SSC MTS 2024 Official Paper (Held On: 01 Oct, 2024 Shift 2) (Previous Year Paper)

SSC Multi-Tasking Staff (MTS) • 2024 • 90 questions • 90 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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SESSION 1

Q1. If the curved surface area of a cylindrical pipe is 44,000 cm² and its diameter is 5 cm, find its length.

(Take π = 22/7)

(a) 19 m
(b) 24.5 m
(c) 28 m
(d) 14 m

Q2. A solid cylinder with a height of 8 units and a radius of 3.5 units is to be covered with a paper sheet. If the cost of the paper sheet is Rs. 40 per 5 square units, the cost (in Rs.) of covering the cylinder is _____ (take π = 22/7).

(a) 2268
(b) 1664
(c) 2024
(d) 1012

Q3. A class of 30 students appeared in a test. The average score of 12 students is 80, and that of the rest is 70. What is the average score of the whole class?

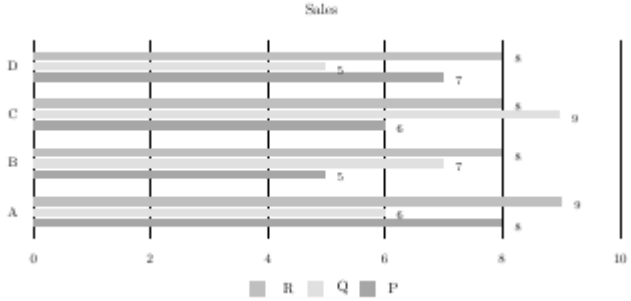
(a) 74
(b) 77
(c) 87
(d) 67

Q4. Find the simple interest (in Rs.) on Rs. 2500 as a sum borrowed at 4% per year rate of interest for 4 years.

(a) 440
(b) 400
(c) 360
(d) 340

Q5. Study the given graph and answer the question that follows.

The graph shows the sales of three products: P, Q and R by four companies: A, B, C and D.



How much more in percentage is the total sales of R than total sales of P (rounded off to one decimal place)?

(a) 26.9%
(b) 26.2%
(c) 22.9%
(d) 29.6%

Q6. A 725 m long train passes through a 235 m long tunnel in 48 sec. Find the speed of the train.

(a) 66 km/h
(b) 54 km/h
(c) 72 km/h
(d) 82 km/h

Q7. A shopkeeper makes a 15% profit on a sale. He would have made 18%, if he had sold it for Rs.18 more. The cost price of the article is:

(a) Rs.650
(b) Rs.550
(c) Rs.600
(d) Rs.500

Q8. The number of three different types of motor bikes B1, B2, and B3 manufactured by a company in three months is given in the following table. Study the given table carefully and answer the question that follows.

Motor Bikes / Months	October	November	December
B1	107	121	145
B2	95	100	80
B3	43	40	20

What is the average number of motor bikes manufactured by the company in the month of November?

(a) 89
(b) 87
(c) 86
(d) 88

Q9. A merchant has 5000 kg of Basmati rice. He sells some part of this Basmati rice at 20% profit and the rest at 35% profit. He gains 29% in the entire transaction. What is the quantity sold at 20% profit and 35% profit, respectively?

(a) 2600 kg, 2400 kg
(b) 2200 kg, 2800 kg
(c) 1800 kg, 3200 kg
(d) 2000 kg, 3000 kg

Q10. If tea that costs Rs. 7.50 per kg is mixed with tea that costs Rs. 10.50 per kg in the proportion of 2:1 then, what is the cost (in Rs.) of the resultant mixture per kg?

(a) 7.00
(b) 8.50
(c) 7.50
(d) 9.00

Q11. Find the HCF of 24, 36 and 60.

(a) 12
(b) 360
(c) 4
(d) 6

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Q12. A train travelling at a speed of 60 km/h leaves station A at 7:00 a.m. and another train travelling at a speed of 84 km/h starts from station A at 9:30 a.m. in the same direction on a parallel track. At what distance (in km) from station A and after how many hours of travel of the second train will they be together? Express your answer in the same order.

(a) 693, 8.25
(b) 525, 6.25
(c) 375, 6.25
(d) 495, 8.25

Q13. A hemispherical bowl is of radius 7.7 cm. It is to be painted from inside as well as outside. Find the cost (in Rs.) of painting the bowl at a rate of Rs. 17 per 7 cm^2.

[Take $\pi = 22/7$]

(a) 1810.16
(b) 745.36
(c) 1025.24
(d) 1620.35

Q14. Find the simple interest (in Rs.) on Rs. 2500 as a sum borrowed at 4% per year rate of interest for 5 years.

(a) 460
(b) 440
(c) 540
(d) 500

Q15. A person deposited Rs. 2,500 in a bank that pays 8% simple interest. He withdrew Rs. 1,000 (from amount) at the end of the first year. What will be his balance after 4 years?

(a) Rs. 2,018
(b) Rs. 2,108
(c) Rs. 2,480
(d) Rs. 2,280

Q16. By selling an article for Rs. 19, a dealer makes a profit of 20%. By how much should he increase his selling price (in Rs. , rounded off to two decimal place) so as to make a profit of 40%?

(a) 6.17
(b) 3.17
(c) 4.17
(d) 5.17

Q17. If 4% of (A + B) is equal to 28% of (A - B), then find A : B.

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

Q18. The average weight of a group of 20 women was calculated as 58.5 kg and it was later discovered that the weight of one of the women was read as 35 kg, whereas her actual weight was 65 kg. What is the actual average weight of the group of 20 women?

(a) 70 kg
(b) 40 kg
(c) 60 kg
(d) 50 kg

Q19. Sunil, Basid, Vikram, and Kuldeep receive salaries in the ratio of 3 : 7 : 8 : 13. If the difference between the salaries of Sunil and Basid is Rs. 2,000, then what is the difference between the salaries (in Rs.) of Vikram and Kuldeep?

(a) 2,400
(b) 2,000

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(c) 2,200
(d) 2,500

Q20. Manpreet offers two successive discounts of 12% and 8% on the sale of a sweater to his customers on the occasion of Diwali. What is the equivalent single percentage discount offered by Manpreet?
(a) 20.96%
(b) 19.04%
(c) 19.64%
(d) 20.00%

Q21. MJHI is related to TQOP in a certain way. In the same way, GDBC is related to NKIJ. To which of the following is XUST related following the same logic?
(a) EABZ
(b) EBZA
(c) DABZ
(d) BZAC

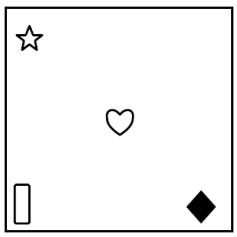
Q22. Six friends are sitting on a circular table, facing towards the centre (but not necessarily in the same order). X is to the immediate left of Z and W is to the immediate right of Y. Z and U are separated by only one person sitting between them. W is an immediate neighbour of U. Only V is sitting between Z and Y. Who among the following are the immediate neighbours of U?
(a) X and W
(b) W and V
(c) W and Y
(d) Z and Y

Q23. In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g., 13 – Operations on 13 such as adding/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
8, 30
12, 46
(a) 15, 62
(b) 16, 61
(c) 15, 61
(d) 16, 62

Q24. Identify the figure given in the options which when put in place of (?) will logically complete the series.

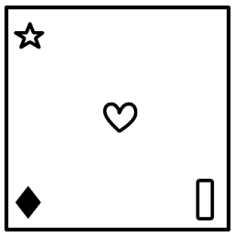


(a)

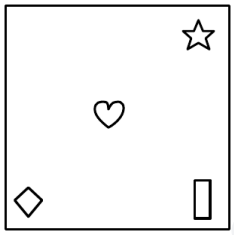


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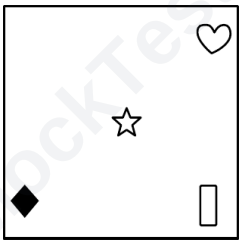
(b)



(c)



(d)



Q25. What will come in the place of '?' in the following equation, if '+' and 'x' are interchanged and '−' and '÷' are interchanged?

17 + 77 − 7 x 37 ÷ 47 = ?

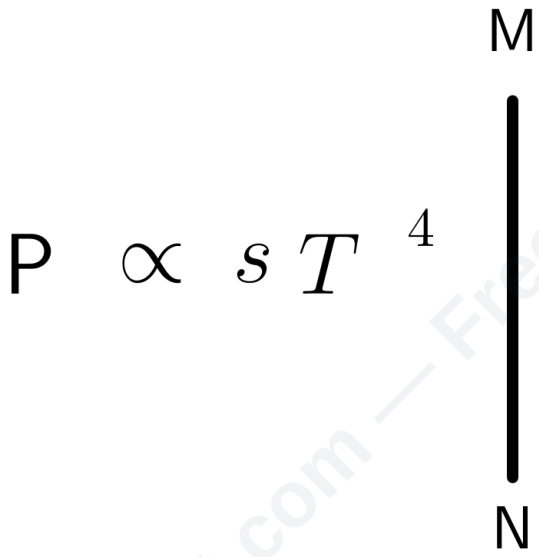
(a) 187
(b) 167
(c) 157
(d) 177

Q26. Seven people R, S, T, D, E, F and G are sitting around a circular table, facing the centre (but not necessarily in the same order). T is sitting to the immediate right of G. R is sitting to the immediate right of E. Only two people are sitting between D and S when counted from the right of S. E is an immediate neighbour of S. If F is not an immediate neighbour of S, who is sitting third to the left of F?

(a) R
(b) T
(c) E
(d) S

Q27. Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.

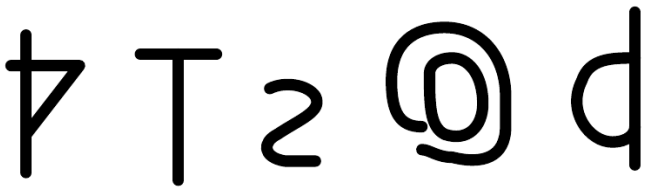
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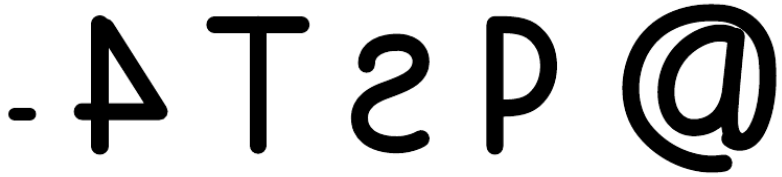
(a)



(b)



(c)



(d)



Q28. 10 is related to 75 following a certain logic. Following the same logic, 6 is related to 47. To which of the following is 15 related following the same logic?

(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.

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Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(a) 164
(b) 110
(c) 123
(d) 156

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

10, 22, 46, 94, 190, ?

(a) 385
(b) 389
(c) 387
(d) 382

Q30. What will come in place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

456 × 4 − 3 ÷ 11 + 70 = ?

(a) 84
(b) 77
(c) 87
(d) 79

Q31. In a certain code language, 'BRIGHT' is coded as '371562', and 'GIRTHS' is coded as '653782'. What is the code for 'B' in 'BRIGHT'?

(a) 2
(b) 1
(c) 8
(d) 7

Q32. Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete? EMU, DNT, COS, BPR, ?

(a) AQQ
(b) BST
(c) UBO
(d) FCD

Q33. In a certain code language, 'make some noise' is written as 'ja sp ko' and 'noise is painful' is written as 'la ma sp'. How will 'noise' be written in that language?

(a) ko
(b) la
(c) ma
(d) sp

Q34. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statement(s).

Statements:

Some whales are sharks.

No shark is a dolphin.

Conclusions:

(I) No dolphin is a shark.

(II) Some sharks are whales.

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

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(d) Only conclusion I follows.

Q35. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All shirts are trousers.

No trouser is a belt.

Conclusions:

(I) No shirt is a belt.

