SSC MTS 2024 Official Paper (Held On: 15 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. A product having an MRP of Rs. 29,800 is on sale for Rs. 28,608 in-store. How much of a discount is being offered on the product?

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

Q2. By selling an article for Rs. 20, a dealer makes a profit of 10%. By how much should he increase his selling price (in Rs. , rounded off to two decimal places) so as to make a profit of 35%?

(a) 6.55
(b) 7.55
(c) 3.55
(d) 4.55

Q3. Three students of class VIII participated in a race during a school sports day. In a 1 km race, A wins the race with B by 100 m, and in a 300 m race, B beats C by 50 m. Then in the race of 1 km, with what margin will A beat C?

(a) 700 m
(b) 750 m
(c) 150 m
(d) 250 m

Q4. Find the simple interest (in Rs.) on Rs. 2500 as a sum borrowed at 8% per year rate of interest for 6 years.

(a) 1200
(b) 1160
(c) 1240
(d) 1140

Q5. A man sold an article for Rs. 237, there by gaining 18.5%. The cost of the article (in Rs.) was:

(a) 200
(b) 193
(c) 291
(d) 281

Q6. What is the ratio between the area of a square having side of 6 cm and that of the rhombus having diagonals of 8 cm and 6 cm?

(a) 3 : 2
(b) 4 : 5
(c) 2 : 5
(d) 3 : 4

Q7. The original breadth of a rectangular box is 25 cm. The box was then remade in such a way that its length was increased by 30% but the breadth decreased by 20% and the area increased by 100 cm². What is the length (in cm) of the new box?

(a) 100
(b) 130
(c) 91
(d) 109

Q8. Find the simple interest (in Rs.) on Rs. 2000 as a sum borrowed at 9% per year rate of interest for 5 years.

(a) 900
(b) 860
(c) 940
(d) 840

Q9. The salary of an employee is reduced by 80% and then the reduced salary is increased by 80%. The percentage loss in the salary of the employee is:

(a) 54%
(b) 58%
(c) 68%
(d) 64%

Q10. The average weight of 30 male workers in a company is 62.5 kg and that of the remaining 20 female workers is 54.5 kg. The average weight of the total workers in the company is:

(a) 59.5 kg
(b) 59.3 kg
(c) 58.5 kg
(d) 58.3 kg

Q11. A solid cone has a height of 63 cm and a base radius of 16 cm. If the painting rate is Rs. 1.75/cm², what will be the total cost (in Rs.) of painting the total surface area of the cone? Use π = 22/7

(a) 7186
(b) 7166
(c) 7156
(d) 7128

Q12. A thief running at 111/2 km/h is chased by a policeman at a speed of 131/2 km/h. If the thief is ahead by 900 m, how much time will the policeman take to catch the thief after starting the chase?

(a) 22 min 30 sec
(b) 27 min
(c) 18 min
(d) 4 min 30 sec

Q13. Find the HCF of 90, 230 and 325.

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

Q14. The average mark in an exam was 60. Due to some assessment errors, the marks of 115 students had to be changed from 85 to 50 each, and the new average is 55. The total number of students who appeared in the examination was:

(a) 1000
(b) 805
(c) 902
(d) 763

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Q15. A body is moving in a straight line and its distance at various instants of time is shown in the following table.

Time (in seconds)	0	1	2	3	4	5	6
Distance (in m)	0	5	14	14	14	20	24

During which interval of time (in s) is the body NOT moving?

(a) 2 to 4
(b) 5 to 6
(c) 0 to 1
(d) 1 to 3

Q16. The average weight of a certain number of apples in a basket was 0.5 kg. If 10 apples with an average weight of 0.7 kg are removed from the basket and 5 apples with an average weight of 0.6 kg are added to the basket, then the average weight of the apples in the basket decreases by 0.1 kg. What was the initial number of apples in the basket?

(a) 21
(b) 20
(c) 19
(d) 18

Q17. The average weight of a family of five members (in kg) whose weights are 40 kg, 49 kg, 56 kg, 72 kg and 39 kg is:

(a) 51.2
(b) 53.2
(c) 50.2
(d) 52.2

Q18. The mean proportional between the numbers p and q is 8. Which of the following pairs of numbers can be the values of p and q?

