, and sports infrastructure development.
• The Khelo India Youth Games have been instrumental in identifying and nurturing young athletes who have the potential to represent India at international sporting events.

Q92. Answer: (c) Nyioga

The correct answer is Nyioga

Key Points

• Option 3 is the correct answer as "Nyioga" does not belong to the folk music of Nagaland.
• Nagaland is known for its rich cultural heritage and diverse folk music, including "Hereileu," "Heliamleu," and "Neuleu."
• These musical forms are integral to the traditional practices and rituals of various tribes in Nagaland.
• Folk music in Nagaland is often performed during festivals, ceremonies, and community gatherings, reflecting the region's rich cultural tapestry.

Additional Information

• Nagaland, a state in northeastern India, is home to several tribes, each with its own unique folk traditions and music.
• Folk music in Nagaland is characterized by the use of traditional instruments, vocal harmonies, and dance.
• The state celebrates various festivals like Hornbill Festival, where traditional music and dance are prominently featured.
• Understanding and preserving folk music is crucial for maintaining the cultural identity and heritage of the region.

Q93. Answer: (c) Ludhiana

The correct answer is Ludhiana

Key Points

• The 66th National School Games 2022-23 were hosted in multiple cities across India.
• Among the venues listed, Ludhiana was not a venue for the 66th National School Games.
• The games are an important event for school-level athletes and are organized annually by the School Games Federation of India (SGFI).
• The venues for the 66th National School Games included Gwalior, Delhi, and Bhopal, among others.

Additional Information

• The National School Games are held to promote sports and physical fitness among school students across India.
• The games feature a wide range of sports including athletics, basketball, football, and more.

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• The School Games Federation of India (SGFI) is responsible for organizing these games and ensuring the participation of school children from different states and regions.

• The event helps in identifying and nurturing young sporting talents in the country.

Q94. Answer: (d) Chennai and Thiruvananthapuram

The correct answer is Chennai and Thiruvananthapuram

Key Points

• Chennai and Thiruvananthapuram have minimal differences in day and night temperatures.

• These cities are located along the coast, which moderates their temperatures due to the influence of the sea.

• Coastal regions generally experience less variation in temperature compared to inland areas.

• This phenomenon is due to the high specific heat capacity of water, which absorbs and releases heat more slowly than land.

Additional Information

• The other options, such as Bhopal and Indore, Jammu and Kashmir, and Jaipur and Jaisalmer, are either inland or have significant altitude differences, leading to larger variations in day and night temperatures.

• Inland areas tend to heat up and cool down more quickly, resulting in greater temperature differences between day and night.

• Understanding the geographic and climatic factors of a region helps in predicting and explaining temperature variations.

Q95. Answer: (b) Ram Nath Kovind

The correct answer is Ram Nath Kovind

Key Points

• Ram Nath Kovind is the author of the book 'Ambedkar and Modi: Reformer's Ideas Performer's Implementation'.

• The book highlights the convergence between Dr. B.R. Ambedkar's vision and Prime Minister Narendra Modi's implementation of reforms.

• It focuses on various aspects of social and economic reforms in India, drawing parallels between the two leaders' contributions.

• The book was released in September 2022 and has been a significant addition to literature on modern Indian reforms.

Additional Information

• Ram Nath Kovind served as the 14th President of India from 25th July 2017 to 25th July 2022.

• Dr. B.R. Ambedkar, known as the father of the Indian Constitution, was a social reformer, jurist, and politician who fought against social discrimination towards the untouchables (Dalits).

• Prime Minister Narendra Modi has been known for implementing various socio-economic reforms aimed at inclusive development and social justice.

Q96. Answer: (d) The contraction and relaxation of these cells result in movement.

The correct answer is The contraction and relaxation of these cells result in movement

Key Points

• Option 4 states that the contraction and relaxation of muscle cells result in movement.

• This is the correct mechanism as muscle cells, also known as muscle fibers, contract and relax to produce movement.

• Muscle contraction is initiated by signals from the nervous system and involves the interaction of actin and myosin filaments within the muscle cells.

• This process requires energy in the form of ATP, which is produced by cellular respiration.

• Relaxation occurs when the muscle cells stop receiving signals from the nervous system, allowing the muscle fibers to lengthen and return to their resting state.

Additional Information

• Muscle cells are specialized cells that contain protein filaments of actin and myosin that slide past one another to produce a contraction that changes both the length and the shape of the cell.

• There are three types of muscle tissue: skeletal, cardiac, and smooth. Each type has a specific function and structure.

• Skeletal muscles are responsible for voluntary movements, cardiac muscles are found in the heart and are responsible for pumping blood, and smooth muscles are found in various internal organs and help in involuntary movements such as digestion.

• Proper muscle function is essential for overall mobility, stability, and the performance of various bodily functions.