(II) Some belts may be trousers.

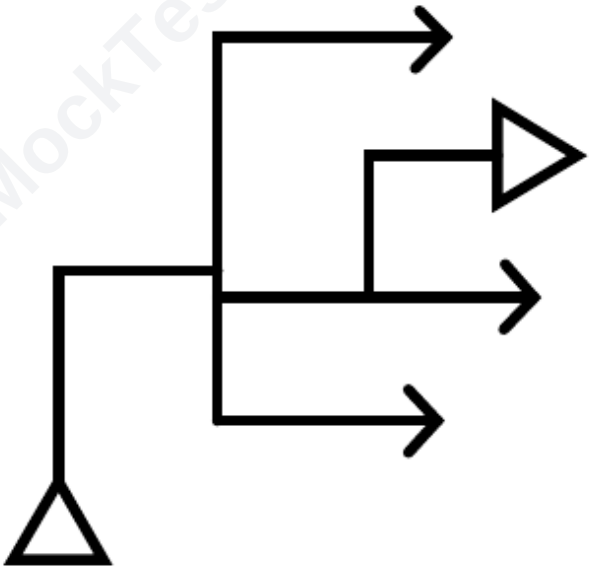
(a) Only conclusion II follows

(b) Neither conclusion I nor II follows

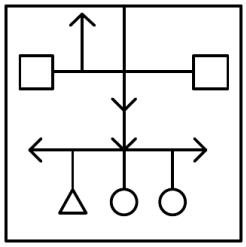
(c) Only conclusion I follows

(d) Both conclusions I and II follow

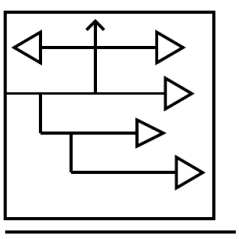
Q36. Select the option figure in which the given figure is embedded as its part (rotation is NOT allowed).



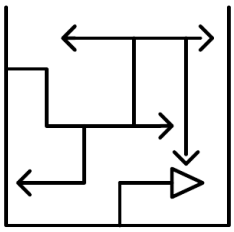
(a)



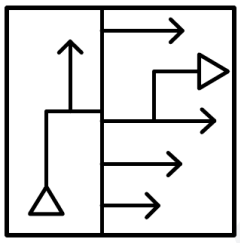
(b)



(c)



(d)



Q37. CE 77 is related to IK 87 in a certain way. In the same way, GJ 52 is related to MP 62. To which of the following is BG 43 related following the same logic?

(a) NZ 30
(b) WZ 20
(c) HM 53
(d) XY 35

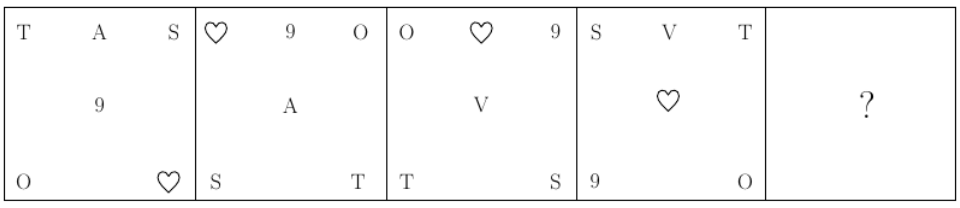
Q38. In a certain code language, 'VOLT' is coded as '3517' and 'TURN' is coded as '2348'. What is the code for 'T' in that language?

(a) 3
(b) 7
(c) 2
(d) 8

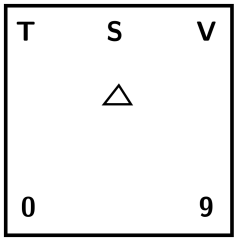
Q39. In a certain code language, 'BORDER' is coded as 'OBDRRE' and 'BEYOND' is coded as 'EBOYDN'. How will 'BURDEN' be coded in the same language?

(a) UBDREN
(b) NEDRUB
(c) UBRDNE
(d) UBDRNE

Q40. Select the figure from among the given options that can replace the question mark (?) in the following series and complete the pattern.

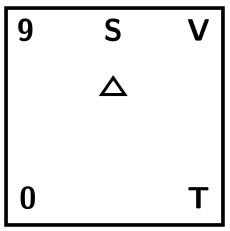


(a)

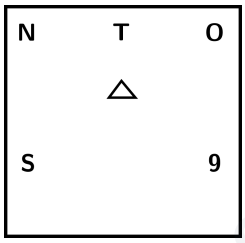


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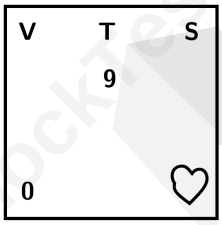
(b)



(c)



(d)



SESSION 2

Q41. In which state is Kawal Wildlife Sanctuary located?

(a) Telangana
(b) Gujarat
(c) Odisha
(d) Maharashtra

Q42. According to the National Multidimensional Poverty Index 2021, which Union Territory has the lowest proportion of poor?

(a) Delhi
(b) Lakshadweep
(c) Chandigarh
(d) Puducherry

Q43. Which Article of the Constitution of India specifically addresses the qualifications for the office of the President?

(a) Article 50
(b) Article 56
(c) Article 58
(d) Article 60

Q44. Who among the following was the most important god of the Aryans?

(a) Agni
(b) Pashupatinath
(c) Marut
(d) Indra

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Q45. When was the All Bengal Students Conference held in the chairmanship of Jawaharlal Nehru?

(a) 1928
(b) 1939
(c) 1934
(d) 1920

Q46. The autobiography of which of the following actors is titled 'The Substance And The Shadow: An Autobiography'?

(a) Vinod Khanna
(b) Rajesh Khanna
(c) Rishi Kapoor
(d) Dilip Kumar

Q47. What is the name of Formula E's first ever race in India, which was hosted in collaboration with the Telangana government?

(a) The 2023 Mahindra Mumbai E-Prix
(b) The 2023 Greenko Hyderabad E-Prix
(c) The 2023 Mahindra Bangalore E-Prix
(d) The 2023 Greenko Buddha Circuit E-Prix

Q48. During which centuries did several Buddhist pilgrims and scholars travel to China on the historic 'silk route'?

(a) First, second and third centuries AD
(b) Sixth and seventh centuries AD
(c) Fourth and fifth centuries AD
(d) Eighth and ninth centuries AD

Q49. Non-polar molecules possess _____.

(a) permanent dipole moment
(b) partial charge
(c) no dipole moment
(d) instantaneous dipole moment

Q50. The Steel Authority of India Limited (SAIL) is an example of the _____ industry.

(a) public sector
(b) cooperative sector
(c) private sector
(d) joint sector

Q51. Which Indian dancer of the Manipuri style won the Tagore Award for Cultural Harmony in 2014?

(a) Nirmala Mehta
(b) Guru Bipin Sinha
(c) Rajkumar Singhajit Singh
(d) Elam Endira Devi

Q52. Who among the following led the Parliamentary delegation to participate in the 9th BRICS Parliamentary Forum in September 2023?

(a) Harivansh Narayan Singh
(b) Nitin Gadkari
(c) Jagdeep Dhankar
(d) Om Birla

Q53. As per Article 51A of the Constitution of India, Fundamental Duty (h) is to develop the _____, humanism and the spirit of inquiry and reform.

(a) religious temper
(b) scientific temper
(c) cultural temper

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(d) sociological temper

Q54. Which classical dance form is performed by the renowned artists; Sitara Devi, Rohini Bhate, Pandit Munnaal Shukla, Kumudini Lakhia and Uma Sharma?

(a) Kathak
(b) Bharatanatyam
(c) Odissi
(d) Kuchipudi

Q55. Select the synthetic indicator from among the given options.

(a) Turmeric
(b) Cabbage juice
(c) Litmus solution
(d) Methyl orange

Q56. The Ramoshi Uprising of 1824 took place in which of the following present states of India?

(a) Uttar Pradesh
(b) Tamil Nadu
(c) Maharashtra
(d) West Bengal

Q57. In October 2023, Maharashtra government planned which of the following schemes to overhaul its medical system after the death of 38 patients in Nanded?

(a) Ayushman Maharashtra
(b) Vision 2035
(c) Sahakar Mitra
(d) Arogya Mission

Q58. Which of the following options correctly matches column-A and column-B?

Column-A (Food component)	Column-B (Enzyme involved in digestion)
i. Protein	a. Amylase
ii. Carbohydrates	b. Lipase
iii. Fats	c. Trypsin

(a) i-c, ii-a, iii-b
(b) i-b, ii-a, iii-c
(c) i-a, ii-b, iii-c
(d) i-a, ii-c, iii-b

Q59. A process like river bifurcation can create valuable landforms for the environment, providing growth of vegetation. An example of such landform is _____.

(a) river deltas
(b) potholes
(c) V-shaped valleys
(d) cascades

Q60. The Taj Mahal was built by who among the following?

(a) Babar
(b) Jahangir
(c) Shah Jahan
(d) Akbar

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Q61. Which of the following statements is/are FALSE for the Harappan town planning?

1. Most of the towns have citadel in harappan civilization.
2. Every town had a temple in Harappan civilization.
3. Every building was made of sand stone in Harappan civilization.

(a) Both 1 and 3
(b) Only 1
(c) Both 1 and 2
(d) Both 2 and 3

Q62. _____ was the pioneer who modified the Hawaiian slide guitar to play classical ragas.

(a) Krishna Ram Chaudhary
(b) Buddhadev Dasgupta
(c) Palghat Raghu
(d) Brij Bhushan Kabra

Q63. Which edition of the Intercontinental Cup event was played in India in 2023?

(a) 10^(th)
(b) 1^(st)
(c) 3^(rd)
(d) 5^(th)

Q64. In the context of microfinance, what does ‘S’ stand for in SHG?

(a) Social
(b) Steady
(c) Sustainable
(d) Self

Q65. In which state is 'Bhogali Bihu' festival celebrated?

(a) Assam
(b) Jharkhand
(c) Gujarat
(d) Chhattisgarh

Q66. Select the most appropriate option to fill in the blank.

My grandparents live in a beautiful house ___the countryside

(a) in
(b) on
(c) onto
(d) at

Q67. In the following sentence the underlined part contains an error. Alternatives to the underlined part are given as options. Select the correct alternative.

The children were merry than usual on Sunday.

(a) more merrier
(b) the merriest
(c) merriest
(d) merrier

Q68. Select the most appropriate option to substitute the underlined segment in the given sentence.

They looked out the matter and found the root cause of the problem.

(a) looked of the matter and found
(b) looked until the matter and found
(c) looked unless the matter and found
(d) looked into the matter and found

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Q69. Select the option that expresses the given sentence in future tense form.

Since next Friday, the team of three members has been tracking the animal.

(a) From next Friday, the team of three members are tracking the animal.
(b) Since last Friday, the team of three members had tracked the animal.
(c) From next Friday, the team of three members have been tracking the animal.
(d) From next Friday, the team of three members will be tracking the animal.

Q70. Select the most appropriate ANTONYM of the highlighted word in the given sentence.

The athlete demonstrated remarkable agility during the gymnastics routine.

(a) Nimbleness
(b) Prowess
(c) Flexibility
(d) Stiffness

Q71. Select the most appropriate meaning of the given idiom.

Apple of one's eye

(a) Very docile
(b) Very strong
(c) Very precious
(d) Very stubborn

Q72. Select the sentence with the most appropriate use of preposition.

(a) Reetu slept all in the history class.
(b) Reetu slept all through the history class.
(c) Reetu slept all during the history class.
(d) Reetu slept all into the history class.

Q73. Read the sentence given below and identify if there is an error in it. The error can be in any segment of the sentence. The segments are marked A, B, C, and D. Select option D if there is 'No error'.

(A) Ritika angrily
(B) spoke to Kartik
(C) after the meeting
(D) No error.

(a) D
(b) A
(c) C
(d) B

Q74. Select the most appropriate synonym of the given word.

Blunt

(a) Insensitive
(b) Adventurous
(c) tactful
(d) Rowdy

Q75. Select the most appropriate ANTONYM of the underlined word in the given sentence.

The children's laughter was filled with exuberant joy

(a) flawless
(b) euphoric
(c) sarcastic
(d) repressed

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Q76. Change the following sentence into superlative degree.

No other mountain in the world is as high as the Mount Everest.

(a) No other mountain is highest than Mount Everest.
(b) Mount Everest is the highest mountain in the world.
(c) Mount Everest is higher than any other mountain in the world.
(d) Mount Everest is high mountain in the world.

Q77. One of the four words in bold in the given sentence is incorrectly spelt. Select the INCORRECTLY spelt word.

The hurricane left behind a devasstating trail of destruction.

(a) trail
(b) hurricane
(c) devasstating
(d) destruction

Q78. Select the word that has the same meaning (SYNONYM) as the underlined word in the given sentence.

She accused her sister of being vindictive when she was trying to defame her.

(a) vigilant
(b) revengeful
(c) righteous
(d) venerable

Q79. Parts of the following sentence have been given as options. Select the option that contains an error.

The farm cattle is grazing in the field when the tiger attacked.

(a) The farm cattle
(b) in the field when
(c) is grazing
(d) the tiger attacked.

Q80. Select the INCORRECTLY spelt word from the given sentence.

The artist's unique technique added a touch of individiuality to the painting.

(a) Individiuality
(b) Unique
(c) Technique
(d) Artist's

Q81. Select the most appropriate option to fill in the blank

The loud thunder _____ the children, making them cry.

(a) fastened
(b) fainted
(c) frightened
(d) fancied

Q82. Select the most appropriate meaning of the given idiom.

When pigs fly

(a) Something unplanned
(b) Something terrible
(c) Something that spoils relationships
(d) Something that will never happen

Q83. Select the option that will improve the underlined part of the given sentence. In case no improvement is needed, select 'No improvement required'.

Placing a huge magnet atop the temple pose to being the biggest hurdle for the masons.

(a) No improvement required
(b) posing as be

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(c) poses for being
(d) posed to be

Q84. Select the correct spelling of the underlined word in the given sentence.

Rahul's personality is complamented by his confident looks.

(a) complamanted
(b) compliiminted
(c) complemented
(d) complieminted

Q85. Select the most appropriate ANTONYM of the given word.

Enmity

(a) Malignity
(b) Antipathy
(c) Hostility
(d) Friendship

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.

A monsoon is traditionally a seasonal reversing wind (1)_____ by corresponding changes in precipitation but is now (2)_____ describe seasonal changes in atmospheric circulation and precipitation associated (3)_____ annual latitudinal oscillation of the Intertropical Convergence Zone (ITCZ) between its limits to the north and south of the equator. Usually, the term monsoon (4)_____ refer to the rainy phase of a seasonally changing pattern, although technically there is also a dry phase. The term is also sometimes used to (5)_____ locally heavy but short-term rains.

Q86. Select the most appropriate option to fill in blank number 1

(a) accompanies
(b) accompany
(c) accompanied
(d) accompanying

Q87. Select the most appropriate option to fill in blank number 2

(a) used to
(b) using to
(c) uses to
(d) use to

Q88. Select the most appropriate option to fill in blank number 3

(a) on
(b) with
(c) for
(d) of

Q89. Select the most appropriate option to fill in blank number 4

(a) is used to
(b) is use to
(c) are used to
(d) were used to

Q90. Select the most appropriate option to fill in blank number 5

(a) describe
(b) describes
(c) described
(d) describing

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ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) 28 m

Given:

Curved surface area of cylindrical pipe = 44,000 cm^2

Diameter = 5 cm

Formula used:

Curved surface area = $2\pi rh$

Where, r = radius and h = height (length)

Calculation:

$44,000 = 2 \times (22/7) \times (5/2) \times h$

$\Rightarrow 44,000 = (110/7) \times h$

$\Rightarrow h = (44,000 \times 7) / 110$

$\Rightarrow h = 2800$ cm

$\Rightarrow h = 28$ m

Therefore The correct answer is option (3).

Q2. Answer: (c) 2024

Given:

Height (h) = 8 units

Radius (r) = 3.5 units

Cost of paper sheet = Rs. 40 per 5 square units

Formula used:

Surface area of the cylinder = $2\pi\ r(r + h)$

Calculation:

Surface area of the cylinder = $2 \times 22/7 \times 3.5 \times (3.5 + 8)$

$\Rightarrow$ Surface area of the cylinder = $2 \times 22/7 \times 3.5 \times 11.5$

$\Rightarrow$ Surface area of the cylinder = 22×11.5

$\Rightarrow$ Surface area of the cylinder = 253 square units

Cost per square unit = 40/5 = 8 Rs. /square unit

Total cost = 253×8

$\Rightarrow$ Total cost = Rs. 2024

Therefore The correct answer is option (3).

Q3. Answer: (a) 74

Shortcut Trick

Assume the base average score is 70.

Deviation for the first 12 students = $12 \times (80 - 70) = +120$.

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Distributed deviation for all 30 students = 120 ÷ 30 = 4.

Total average score = Base average + Deviation = 70 + 4 = 74.

Therefore The correct answer is 74.

Alternate Method

Given:

Total number of students = 30

Number of students in the first group = 12

Average score of the first group = 80

Number of students in the second group = 30 − 12 = 18

Average score of the second group = 70

Formula Used:

Combined Average = Total Sum of Scores ÷ Total Number of Students

Calculations:

=> Total score of 12 students = 12 × 80 = 960

=> Total score of the remaining 18 students = 18 × 70 = 1260

=> Total score of the whole class = 960 + 1260 = 2220

=> Average score of 30 students = 2220 ÷ 30

=> Average score = 74

Therefore The correct answer is 74.

Additional Information

Combined Mean Formula

The combined mean (x_c) of two groups is calculated as: x_c = (n1x1 + n2x2) ÷ (n1 + n2), where n is the size and x is the average of each group.

Weighted Average

Used when items in a data set have different levels of importance or frequency; each value is multiplied by its weight before summing and dividing by the total weight.

Deviation Method

A mental math technique where an assumed mean is used, and the net deviation from this mean is adjusted across the total count to find the actual average.

Q4. Answer: (b) 400

Given:

Principal (P) = Rs. 2500

Rate (R) = 4% per year

Time (T) = 4 years

Formula used:

Simple Interest (SI) = (P × R × T)/100

Calculation:

(2500 × 4 × 4)/100

=> SI = (2500 × 16)/100

=> SI = Rs. 400

Therefore The correct answer is option 2.

Q5. Answer: (a) 26.9%

Given:

Sales of R: A = 9, B = 8, C = 8, D = 8

Sales of P: A = 8, B = 5, C = 6, D = 7

Formula used:

Percentage increase = (Total sales of R - Total sales of P)/(Total sales of P) × 100

Calculation:

Total sales of R = 9 + 8 + 8 + 8 = 33

Total sales of P = 8 + 5 + 6 + 7 = 26

=> Difference = 33 - 26 = 7

=> Percentage increase = 7/26 × 100

=> Percentage increase = 26.9%

Therefore The correct answer is option 1 (26.9%).

Q6. Answer: (c) 72 km/h

Given:

A 725 m long train passes through a 235 m long tunnel in 48 sec.

Formula used:

Speed = Distance / Time

Calculation:

Total distance = Length of train + Length of tunnel

Total distance = 725 m + 235 m

=> Total distance = 960 m

Speed = Total distance / Time

=> Speed = 960 m / 48 sec = 20 m/s

Speed (in km/h) = Speed (in m/s) × 18/5

=> Speed = 20 × 18/5 = 72 km/h

Therefore The correct answer is option (3).

Q7. Answer: (c) Rs.600

Given:

A shopkeeper makes a 15% profit on a sale. He would have made 18%, if he had sold it for Rs.18 more.

Formula used:

Selling Price (SP) = Cost Price (CP) + Profit

Calculations:

Let the Cost Price (CP) be Rs. x

Selling Price at 15% profit = x + 0.15x = 1.15x

Selling Price at 18% profit = x + 0.18x = 1.18x

Given, 1.18x = 1.15x + 18

=> 1.18x - 1.15x = 18

=> 0.03x = 18

=> x = 18/0.03

=> x = 600

Therefore The correct answer is option 3.

Q8. Answer: (b) 87

Given:

Number of motorbikes in November:

B1 = 121, B2 = 100, B3 = 40

Formula used:

Average = (Sum of values)/(Number of values)

Calculation:

Sum of motorbikes in November = 121 + 100 + 40 = 261

=> Average = 261/3

=> Average = 87

Therefore The correct answer is option (2).

Q9. Answer: (d) 2000 kg, 3000 kg

Given:

A merchant has 5000 kg of Basmati rice. He sells some part of this Basmati rice at 20% profit and the rest at 35% profit. He gains 29% in the entire transaction.

Formula used:

Let the quantity sold at 20% profit be x kg and the quantity sold at 35% profit be (5000 - x) kg.

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Average profit percentage = (Profit from 20% part + Profit from 35% part) / Total quantity
Calculation:
0.29 × 5000 = (0.20 × x) + (0.35 × (5000 - x))
=> 1450 = 0.20x + 0.35(5000 - x)
=> 1450 = 0.20x + 1750 - 0.35x
=> 1450 = 1750 - 0.15x
=> 1450 - 1750 = -0.15x
=> -300 = -0.15x
=> x = 2000 kg
=> Quantity sold at 35% profit = 5000 - x = 3000 kg
Therefore The correct answer is option (4).

Q10. Answer: (b) 8.50

Given:
If tea that costs Rs. 7.50 per kg is mixed with tea that costs Rs. 10.50 per kg in the proportion of 2:1
Formula used:
Average Cost = (Cost of Tea 1 × Quantity of Tea 1 + Cost of Tea 2 × Quantity of Tea 2) / (Quantity of Tea 1 + Quantity of Tea 2)
Calculation:
Average Cost = (7.50 × 2 + 10.50 × 1) / (2 + 1)
=> Average Cost = (15 + 10.50) / 3
=> Average Cost = 25.50 / 3
=> Average Cost = 8.50
Therefore The correct answer is option 2.

Q11. Answer: (a) 12

Given:
Numbers: 24, 36, 60
Formula used:
HCF is the largest number that divides all given numbers exactly.
Calculation:
Prime factorization:
24 = 2 × 2 × 2 × 3
36 = 2 × 2 × 3 × 3
60 = 2 × 2 × 3 × 5
Common factors: 2 × 2 × 3
=> HCF = 12
Therefore The HCF of 24, 36, and 60 is 12.

Q12. Answer: (b) 525, 6.25

Concept:
Speed = Distance/time
Relative speed = S1 - S2 for same direction,
Relative speed = S1 + S2 for opposite direction
Solution:
The first train travels at a speed of 60 km/h and starts at 7:00 a.m.
The second train starts at 9:30 a.m., so the first train has a head start of 2.5 hours.
Distance covered by the first train in 2.5 hours = speed × time = 60 × 2.5 = 150 km.
Both trains are moving in the same direction,
So the relative speed is the difference of their speeds,
Relative speed = 84 - 60 = 24 km/h.
The second train needs to cover the 150 km gap created by the first train.
Time taken to close the gap = distance/(relative speed) = 150/24 = 6.25 hours.
The second train starts at 9:30 a.m. and takes 6 hours and 15 minutes to catch up.

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Distance = speed × time = 84 × 6.25 = 525 km

Q13. Answer: (a) 1810.16

Given:

A hemispherical bowl has a radius of 7.7 cm. It is to be painted from the inside as well as outside.