Q97. Answer: (d) West Bengal

The correct answer is West Bengal

Key Points

• In July 2021, the West Bengal state government passed a resolution supporting an ad hoc committee report that favoured the creation of a legislative council.

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• Legislative councils are a form of bicameral legislature in Indian states, similar to the Rajya Sabha at the national level.

• These councils function as the upper house in states that choose to have a bicameral legislature, providing a forum for more detailed scrutiny of legislation.

• The creation of a legislative council requires a resolution passed by the state legislature and subsequent approval by the Parliament of India.

Additional Information

• West Bengal previously had a legislative council, which was abolished in 1969.

• As per Article 169 of the Indian Constitution, the Parliament can create or abolish a legislative council in a state if the legislative assembly of that state passes a resolution to that effect by a majority of the total membership of the assembly and by a majority of not less than two-thirds of the members of the assembly present and voting.

• Currently, a few Indian states such as Bihar, Karnataka, Maharashtra, Telangana, and Uttar Pradesh have legislative councils.

• The re-establishment of the legislative council in West Bengal is seen as a measure to provide more in-depth legislative review and representation.

Q98. Answer: (b) Rashtriya Ucchatar Shiksha Abhiyan

The correct answer is Rashtriya Ucchatar Shiksha Abhiyan

Key Points

• Rashtriya Ucchatar Shiksha Abhiyan (RUSA) is not a poverty alleviation programme; it is a centrally sponsored scheme aimed at providing strategic funding to higher educational institutions throughout the country.

• Prime Minister Rozgar Yojana (PMRY) is a poverty alleviation programme aimed at providing self-employment opportunities to educated unemployed youth.

• Swarna Jayanti Shahari Rozgar Yojana (SJSRY) is a poverty alleviation programme aimed at providing gainful employment to the urban unemployed or underemployed through self-employment or wage employment.

• Integrated Rural Development Program (IRDP) is a poverty alleviation programme aimed at providing opportunities for self-employment to the rural poor.

Additional Information

• The Rashtriya Ucchatar Shiksha Abhiyan (RUSA) was launched in 2013 and aims to improve the overall quality of existing state higher educational institutions by ensuring their conformity to prescribed norms and standards.

• The Prime Minister Rozgar Yojana (PMRY) was launched in 1993 to provide sustainable self-employment opportunities to a million educated unemployed youth in the country.

• The Swarna Jayanti Shahari Rozgar Yojana (SJSRY) was launched in 1997 by the Government of India to address urban poverty through gainful employment.

• The Integrated Rural Development Program (IRDP) was launched in 1978 and aimed at providing assistance to the rural poor in the form of subsidies and bank credit for productive employment opportunities.

Q99. Answer: (b) protection in respect of conviction for offenses

The correct answer is protection in respect of conviction for offenses

Key Points

• Article 20 of the Constitution of India provides protection in respect of conviction for offenses.

• This article ensures certain protections against arbitrary and unjust prosecution and punishment.

• It includes protection against ex post facto laws, which means an individual cannot be convicted of an act that was not a crime at the time it was committed.

• It also protects against double jeopardy, meaning a person cannot be prosecuted and punished for the same offense more than once.

• Additionally, it provides protection against self-incrimination, ensuring that no person accused of any offense shall be compelled to be a witness against himself.

Additional Information

• Article 20 is a fundamental right enshrined in Part III of the Constitution of India.

• The Constitution of India was adopted by the Constituent Assembly on 26th November 1949 and came into effect on 26th January 1950.

• It lays down the framework defining fundamental political principles, establishes the structure, procedures, powers, and duties of government institutions, and sets out fundamental rights, directive principles, and the duties of citizens.

• The Constitution of India is the longest written constitution of any country in the world.

• It declares India a sovereign, socialist, secular, and democratic republic, assuring its citizens justice, equality, and liberty, and endeavors to promote fraternity.

• Amendments to the Constitution can be made through a process outlined in Article 368.

Q100. Answer: (c) Pallava

The correct answer is Pallava

Key Points

• The Mahabalipuram temple was built under the reign of the Pallava dynasty.

• Mahabalipuram, also known as Mamallapuram, is a historic city and UNESCO World Heritage site located in Tamil Nadu, India.

• The temples and monuments at Mahabalipuram were constructed during the 7th and 8th centuries by the Pallava kings, particularly during the reign of Narasimhavarman I and his successors.

• The site is renowned for its rock-cut architecture and intricate carvings.

Additional Information

• The Pallava dynasty ruled parts of South India from the 3rd to the 9th centuries CE.

• They were known for their patronage of the arts, architecture, and literature.

• Mahabalipuram is famous for its Shore Temple, Pancha Rathas (Five Rathas), and Arjuna's Penance, among other monuments.

• The Pallava kings were instrumental in promoting the Dravidian architectural style.

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