The cost of painting it is at the rate of Rs. 17 per 7 sq. cm.

Concept used:

Curved surface area of a solid hemisphere = 2π(Radius)2

Calculation:

Curved surface area of the bowl = 2π × (7.7)2 = 372.68 cm2

Now, the cost of painting the bowl

=> 17 × (372.68 ÷ 7) × 2 (Because Inside as well as outside is being painted. That's why multiplying by 2)

=> Rs. 1810.16

Therefore The cost of painting it at the rate of Rs. 17 per 7 sq. cm will be Rs. 1810.16.

Q14. Answer: (d) 500

Given:

Principal (P) = Rs. 2500

Rate (R) = 4% per year

Time (T) = 5 years

Formula used:

Simple Interest (SI) = (P × R × T)/100

Calculations:

SI = (2500 × 4 × 5)/100

=> SI = 50000/100

=> SI = Rs. 500

Therefore The correct answer is option (4).

Q15. Answer: (b) Rs. 2,108

Given:

Principal (P) = Rs. 2,500

Rate (r) = 8%

Time (t) = 4 years

Withdrawn amount = Rs. 1,000 at the end of the first year

Formula used:

Simple Interest (SI) = P × r × t / 100

Amount (A) = P + SI

Calculations:

Interest for first year (before withdrawal):

SI1 = 2500 × 8 × 1 / 100

=> SI1 = 200

Amount after first year and before withdrawal:

A1 = 2500 + 200

=> A1 = 2700

Amount after withdrawal:

A2 = 2700 - 1000

=> A2 = 1700

Interest for remaining 3 years:

SI2 = 1700 × 8 × 3 / 100

=> SI2 = 408

Final Amount:

A_(final) = 1700 + 408

=> A_(final) = 2108

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Therefore The correct answer is option 2.

Q16. Answer: (b) 3.17

Given:

Selling Price (SP) = Rs. 19

Profit = 20%

New Profit = 40%

Formula used:

Cost Price (CP) = SP/(1 + Profit/100)

New Selling Price (NSP) = (1 + (New Profit)/100) × CP

Calculation:

CP = 19/(1 + 20/100)

=> CP = 19/1.20

=> CP = Rs. 15.83

NSP = (1 + 40/100) × 15.83

=> NSP = (1.40) × 15.83

=> NSP = Rs. 22.16

Increase in Selling Price = NSP - SP

=> Increase in Selling Price = Rs. 22.16 - Rs. 19

=> Increase in Selling Price = Rs. 3.17

Therefore The correct answer is option (2).

Q17. Answer: (b) 4 : 3

Given:

4% of (A + B) = 28% of (A - B)

Calculation:

1/25 (A + B) = 7/25 (A - B)

=> (A + B) = 7(A - B)

=> A + B = 7A - 7B

=> 6A= 8B

=> A / B = 8 / 6 => A / B = 4 / 3

Therefore The correct answer is option (2) 4 : 3.

Q18. Answer: (c) 60 kg

Concept:

Total weight = average weight × number of women.

Solution:

Total weight (incorrect) = average weight × number of women = 58.5 × 20 = 1170 kg.

The weight of one woman was incorrectly recorded as 35 kg instead of 65 kg.

The difference between the actual weight and the incorrect weight is 65 - 35 = 30 kg.

To correct the total weight, we add this 30 kg in total weight (correct) = 1170 + 30 = 1200 kg.

Correct average = total weight ÷ number of women = 1200 ÷ 20 = 60 kg.

The correct answer is option 3.

Q19. Answer: (d) 2,500

Given:

Salaries ratio: Sunil : Basid : Vikram : Kuldeep = 3 : 7 : 8 : 13

Difference between salaries of Sunil and Basid = Rs. 2,000

Formula used:

If salaries are in the ratio a : b : c : d and difference between two salaries is given, we can use the ratio and the difference to find the actual salaries.

Calculations:

Let the common multiple be x.

Salary of Sunil = 3x
Salary of Basid = 7x
Difference between salaries of Sunil and Basid = 7x - 3x = 4x
4x = Rs. 2,000
=> x = 500
Salary of Vikram = 8x = 8 × 500 = Rs. 4,000
Salary of Kuldeep = 13x = 13 × 500 = Rs. 6,500
Difference between salaries of Vikram and Kuldeep = Rs. 6,500 - Rs. 4,000 = Rs. 2,500
Therefore The correct answer is option 4.

Q20. Answer: (b) 19.04%

Given:
Manpreet offers two successive discounts of 12% and 8% on the sale of a sweater.
Formula used:
Equivalent single percentage discount = 1 - (1 - d1) × (1 - d2)
Where, d1 = first discount, d2 = second discount
Calculations:
Equivalent single percentage discount = 1 - (1 - 0.12) × (1 - 0.08)
=> Equivalent single percentage discount = 1 - 0.88 × 0.92
=> Equivalent single percentage discount = 1 - 0.8096
=> Equivalent single percentage discount = 0.1904 = 19.04%
Therefore The correct answer is option (2).

Q21. Answer: (b) EBZA

The logic followed here is:
MJHI is related to TQOP
And,
GDBC is related to NKIJ
Similarly,
XUST is related to
Hence, "Option 2" is the correct answer.

Q22. Answer: (a) X and W

Given: Six friends are sitting on a circular table, facing towards the centre.
1) X is to the immediate left of Z and W is to the immediate right of Y.
2) Only V is sitting between Z and Y.
3) Z and U are separated by only one person sitting between them.
4) W is an immediate neighbour of U.
Thus, according to the final arrangement, X and W are the immediate neighbours of U.
Hence, "Option 1" is the correct answer.

Q23. Answer: (d) 16, 62

Logic followed here is,
First number × 4 - 2 = Second number
Given,
8, 30
8 × 4 - 2 = 30(Second number)
12, 46
12 × 4 - 2 = 46(Second number)
Check the option,
Option 1 (15, 62)
15 × 4 - 2 = 58 ≠ 62
Option 2 (16, 61)

16 × 4 - 2 = 61 ≠ 61

Option 3 (15, 61)

15 × 4 - 2 = 58 ≠ 61

Option 4 (16, 62)

16 × 4 - 2 = 62 (Second number)

Hence the correct answer is "Option 4"

Q24. Answer: (b) [figure]

The logic followed here is:

1) All the element shift anticlockwise subsequently.

2) Top left corner element is replaced by new element subsequently.

3) Bottom left corner element is shaded subsequently.

Thus, final series is:

Hence, "Option 2" is the correct answer.

Q25. Answer: (d) 177

Given : 17 + 77 − 7 x 37 ÷ 47 = ?

According to the question, after '+' and 'x' are interchanged and '−' and '÷' are interchanged:

17 + 77 − 7 x 37 ÷ 47 = ? => 17 x 77 ÷ 7 + 37 - 47 = ?

=> 17 x 77 ÷ 7 + 37 - 47 = ?

=> 17 x 11 + 37 - 47 = ?

=> 187 + 37 - 47 = ?

=> 224 - 47 = ?

=> 177 = ?

Hence, "Option 4" is the correct answer.

Q26. Answer: (c) E

Given: Seven people R, S, T, D, E, F and G are sitting around a circular table, facing the centre.

1) R is sitting to the immediate right of E.

2) E is an immediate neighbour of S.

3) Only two people are sitting between D and S when counted from the right of S.

4) T is sitting to the immediate right of G.

5) F is not an immediate neighbour of S.

Thus, according to the final arrangement, E is sitting third to the left of F.

Hence, "Option 3" is the correct answer.

Q27. Answer: (a) [figure]

The correct mirror image of the given figure is:

Hence, the correct answer is "Option 1".

Q28. Answer: (b) 110

Logic followed here is,

(First number × 7) + 5 = Second number

Given,

10 × 7 + 5 = 75(Second number)

6 × 7 + 5 = 47(Second number)

Now, for 15

15 × 7 + 5 = 110

So correct answer is Option 2.

Q29. Answer: (d) 382

The logic followed here is:

Hence, "Option 4" is the correct answer.

Q30. Answer: (b) 77

Given : 456 × 4 − 3 ÷ 11 + 70 = ?

According to the question, after '+' and '−' are interchanged and '×' and '÷' are interchanged:

456 × 4 − 3 ÷ 11 + 70 = ? => 456 ÷ 4 + 3 × 11 − 70 = ?

=> 456 ÷ 4 + 3 × 11 − 70 = ?

=> 114 + 3 × 11 − 70 = ?

=> 114 + 33 − 70 = ?

=> 147 − 70 = ?

=> 77 = ?

Hence, "Option 2" is the correct answer.

Q31. Answer: (b) 1

Given code language:

'BRIGHT' is coded as '371562'

B	R / I / G / H / T
1	7 / 3 / 5 / 6 / 2

'GIRTHS' is coded as '653782'

S	G / I / R / T / H
8	6 / 5 / 3 / 7 / 2

Now, 'RIGHT' is common in both language then code for B is '1'.

Hence, the correct answer is "Option 2".

Q32. Answer: (a) AQQ

The logic followed here is:

Hence, "Option 1" is the correct answer.

Q33. Answer: (d) sp

According to the given information,

Thus, according to the given codes the code 'sp' is for the word 'noise'.

Hence, the correct answer is "Option 4".

Q34. Answer: (a) Both conclusions I and II follow.

The least possible Venn diagram for the given statements is as shown below :

Conclusions:

(I) No dolphin is a shark → Follow (As no shark is a dolphin. As direct relation is given between sharks and dolphin, therefore it is true.)

(II) Some sharks are whales → Follow (As some whales are sharks. As some part of whales is common with sharks, therefore it is true.)

Therefore Here, Both conclusions I and II follow.

Hence, the correct answer is "Option 1".

Q35. Answer: (c) Only conclusion I follows

The least possible Venn diagram for the given statements is as shown below :

Conclusions:

(I) No shirt is a belt → Follow (As all shirts are trousers and no trouser is a belt. As whole shirts comes in trousers which cannot be belt, therefore it is false.)

(II) Some belts may be trousers → Does not follow (As no trouser is a belt. As no trouser cannot be belt, therefore it is false.)

Therefore Here, Only conclusion I follows.

Hence, the correct answer is "Option 3".

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Q36. Answer: (d) [figure]

The image embedded in the given figure is as shown below :

Therefore Here, the given figure is embedded in the option figure 4.

Hence, the correct answer is "Option 4".

Q37. Answer: (c) HM 53

The logic followed here is:

CE 77 is related to IK 87

And,

GJ 52 is related to MP 62

Similarly,

BG 43 is related to

Hence, "Option 3" is the correct answer.

Q38. Answer: (a) 3

The logic followed here is:

'VOLT' is coded as '3517'

'TURN' is coded as '2348'

Thus, code for 'T' is '3'.

Hence, "Option 1" is the correct answer.

Q39. Answer: (d) UBDRNE

The logic followed here is:

'BORDER' is coded as 'OBDRRE'

And,

'BEYOND' is coded as 'EBOYDN'

Similarly,

'BURDEN' is coded as

Hence, "Option 4" is the correct answer.

Q40. Answer: (a) [figure]

The logic followed here is:

1) First box series →

Elements at the corners interchange positions diagonally.

The rest of the elements interchange positions.

2) Second box series →

First row element shift clockwise subsequently.

The bottom elements interchange positions.

The center element is replaced by new element.

Thus, final series is:

Hence, "Option 1" is the correct answer.

Q41. Answer: (a) Telangana

The correct answer is Telangana.

Key Points

• Kawal Wildlife Sanctuary is located in the Adilabad district of Telangana.

• The sanctuary spans an area of approximately 893 square kilometers.

• It was declared a wildlife sanctuary in 1965 to protect its rich biodiversity and wildlife.

• Kawal Wildlife Sanctuary is known for its population of tigers, leopards, and deer.

• In 2012, it was designated as a Tiger Reserve under Project Tiger to ensure better conservation efforts for the tiger population.

Additional Information

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• Project Tiger
• It is a tiger conservation program launched in India in 1973.
• The aim is to protect tigers from extinction by ensuring a viable population in their natural habitats.
• Project Tiger focuses on habitat preservation, anti-poaching measures, and scientific management.
• India has over 50 tiger reserves under this project, covering various regions across the country.
• Biodiversity Hotspot
• A biodiversity hotspot is a biogeographic region with a significant reservoir of biodiversity that is under threat from humans.
• To qualify as a biodiversity hotspot, a region must contain at least 1,500 species of vascular plants as endemics.
• It must have lost at least 70% of its original habitat.
• The Eastern Himalayas and Western Ghats in India are examples of biodiversity hotspots.
• Wildlife Sanctuary
• A wildlife sanctuary is a protected area reserved for the conservation of wild animals and their habitats.
• Human activities such as cultivation, grazing, and forestry are regulated to ensure minimal disturbance to wildlife.
• India has over 500 wildlife sanctuaries, each focusing on preserving different species and ecosystems.
• Examples include Bharatpur Bird Sanctuary, Jim Corbett National Park, and Kaziranga National Park.
• Ecotourism
• Ecotourism is a form of sustainable travel that supports the conservation of natural environments.
• It aims to minimize the negative impact on the environment and local communities.
• Ecotourism promotes responsible travel practices, environmental education, and cultural awareness.
• Popular ecotourism destinations in India include Periyar National Park, Sunderbans, and the Andaman and Nicobar Islands.

Q42. Answer: (d) Puducherry

The correct answer is Puducherry.

Key Points

• According to the National Multidimensional Poverty Index (MPI) 2021, Puducherry has the lowest proportion of poor among the Union Territories.
• The MPI is developed by the NITI Aayog in collaboration with Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP).
• The index measures poverty based on various factors such as health, education, and living standards.
• Puducherry's low poverty rate is attributed to its higher levels of education, better healthcare facilities, and improved living standards.
• The data reflects the effectiveness of social welfare programs and policies implemented in the Union Territory.

Additional Information

• National Multidimensional Poverty Index (MPI)
• The MPI is a comprehensive measure of poverty that considers multiple deprivations at the household level across three dimensions: health, education, and living standards.
• It uses 10 indicators including nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing, and assets.
• The index provides a more nuanced understanding of poverty beyond income-based measures.
• NITI Aayog
• NITI Aayog (National Institution for Transforming India) is a policy think tank of the Government of India, established to replace the Planning Commission.
• It aims to foster cooperative federalism through structured support initiatives and mechanisms with the states on a continuous basis.
• Oxford Poverty and Human Development Initiative (OPHI)
• OPHI is an economic research centre within the University of Oxford.
• It develops and implements multidimensional approaches to measuring poverty and wellbeing.
• United Nations Development Programme (UNDP)
• UNDP is the United Nations' global development network, advocating for change and connecting countries to knowledge, experience, and resources to help people build a better life.
• It works in nearly 170 countries and territories, helping to achieve the eradication of poverty and the reduction of inequalities and exclusion.

Q43. Answer: (c) Article 58

The correct answer is Article 58.

Key Points

• Article 58 of the Indian Constitution lays down the qualifications required for a person to be eligible for election as the President of India.

• The candidate must be a citizen of India.

• The candidate must have completed the age of 35 years.

• The candidate must be qualified for election as a member of the House of the People (Lok Sabha).

• The candidate should not hold any office of profit under the Government of India or the Government of any State or under any local or other authority subject to the control of any of the said Governments.

Additional Information

• Article 52 of the Indian Constitution states that there shall be a President of India.

• Article 53 states that the executive power of the Union shall be vested in the President and shall be exercised by him either directly or through officers subordinate to him in accordance with the Constitution.

• Article 54 specifies the manner of election of the President.

• Article 55 outlines the procedure for the election of the President.

• The President is elected by an electoral college consisting of elected members of both Houses of Parliament, as well as elected members of the Legislative Assemblies of States and Union territories.

Q44. Answer: (d) Indra

The correct answer is Indra.

Key Points

• Indra was the most important god of the Vedic Aryans and was considered the king of the gods.

• He was primarily known as the god of rain, thunder, and war, and was often invoked for victory in battles.

• Indra is frequently mentioned in the Rigveda, one of the oldest sacred texts of the Aryans, with over 250 hymns dedicated to him.

• He played a crucial role in Aryan mythology, often depicted as slaying the serpent Vritra, a symbol of drought, to release the waters.

Additional Information

• Agni

• Agni was another prominent deity of the Aryans, known as the god of fire.

• He acted as a mediator between the gods and humans, carrying offerings to the gods through fire.

• Agni played a vital role in Vedic rituals and sacrifices.

• Pashupatinath

• Pashupatinath is a form of Lord Shiva, a major deity in later Hinduism, but not prominent in early Aryan worship.

• The deity is revered as the lord of animals and is particularly worshipped in Nepal.

• Marut

• Maruts were storm deities, often associated with Indra in the Rigveda.

• They were considered the sons of Rudra and were known for their fierce nature and thunderous power.

Q45. Answer: (a) 1928

The correct answer is 1928.

Key Points

• The All Bengal Students Conference was held in 1928.

• Jawaharlal Nehru chaired the conference, marking a significant moment in the Indian student movement.

• The conference was pivotal in galvanizing student support for the Indian independence movement.

• It provided a platform for young intellectuals to discuss and address national issues.

Additional Information

• Jawaharlal Nehru

• He was a prominent leader in the Indian independence movement and the first Prime Minister of India.

• Nehru played a key role in shaping modern India with his vision of a secular and socialist nation.

• He was instrumental in establishing institutions of higher learning and research in India.

• Indian Independence Movement

• The movement aimed at ending British rule in India, culminating in independence in 1947.

• It involved a series of political and social campaigns, led by figures like Mahatma Gandhi, Jawaharlal Nehru, and Subhas Chandra Bose.
• Key events included the Non-Cooperation Movement, Civil Disobedience Movement, and the Quit India Movement.
• Student Movements in India
• Student movements have historically played a crucial role in Indian politics and social reform.
• They have been instrumental in advocating for educational reforms, social justice, and political change.
• Prominent student organizations include the All India Students Federation (AISF) and the National Students' Union of India (NSUI).
• Bengal in the Independence Movement
• Bengal was a major center for revolutionary activities against British rule.
• It produced several prominent leaders and revolutionaries, including Subhas Chandra Bose and Rabindranath Tagore.
• The region witnessed significant events such as the Partition of Bengal in 1905 and the Bengal Famine of 1943.

Q46. Answer: (d) Dilip Kumar

The correct answer is Dilip Kumar.

Key Points

• Dilip Kumar, a legendary actor in Indian cinema, is known for his significant contributions to the film industry.
• His autobiography, titled 'The Substance And The Shadow: An Autobiography', offers a detailed account of his life and illustrious career.
• The book was published in 2014 and has been highly acclaimed for its in-depth portrayal of his journey.
• Dilip Kumar, often referred to as the 'Tragedy King', has won numerous awards and accolades for his performances over several decades.

Additional Information

• Dilip Kumar's Real Name: His birth name is Muhammad Yusuf Khan, and he adopted the screen name Dilip Kumar for his acting career.
• Career Highlights: He debuted in the film 'Jwar Bhata' in 1944 and went on to star in classics like 'Mughal-e-Azam', 'Naya Daur', and 'Devdas'.
• Honors and Awards: Dilip Kumar received numerous awards, including eight Filmfare Awards for Best Actor and the Padma Bhushan and Padma Vibhushan from the Government of India.
• Influence and Legacy: He is considered one of the greatest actors in Indian cinema, influencing several generations of actors with his method acting style.
• Personal Life: Dilip Kumar was married to actress Saira Banu, and their marriage was widely celebrated in the Indian film industry.

Q47. Answer: (b) The 2023 Greenko Hyderabad E-Prix

The correct answer is The 2023 Greenko Hyderabad E-Prix.

Key Points

• The first-ever Formula E race in India was hosted in Hyderabad in 2023.
• The event was officially named The 2023 Greenko Hyderabad E-Prix.
• It was held in collaboration with the Telangana government, highlighting the region's commitment to promoting electric vehicles and sustainable practices.
• The race took place on a specially designed street circuit in Hyderabad, showcasing the city's infrastructure and capability to host international sporting events.

Additional Information

• Formula E
• Formula E is a single-seater motorsport championship that uses only electric cars.
• It was conceived in 2011 and the inaugural championship started in Beijing in 2014.
• The series was created to promote electric vehicles and sustainable mobility solutions.
• Formula E races take place on temporary street circuits in major cities around the world.
• Greenko
• Greenko is one of India’s leading renewable energy companies.
• The company focuses on generating energy from renewable sources such as solar, wind, and hydro.
• Greenko's collaboration in hosting the E-Prix aligns with its mission to promote sustainable and clean energy solutions.
• Telangana Government

• Telangana is a state in southern India, known for its tech-savvy governance and rapid development.
• The state government is actively promoting the adoption of electric vehicles and sustainable practices.
• Hosting the Formula E race was a part of its broader strategy to position Hyderabad as a hub for innovation and sustainability.

Q48. Answer: (a) First, second and third centuries AD

The correct answer is First, second and third centuries AD.

Key Points

• Several Buddhist pilgrims and scholars, such as Faxian, travelled to China during the first, second, and third centuries AD.
• These journeys were primarily taken to collect Buddhist scriptures and spread Buddhism in China.
• Notable figures like Faxian and Kashyapa Matanga played crucial roles in the cultural exchanges between India and China during this period.
• The Silk Route was a vital conduit for not only trade but also for cultural and religious exchanges.
• These travels significantly influenced the development of Buddhism in China.

Additional Information

• Faxian:
• Faxian was a Chinese Buddhist monk who travelled to India between 399 and 412 AD to collect Buddhist texts.
• His journey is documented in his travelogue, "A Record of Buddhist Kingdoms."
• Silk Route:
• The Silk Route was an ancient network of trade routes that connected the East and West.
• It was central to cultural interaction through regions of the Asian continent connecting the East and West from China to the Mediterranean Sea.
• Buddhism in China:
• Buddhism was introduced to China during the Han dynasty (206 BC–220 AD).
• It became one of the major religions in China, influencing Chinese culture, philosophy, and art.
• Kashyapa Matanga:
• Kashyapa Matanga was an Indian Buddhist monk who is traditionally thought to have first arrived in China in the 1st century AD.
• He is credited with helping to establish Buddhism in China.

Q49. Answer: (d) instantaneous dipole moment

The correct answer is instantaneous dipole moment.

Key Points

• Non-polar molecules have an even distribution of electrons across the molecule, resulting in no regions of partial positive or negative charge.
• These molecules typically consist of identical atoms or atoms with similar electronegativities, such as in diatomic molecules like N_2 or O_2.
• Non-polar molecules do not have a permanent dipole moment, meaning they do not have a net separation of electrical charge.
• Even though non-polar molecules have no permanent dipole moment, they can still possess a temporary "instantaneous dipole moment" due to the random fluctuations in their electron clouds, which can create a temporary positive and negative charge separation within the molecule. Hence, option 4 is correct.
• Examples of non-polar molecules include noble gases (e.g., He, Ne) and hydrocarbons like methane (CH_4).

Additional Information

• Electronegativity: It is a measure of the tendency of an atom to attract a bonding pair of electrons. Non-polar bonds occur when atoms have similar electronegativities.
• Polar vs. Non-polar: Polar molecules have a significant difference in electronegativity between bonded atoms, creating partial charges and a dipole moment. Non-polar molecules do not exhibit these characteristics.
• Van der Waals Forces: Non-polar molecules primarily interact through Van der Waals forces, which are weaker than the dipole-dipole interactions found in polar molecules.
• Solubility: Non-polar molecules are generally soluble in non-polar solvents (like oils and fats) but insoluble in polar solvents (like water).
• Instantaneous Dipole: Although non-polar molecules do not have a permanent dipole moment, they can have instantaneous dipoles due to temporary imbalances in electron distribution, leading to weak London dispersion forces.

Q50. Answer: (a) public sector

The correct answer is public sector.

Key Points

• The Steel Authority of India Limited (SAIL) is a public sector undertaking (PSU) in India.

• SAIL is one of the largest steel-making companies in India and one of the Maharatnas of India's Central Public Sector Enterprises.

• It was established in 1973 and operates under the Ministry of Steel, Government of India.

• SAIL owns and operates five integrated steel plants at Bhilai, Rourkela, Durgapur, Bokaro, and Burnpur (Asansol), and three special steel plants at Salem, Durgapur, and Bhadravati.

Additional Information

• Public Sector Undertakings (PSUs)

• PSUs are government-owned corporations or state-owned enterprises created by the government to undertake commercial activities on behalf of the government.

• These entities are either wholly or partially owned by the government and are typically involved in industries considered crucial for the country's economy.

• Maharatna Status

• This status is granted to select CPSEs to empower them to expand operations and emerge as global giants.

• Companies with Maharatna status have greater autonomy compared to other PSUs in terms of investment decisions, mergers, and acquisitions.

• Ministry of Steel

• This is the apex body responsible for formulating policies and strategies for the growth of the steel industry in India.

• The ministry ensures coordination among various stakeholders, including public and private sector steel companies.

• Integrated Steel Plants

• These are large-scale industrial setups that carry out all processes from raw material processing to finished steel production.

• They include various stages such as coke production, sintering, iron making, steel making, and rolling.

Q51. Answer: (c) Rajkumar Singhajit Singh

The correct answer is Rajkumar Singhajit Singh.

Key Points

• Rajkumar Singhajit Singh is a renowned Indian dancer and choreographer known for his expertise in the Manipuri dance form.

• He was awarded the prestigious Tagore Award for Cultural Harmony in 2014 for his contributions to the preservation and promotion of Manipuri dance.

• Singhajit Singh has been instrumental in popularizing the Manipuri dance form both in India and internationally.

• He has received numerous accolades and honors for his work, including the Padma Shri in 1986 and the Sangeet Natak Akademi Award in 1984.

Additional Information

• Manipuri Dance

• Manipuri dance, also known as Jagoi, is one of the major classical dance forms of India, originating from the northeastern state of Manipur.

• It is characterized by graceful and fluid movements, often depicting themes from the Vaishnavite traditions of Hinduism.

• The dance incorporates elements of both solo and group performances, with a strong emphasis on expressiveness and storytelling.

• Costumes and makeup play a significant role in Manipuri dance, with elaborate and colorful attire that enhances the visual appeal.

• Tagore Award for Cultural Harmony

• The Tagore Award for Cultural Harmony was instituted by the Government of India in 2012 to commemorate the 150th birth anniversary of Rabindranath Tagore.

• The award recognizes individuals, associations, institutions, or organizations for their outstanding contributions towards promoting values of cultural harmony.

• The award includes a cash prize of Rs. 1 crore, a citation, a plaque, and an exquisite traditional handicraft or handloom item.

• The objective of the award is to foster cultural harmony and understanding, reflecting the spirit of Tagore's vision for a unified world.

• Sangeet Natak Akademi

• The Sangeet Natak Akademi, established in 1952, is the national academy for music, dance, and drama in India.

• It aims to preserve and promote the diverse cultural heritage of India by supporting artists and organizing cultural events.

• The Akademi presents awards to individuals for their outstanding contributions in the fields of music, dance, and drama.

• It also conducts training programs, workshops, and festivals to encourage and nurture new talent in performing arts.

• Padma Awards

• The Padma Awards are one of the highest civilian honors in India, instituted in 1954 to recognize achievements in various fields of activities.

• The awards are categorized into three levels: Padma Vibhushan (for exceptional and distinguished service), Padma Bhushan (for distinguished service of high order), and Padma Shri (for distinguished service).

• Recipients of the Padma Awards are chosen based on their contributions to arts, literature, science, social work, public affairs, and other areas.

• The awards are announced annually on the occasion of Republic Day and are conferred by the President of India in a ceremonial event.

Q52. Answer: (a) Harivansh Narayan Singh

The correct answer is Harivansh Narayan Singh.

Key Points

• Harivansh Narayan Singh, the Deputy Chairman of Rajya Sabha, led the Indian Parliamentary delegation to the 9th BRICS Parliamentary Forum.

• The forum took place in September 2023, focusing on strengthening parliamentary cooperation among BRICS nations.

• Harivansh Narayan Singh's participation underscores India's active role in BRICS and its commitment to multilateralism.

• The BRICS Parliamentary Forum is a platform for parliamentarians from Brazil, Russia, India, China, and South Africa to discuss and promote common interests.

Additional Information

• BRICS

• BRICS stands for Brazil, Russia, India, China, and South Africa, representing major emerging economies.

• The group was formed in 2009 with the aim of promoting peace, security, and development in the region.

• BRICS nations account for about 42% of the world's population and 23% of the global GDP.

• Parliamentary Forums

• Parliamentary forums like the BRICS Parliamentary Forum facilitate dialogue and cooperation on legislative matters.

• They provide a platform for parliamentarians to share best practices and collaborate on global issues.

• Harivansh Narayan Singh

• He is a seasoned politician and journalist, serving as the Deputy Chairman of Rajya Sabha since 2018.

• He has played a significant role in various parliamentary committees and discussions.

• BRICS Cooperation

• BRICS nations collaborate on various fronts including economic, political, and cultural exchanges.

• They work together to address global challenges like climate change, terrorism, and economic inequality.

Q53. Answer: (b) scientific temper

The correct answer is scientific temper.

Key Points

• Article 51A(h) of the Constitution of India lists the fundamental duty to develop the scientific temper, humanism, and the spirit of inquiry and reform.

• The concept of scientific temper was promoted by the first Prime Minister of India, Jawaharlal Nehru.

• Scientific temper refers to an attitude of logical and rational thinking.

• This duty aims to encourage critical thinking and scientific reasoning among citizens.

Additional Information

• Fundamental Duties

• Fundamental Duties are moral obligations of all citizens to help promote a spirit of patriotism and to uphold the unity of India.

• These duties are listed in Part IV-A of the Indian Constitution.

• Initially, there were ten Fundamental Duties, but an eleventh duty was added by the 86th Amendment Act in 2002.

• Scientific Temper

• Scientific temper is a way of life that involves the application of logic and the avoidance of superstition and irrational beliefs.

• It is essential for the progress and development of society.

• Promoting scientific temper is also crucial for fostering innovation and technological advancements.

• Humanism

• Humanism is a rational philosophy informed by science, inspired by art, and motivated by compassion.

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• It affirms the dignity and worth of all people and promotes human welfare and happiness.
• Spirit of Inquiry
• The spirit of inquiry involves curiosity, questioning, and the search for truth and knowledge.
• It encourages people to challenge established norms and contribute to societal reforms.

Q54. Answer: (a) Kathak

The correct answer is Kathak.

Key Points

• Kathak is one of the eight major classical dance forms of India.
• It originated from the northern regions of India and has a rich tradition of storytelling through dance.
• Famous exponents of Kathak include Sitara Devi, Rohini Bhate, Pandit Munnaal Shukla, Kumudini Lakhia, and Uma Sharma.
• Kathak is characterized by intricate footwork, spins, and expressive gestures and facial expressions.
• The dance form is closely associated with the Hindu epics and the Bhakti movement.

Additional Information

• Gharanas
• Kathak has three main gharanas (schools): Lucknow, Jaipur, and Banaras.
• Each gharana has its own unique style and repertoire.
• Costumes and Music
• Male dancers typically wear dhoti-kurta, while female dancers wear lehenga-choli or saree.
• The music is mainly based on Hindustani classical music.
• Instruments
• The main instruments used in Kathak performances include tabla, harmonium, and sitar.
• The dancers also wear ghungroos (ankle bells) to emphasize their footwork.
• Historical Context
• Kathak evolved from the ancient storytellers known as Kathakars.
• It was influenced by both Hindu and Muslim cultures during the Mughal era.

Q55. Answer: (d) Methyl orange

The correct answer is Methyl orange.

Key Points

• Methyl orange is a synthetic indicator used primarily in titrations due to its clear and distinct color change.
• It is used to determine the pH of a solution, changing color at a pH of approximately 3.1 to 4.4.
• In acidic solutions, methyl orange turns red, whereas in basic solutions, it turns yellow.
• This indicator is particularly useful for titrations involving weak bases and strong acids.

Additional Information

• Litmus Solution
• Litmus is a natural indicator derived from lichens.
• It is commonly used to test whether a solution is acidic or basic.
• Acidic solutions turn blue litmus paper red, while basic solutions turn red litmus paper blue.
• Turmeric
• Turmeric is a natural indicator that turns red in basic conditions.
• It remains yellow in acidic and neutral solutions.
• It is commonly used in household experiments to test for the presence of bases.
• Cabbage Juice
• Red cabbage juice is a natural pH indicator.
• It changes color over a wide pH range, from red in acidic conditions to green/yellow in neutral conditions, and blue/purple in basic conditions.
• It is often used in educational settings for pH experiments.
• Indicators
• An indicator is a substance that changes color to indicate the presence of an acid or base.
• They are widely used in titrations to determine the endpoint of a chemical reaction.
• Indicators can be synthetic (like methyl orange) or natural (like litmus, turmeric, and cabbage juice).

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Q56. Answer: (c) Maharashtra

The correct answer is Maharashtra.

Key Points

• The Ramoshi Uprising of 1824 took place in the present state of Maharashtra.
• The Ramoshi community, primarily residing in Maharashtra, revolted against the British East India Company.
• The uprising was led by Chittur Singh, a notable leader of the Ramoshi tribe.
• The Ramoshis were dissatisfied with British policies that impacted their traditional way of life and economic conditions.
• This uprising was one of the early revolts against British colonial rule in India.

Additional Information

• Ramoshi Community
• The Ramoshis are a tribal community found mainly in Maharashtra and parts of Karnataka.
• Traditionally, they were known for their skills in hunting and gathering, and later some were employed as watchmen and guards.
• Their traditional leadership and warrior skills were significant during the Maratha Empire.
• British Policies and Impact
• The British East India Company implemented policies that disrupted the traditional livelihoods of many tribal communities.
• Land revenue policies and forest laws restricted the Ramoshis' access to their traditional lands and resources.
• These policies led to widespread discontent and resistance among various tribal groups in India.
• Other Tribal Uprisings
• The Santal Rebellion (1855-56) in present-day Jharkhand and West Bengal.
• The Bhil Uprising (1818-1831) in western India.
• The Munda Rebellion (1899-1900) led by Birsa Munda in present-day Jharkhand.
• Historical Significance
• These uprisings were among the early signs of resistance against colonial rule in India.
• They reflect the widespread discontentment among various communities due to the exploitative policies of the British.
• Such uprisings set the stage for a broader national movement for independence in the later years.

Q57. Answer: (b) Vision 2035

The correct answer is Vision 2035.

Key Points

• The Maharashtra government introduced the Vision 2035 plan to modernize and revamp its healthcare system.
• This initiative comes in response to the tragic deaths of 38 patients in a government hospital in Nanded in October 2023.
• Vision 2035 aims to upgrade medical facilities, infrastructure, and healthcare services across the state.
• The plan includes the integration of advanced medical technologies and training programs for healthcare professionals.
• The Maharashtra government is committed to ensuring better healthcare delivery and patient safety through this comprehensive scheme.

Additional Information

• Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)
• It is a national health insurance scheme spearheaded by the Ministry of Health and Family Welfare.
• It is considered to be the world's largest government-financed health assurance initiative.
• It aims to provide free access to health insurance coverage for India's low-income earners.
• AB-PMJAY provides a cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization.
• This scheme is fully financed by the Indian government, serving as a significant step towards universal healthcare in India.
• Pradhan Mantri Suraksha Bima Yojana (PMSBY)
• It is a government-backed accident insurance scheme launched on May 9, 2015, by PM Narendra Modi.
• PMSBY aims to provide affordable insurance for the poor and underprivileged.
• Available to individuals aged 18 to 70 years with a bank account.
• For an annual premium of Rs.12, beneficiaries receive coverage of Rs.2 lakh for accidental death and full disability, and Rs.1 lakh for partial disability.
• This scheme plays a pivotal role in protecting vulnerable individuals from unforeseen risks.
• Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)
• Launched on May 9, 2015, by PM Narendra Modi.
• A government-backed life insurance scheme aimed at increasing life insurance coverage.

• Available to individuals aged 18 to 50 years with a bank account.
• Offers a life cover of Rs.2 lakhs for a one-year period, renewable annually.
• The annual premium is Rs.436, automatically debited from the subscriber's account.
• This scheme provides affordable life insurance to Indian citizens.

Q58. Answer: (a) i-c, ii-a, iii-b

The correct answer is option 1: i-c, ii-a, iii-b.

Key Points

• Proteins are broken down by the enzyme Trypsin, which is produced in the pancreas and acts in the small intestine.
• Carbohydrates are digested by Amylase, an enzyme found in saliva and pancreatic juice.
• Fats are digested by the enzyme Lipase, which is also produced in the pancreas and acts in the small intestine.
• Enzymes are biological catalysts that speed up the chemical reactions involved in the digestion of food.
• The correct matching of Column-A and Column-B is: i) Protein - Trypsin, ii) Carbohydrates - Amylase, iii) Fats - Lipase.

Additional Information

• Proteins: Complex molecules that are broken down into amino acids, which are essential for various body functions.
• Carbohydrates: Organic compounds that serve as a major energy source for the body, broken down into simple sugars like glucose.
• Fats: Lipid molecules that are broken down into fatty acids and glycerol, providing a concentrated energy source.
• Amylase: An enzyme that helps in the breakdown of starches into sugars, found in saliva and pancreatic juice.
• Trypsin: A protease enzyme that breaks down proteins into smaller peptides, produced by the pancreas.
• Lipase: An enzyme that catalyzes the breakdown of fats into fatty acids and glycerol, essential for fat digestion and absorption.

Q59. Answer: (a) river deltas

The correct answer is river deltas.

Key Points

• River deltas are formed at the mouth of a river where it meets a standing body of water like an ocean, sea, or lake, leading to sediment deposition.
• They are highly fertile areas due to the accumulation of nutrient-rich sediments, supporting diverse vegetation and agriculture.
• The process of bifurcation, where a river splits into multiple channels, contributes to the creation and expansion of delta regions.
• Famous examples of river deltas include the Nile Delta in Egypt, the Mississippi Delta in the USA, and the Ganges-Brahmaputra Delta in India and Bangladesh.
• Deltas play a crucial role in sustaining ecosystems, supporting wildlife habitats, and providing protection against storm surges and coastal erosion.

Additional Information

• Sedimentation Process
• Rivers carry sediments which are deposited when the river loses its carrying capacity upon entering a slower-moving or standing body of water.
• This process gradually builds up layers of sediment, forming the delta.
• Bifurcation
• Bifurcation refers to a river splitting into two or more channels, contributing to the formation of distributaries in delta regions.
• This division helps in the even distribution of sediments across the delta area.
• Types of Deltas
• There are several types of deltas based on their shape and formation process, including arcuate, bird's foot, and cuspate deltas.
• For example, the Nile Delta is an arcuate delta, while the Mississippi Delta is a bird's foot delta.
• Ecological Importance
• Deltas are critical for biodiversity, providing habitats for various species of fish, birds, and other wildlife.
• They also act as natural buffers, absorbing floodwaters and reducing the impact of storm surges.
• Human Impact
• Human activities such as dam construction and river channelization can significantly affect sediment flow and delta formation.
• Efforts are being made to manage and restore delta regions to maintain their ecological and economic benefits.

Q60. Answer: (c) Shah Jahan

The correct answer is Shah Jahan.

Key Points

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• The Taj Mahal was commissioned in 1632 by the Mughal Emperor Shah Jahan to house the tomb of his favorite wife, Mumtaz Mahal.
• The construction of the Taj Mahal was completed in 1653, employing thousands of artisans and craftsmen.
• The Taj Mahal is located on the southern bank of the Yamuna River in the city of Agra, India.
• This architectural marvel is renowned for its stunning white marble dome and intricate inlay work with precious stones.
• The Taj Mahal is a UNESCO World Heritage Site and is often regarded as the pinnacle of Mughal architecture.

Additional Information

• Mughal Architecture:
• Mughal architecture is characterized by large bulbous domes, slender minarets at the corners, massive halls, and large vaulted gateways.
• It combines elements from Persian, Turkish, and Indian architectural styles.
• Examples include the Red Fort, Humayun's Tomb, and the Jama Masjid in Delhi.
• Shah Jahan:
• Shah Jahan was the fifth Mughal Emperor, reigning from 1628 to 1658.
• He is also known for commissioning other significant buildings such as the Red Fort in Delhi and the Jama Masjid.
• His reign is often considered the golden age of Mughal architecture.
• UNESCO World Heritage Sites:
• The Taj Mahal was designated as a UNESCO World Heritage Site in 1983.
• World Heritage Sites are landmarks or areas with legal protection by an international convention administered by UNESCO.
• They are recognized for having cultural, historical, scientific, or other forms of significance.
• Yamuna River:
• The Yamuna River is one of the major rivers of India and the longest tributary of the Ganges.
• It flows through several states including Uttarakhand, Himachal Pradesh, Haryana, Delhi, and Uttar Pradesh.

Q61. Answer: (d) Both 2 and 3

The correct answer is Both 2 and 3.

Key Points

• The Harappan civilization is known for its advanced town planning, including features like grid layouts and well-organized drainage systems.
• Most Harappan towns had a citadel, which served as a fortified area housing important buildings and possibly administrative centers.
• There is no evidence that every town had a temple; instead, the civilization is known for its secular architecture.
• Harappan buildings were primarily constructed using baked bricks, not sandstone.
• The cities featured well-planned streets, granaries, and public baths, reflecting advanced urban planning.

Additional Information

• Citadel: A raised area in Harappan cities that housed important buildings and possibly served as a center for administration and storage.
• Drainage System: Harappan cities had sophisticated drainage systems with covered drains running alongside the streets, indicating advanced engineering skills.
• Granaries: Large storage structures found in some Harappan cities, suggesting the importance of agriculture and surplus storage in their economy.
• Public Baths: Structures like the Great Bath in Mohenjo-Daro, indicating the emphasis on cleanliness and possibly ritual bathing in Harappan culture.
• Urban Planning: The layout of Harappan cities with grid-pattern streets, standardized brick sizes, and consistent architectural planning across various settlements.

Q62. Answer: (d) Brij Bhushan Kabra

The correct answer is Brij Bhushan Kabra.

Key Points

• Brij Bhushan Kabra was a pioneer in modifying the Hawaiian slide guitar to play classical ragas.
• He was born in Jodhpur, Rajasthan, and is renowned for his innovative approach to Indian classical music.
• Kabra's contribution significantly enriched the Indian classical music repertoire with the inclusion of guitar.
• His style brought a new dimension to Indian classical music, blending the sounds of the guitar with traditional ragas.

Additional Information

• Hawaiian Slide Guitar
• Originally used in Hawaiian music, it involves sliding a metal bar along the strings to create a smooth, gliding sound.
• This technique allows for a continuous range of pitches, akin to the human voice.
• Indian Classical Ragas
• Ragas are melodic frameworks for improvisation in Indian classical music.
• Each raga is associated with a specific time of day or season, and evokes particular emotions.
• Fusion Music
• Fusion music combines elements from different musical traditions, creating new and innovative sounds.
• Kabra's work represents a fusion of Western and Indian musical techniques.
• Influence on Modern Indian Music
• Brij Bhushan Kabra's integration of the guitar into Indian classical music paved the way for future musicians to experiment with new instruments and sounds.
• His legacy continues to inspire contemporary musicians to explore and innovate within the realm of Indian classical music.

Q63. Answer: (c) 3^(rd)

The correct answer is 3rd.

Key Points

• The 2023 edition of the Intercontinental Cup was the 3rd edition of the tournament.
• The Intercontinental Cup is a football tournament organized by the All India Football Federation (AIFF).
• The previous editions of the tournament were held in 2018 and 2019.
• The event provides international exposure to the Indian national football team by allowing them to compete against teams from different continents.

Additional Information

• All India Football Federation (AIFF)
• The AIFF is the governing body for football in India and is responsible for the promotion and development of the sport in the country.
• It was founded in 1937 and is affiliated with FIFA, the international governing body for football.
• The AIFF organizes various domestic football leagues and tournaments, including the Indian Super League (ISL) and the I-League.
• Intercontinental Cup
• The Intercontinental Cup is an invitational tournament that features teams from different continents.
• The primary aim of the tournament is to provide competitive international matches for the Indian national team.
• The first edition was held in 2018, and the tournament has since become a regular feature in the Indian football calendar.
• Indian National Football Team
• The team is governed by the AIFF and represents India in international football competitions.
• The team has seen significant improvements in recent years and has been actively participating in various international tournaments.
• Sunil Chhetri, the team captain, is one of the most prominent and successful players in Indian football history.
• Impact of the Intercontinental Cup
• The tournament helps in improving the FIFA rankings of the Indian national team by providing them with competitive matches.
• It also helps in popularizing football in India, encouraging more young players to take up the sport.
• The exposure gained by playing against international teams helps in the overall development of the players and the team.

Q64. Answer: (d) Self

The correct answer is Self.

Key Points

• Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions.
• They are usually composed of 10-20 members, often women, from similar socio-economic backgrounds.
• The primary objective of SHGs is to enhance the socio-economic conditions of their members through collective efforts and mutual support.
• SHGs play a crucial role in financial inclusion by enabling members to pool their savings, access credit, and engage in income-generating activities.
• SHGs are a key component of microfinance initiatives, providing a platform for the delivery of financial services to the

underserved and marginalized sections of society.

Additional Information

• Microfinance

• Microfinance refers to the provision of financial services to low-income individuals or groups who typically lack access to traditional banking services.

• It includes a range of services such as microcredit, savings, insurance, and remittances.

• Microfinance aims to promote financial inclusion and empower economically disadvantaged people.

• It has been recognized as a powerful tool for poverty alleviation and socio-economic development.

• Financial Inclusion

• Financial inclusion involves ensuring that individuals and businesses have access to useful and affordable financial products and services.

• These services should meet their needs and be delivered responsibly and sustainably.

• Financial inclusion is essential for reducing poverty, fostering economic growth, and promoting social equity.

• Women Empowerment through SHGs

• SHGs have been instrumental in empowering women by enhancing their financial independence and decision-making power.

• Participation in SHGs helps women develop skills, confidence, and a sense of solidarity.

• Empowered women contribute to the well-being of their families and communities, leading to broader social and economic development.

• Government Support for SHGs

• The Indian government, through various schemes and programs, supports the formation and strengthening of SHGs.

• Initiatives like the National Rural Livelihood Mission (NRLM) aim to promote SHGs and enhance their capacity.

• Government support includes financial assistance, training, and capacity-building activities for SHG members.

Q65. Answer: (a) Assam

The correct answer is Assam.

Key Points

• Bhogali Bihu is one of the most important festivals celebrated in the state of Assam.

• Also known as Magh Bihu, it marks the end of the harvesting season in the month of Magh (January-February).

• The festival is characterized by community feasts, bonfires, and the preparation of traditional Assamese delicacies.

• It is a time for farmers to relax and enjoy the fruits of their labor with family and friends.

• Various traditional games like tekeli bhonga (pot-breaking) and buffalo fighting are organized during the celebrations.

Additional Information

• Bihu Festival

• There are three main types of Bihu celebrated in Assam: Bohag Bihu (Rongali Bihu), Kati Bihu (Kongali Bihu), and Magh Bihu (Bhogali Bihu).

• Bohag Bihu marks the Assamese New Year and the arrival of spring.

• Kati Bihu is observed in the month of Kati (October) and is associated with the relocation of crops and the lighting of lamps.

• Magh Bihu, as mentioned, celebrates the end of the harvest season.

• Traditional Foods

• During Bhogali Bihu, people prepare various traditional dishes such as pitha (rice cakes), laru (coconut and sesame sweets), and doi (curd).

• Community feasts called bhog are organized where neighbors and relatives come together to share food.

• Meji and Bhela Ghar

• Meji is a bonfire made of wood and bamboo, symbolizing the end of the harvesting period.

• Bhela Ghar are temporary huts made from bamboo, leaves, and thatch, where people gather to eat and celebrate.

• These structures are usually burnt at the end of the festival as part of the ritual.

• Cultural Significance

• The festival fosters a sense of community and reinforces cultural bonds among the Assamese people.

• It also reflects the agrarian lifestyle of Assam, highlighting the importance of agriculture in the region.

Q66. Answer: (a) in

The correct answer is 'in'.

Key Points

• The correct preposition to use with "countryside" is "in."
• We say "in the countryside" to refer to an area outside cities and towns.
• Other prepositions like "on," "onto," or "at" do not fit grammatically in this context.

Therefore, the correct answer is Option 1.

Complete Sentence: "My grandparents live in a beautiful house in the countryside."

Additional Information

• Option 2: "on" is incorrect because "on the countryside" is not a valid phrase in English.
• Option 3: "onto" is incorrect because "onto" is used for movement from one place to another.
• Option 4: "at" is incorrect because "at" is used for specific points or locations, not broad areas like the countryside.

Q67. Answer: (d) merrier

The correct answer is Option 4.

Key Points

• The primary issue in the sentence is the comparative form of the adjective "merry."
• When comparing two things, the correct comparative form of "merry" is "merrier."
• Thus, the sentence should use "merrier" instead of "merry than usual."

Therefore, the correct answer is Option 4.

Correct Sentence: "The children were merrier than usual on Sunday."

Additional Information

• Option 1: "more merrier" – This is grammatically incorrect as "merrier" is already a comparative form and does not need "more".
• Option 2: "the merriest" – This is the superlative form and not suitable for comparing two things.
• Option 3: "merriest" – This is also a superlative form and not suitable for comparing two things.

Q68. Answer: (d) looked into the matter and found

The correct answer is Option 4.

Key Points

• The primary issue in the sentence is the incorrect phrase "looked out the matter" which needs to be corrected to "looked into the matter."
• The phrase "looked into" is the correct phrasal verb to indicate examining or investigating a matter.
• The correct phrase should be "looked into the matter and found," ensuring grammatical correctness and clarity.

Therefore, the correct answer is Option 4.

Correct Sentence: "They looked into the matter and found the root cause of the problem."

Additional Information

• Option 1: "looked of the matter and found" is incorrect as "looked of" is not a valid phrase.
• Option 2: "looked until the matter and found" is incorrect as "looked until" does not make sense in this context.
• Option 3: "looked unless the matter and found" is incorrect as "looked unless" is not a valid phrase.

Q69. Answer: (d) From next Friday, the team of three members will be tracking the animal.

The correct answer is '4' i.e. From next Friday, the team of three members will be tracking the animal.

Key Points

• To express a sentence in the future tense, we use "will be" followed by the present participle (-ing form) of the verb.
• The phrase "From next Friday" indicates a future time reference.
• Among the given options, "will be tracking" correctly represents the future continuous tense.

Hence, the correct answer is option 4.

Correct sentence: "From next Friday, the team of three members will be tracking the animal."

Additional Information

• Option 1: "are tracking" is incorrect because "are" is present continuous, which does not indicate a future action.
• Option 2: "had tracked" is incorrect because it is in past perfect tense, which refers to an action completed before another past action.
• Option 3: "have been tracking" is incorrect because it is present perfect continuous, which refers to an action that started in the past and is still ongoing.

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Q70. Answer: (d) Stiffness

The solution is in Hindi. Read it online.

Q71. Answer: (c) Very precious

The solution is in Hindi. Read it online.

Q72. Answer: (b) Reetu slept all through the history class.

The correct answer is '2) Reetu slept all through the history class.'

Key Points

• The phrase "all through" is the correct preposition here, meaning Reetu slept for the entire duration of the history class.

• Other options are incorrect:

• Option 1: "all in" – Incorrect as "all in" does not convey duration properly.

• Option 3: "all during" – Not idiomatically correct.

• Option 4: "all into" – Incorrect usage; "into" does not fit in this context.

Therefore, the correct answer is Option 2.

Correct Sentence: "Reetu slept all through the history class."

Additional Information

• The phrase "through the class" emphasizes the entire duration of the class.

• Similar correct usage:

• "She worked all through the night."

• "He kept talking all through the meeting."

Q73. Answer: (a) D

The correct answer is Option 1.

Key Points

• The sentence "Ritika angrily spoke to Kartik after the meeting" is grammatically correct.

• The structure follows the proper order: Subject + Adverb + Verb + Object + Time expression.

• There is no issue related to tense, preposition, or word usage in any part.

• Thus, no segment (A, B, or C) contains an error.

Therefore, the correct answer is D (No error).

Correct Sentence: "Ritika angrily spoke to Kartik after the meeting."

Q74. Answer: (a) Insensitive

The solution is in Hindi. Read it online.

Q75. Answer: (d) repressed

The solution is in Hindi. Read it online.

Q76. Answer: (b) Mount Everest is the highest mountain in the world.

The correct answer is 'B' i.e. Mount Everest is the highest mountain in the world.

Key Points

• The given sentence is in the positive degree.

• The superlative degree is used to compare more than two things.

• The correct transformation follows this pattern:

• Positive Degree: No other mountain in the world is as high as Mount Everest.

• Superlative Degree: Mount Everest is the highest mountain in the world.

• Thus, the correct answer is Option 2.

Hence, the correct answer is option 2.

Correct Sentence: Mount Everest is the highest mountain in the world.

Additional Information

• Comparative Degree: Mount Everest is higher than any other mountain in the world.

• Positive Degree: No other mountain in the world is as high as Mount Everest.

• In superlative degree transformation, we use "the + superlative form."

• Example:

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• Positive: No other city is as crowded as Mumbai.
• Superlative: Mumbai is the most crowded city.

Q77. Answer: (c) devasstating

The solution is in Hindi. Read it online.

Q78. Answer: (b) revengeful

The solution is in Hindi. Read it online.

Q79. Answer: (c) is grazing

The correct answer is Option 3.

Key Points

• The error lies in the phrase “is grazing.”
• The subject “cattle” is a plural noun and should take a plural verb, not a singular one.
• Therefore, instead of “is grazing,” it should be “are grazing.”
• Additionally, the tense inconsistency between “is grazing” (present) and “attacked” (past) should be corrected by using “were grazing.”

Therefore, the correct answer is Option 3.

Correct Sentence: “The farm cattle were grazing in the field when the tiger attacked.”

Q80. Answer: (a) Individiuality

The solution is in Hindi. Read it online.

Q81. Answer: (c) frightened

The solution is in Hindi. Read it online.

Q82. Answer: (d) Something that will never happen

The solution is in Hindi. Read it online.

Q83. Answer: (d) posed to be

The correct answer is Option 4.

Key Points

• The primary issue in the sentence is the incorrect verb form "pose to being".
• The correct form should be "posed to be" to maintain the past tense and grammatical correctness.
• Thus, the error is located in the verb form used in the sentence.

Therefore, the correct answer is Option 4.

Correct Sentence: "Placing a huge magnet atop the temple posed to be the biggest hurdle for the masons."

Additional Information

• No improvement required – This would be the correct option if the sentence was already correct, but it isn't due to the incorrect verb form.
• Posing as be – This option is grammatically incorrect.
• Poses for being – This option is also grammatically incorrect.

Q84. Answer: (c) complemented

The solution is in Hindi. Read it online.

Q85. Answer: (d) Friendship

The solution is in Hindi. Read it online.

Q86. Answer: (c) accompanied

The correct answer is 'Option 3'.

Key Points

• The sentence structure requires a past tense verb to correctly align with the context provided.
• Option 3 "accompanied" correctly fits the past tense requirement, indicating an action that has already taken place.
• Other options ("accompanies", "accompany", "accompanying") do not fit the past tense context and would result in grammatical errors.

Therefore, the correct answer is 'Option 3'.

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Complete Sentence: The event was successful and was accompanied by a lot of celebrations.

Additional Information

• Accompanies: This is the present tense form and does not fit the past tense context.

• Accompany: This is the base form and does not fit the past tense context.

• Accompanying: This is the present participle form and does not fit the past tense context.

Q87. Answer: (a) used to

The correct answer is 'used to'.

Key Points

• The phrase "used to" is commonly used to indicate something that was done in the past or a previous state of something.

• In the given passage, "used to" correctly fits the context of describing how the term monsoon was traditionally applied.

• "Uses to" and "Using to" are grammatically incorrect.

• "Use to" is incorrect because "use" does not function as a past participle in this context.

Therefore, the correct answer is 'Option 1'.

Additional Information

• "Using to" is incorrect as "using" does not follow the appropriate verb form required here.

• "Uses to" is incorrect as "uses" is the third-person singular present form, which does not fit the sentence structure.

• "Use to" is incorrect because "use" in this context should be in the past form, which is "used to".

Q88. Answer: (b) with

The correct answer is 'with'.

Key Points

• The sentence discusses the association between seasonal atmospheric changes and the annual latitudinal oscillation of the ITCZ.

• The preposition "with" correctly conveys this association, indicating a connection between the two elements.

• Other options like "on", "for", and "of" do not accurately reflect this relationship in the given context.

Therefore, the correct answer is 'Option 2'.

Additional Information

• "On" generally indicates position or surface, which does not fit in this context.

• "For" is used to indicate purpose or benefit, which does not convey the correct meaning here.

• "Of" usually denotes possession or belonging, which does not suit the sentence structure.

Q89. Answer: (a) is used to

The correct answer is 'is used to'.

Key Points

• The sentence refers to the term "monsoon" in a general sense, meaning the subject is singular.

• "Is used to" is the correct phrase to indicate the present usage of the term.

• "Are used to" is incorrect as "monsoon" is singular, not plural.

• Other options ("is use to", "were used to") are grammatically incorrect.

Therefore, the correct answer is 'Option 1'.

Additional Information

• "Is use to" is incorrect because "use" should be in the past participle form "used".

• "Are used to" is incorrect because "monsoon" is singular.

• "Were used to" is incorrect because it refers to the past, while the sentence talks about a general fact.

Q90. Answer: (a) describe

The correct answer is 'describe'.

Key Points

• The blank requires a base form of the verb that fits with the phrase "used to".

• "Describe" is the correct option as the phrase "used to" is followed by the base form of a verb.

• Other options ("describes", "described", "describing") do not fit grammatically in this context.

Therefore, the correct answer is 'Option 1'.

Additional Information

- Describes: "Describes" is incorrect as it is the singular present form and does not fit after "used to".
- Described: "Described" is incorrect as it is the past tense form, which does not fit the context.
- Describing: "Describing" is incorrect as it is a continuous form, which does not align with "used to".

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