(a) 12 and 3
(b) 16 and 4
(c) 12 and 16
(d) 10 and 6

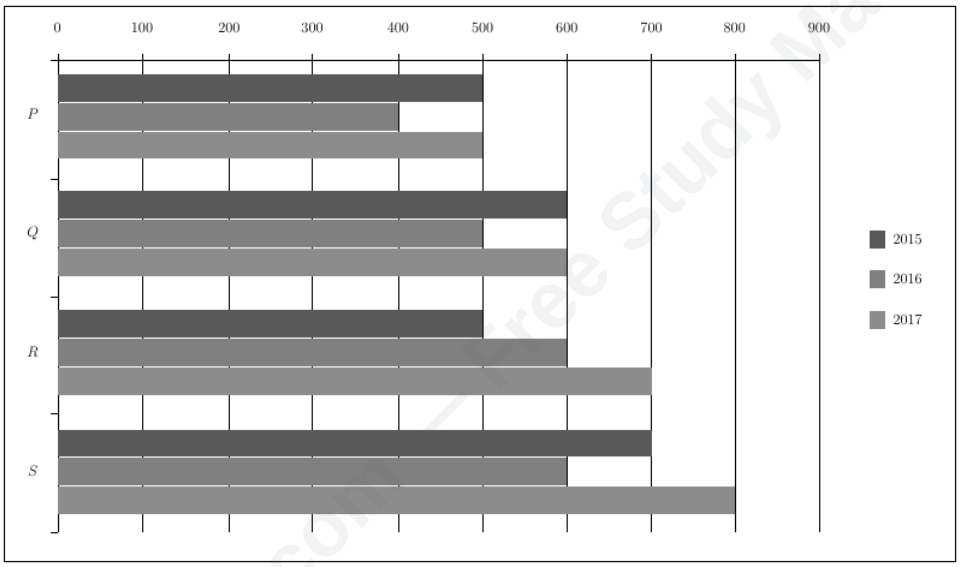
Q19. A part of the sum of Rs. 31,000 was lent at 9% per annum simple interest and the remaining at 7% per annum simple interest for a period of 2 years. If the total interest earned was Rs. 4,820, what was the sum lent at 9%?

(a) Rs. 12000
(b) Rs. 19000
(c) Rs. 11000
(d) Rs. 20000

Q20. The following bar graph shows the number of scooters manufactured by 4 different companies, P, Q, R and S, during the years 2015 - 2017. The x - axis indicates the number of scooters manufactured and the y - axis indicates the companies. Study the bar graph carefully and answer the question that follows.

Manufacture of scooters by 4 companies

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In which year(s) was the percentage increase in the manufacturing of scooters as compared to the previous years the maximum for the company R?

(a) 2016 and 2017
(b) 2015 and 2017
(c) Only 2017
(d) Only 2016

Q21. What should come in place of the question mark (?) in the given series based on the English alphabetical order?
SRQ ,ONM, KJI, GFE, ?

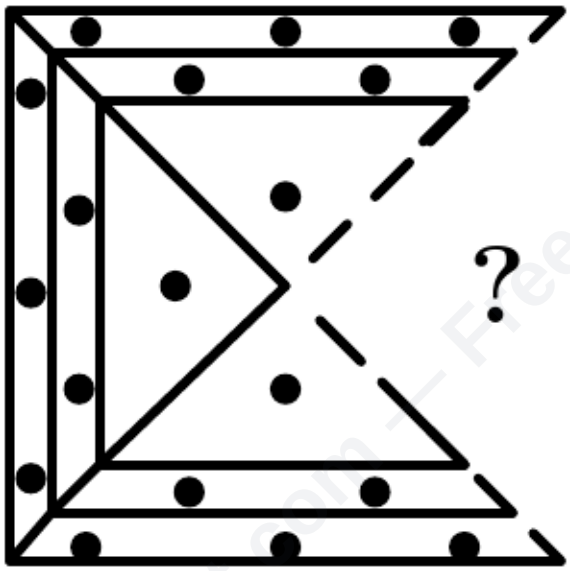
(a) BAZ
(b) DCB
(c) CBA
(d) ABC

Q22. In a certain code language, ‘played the piano’ is written as ‘lo le li’ and ‘sparkles a piano’ is coded as ‘lu li la’. How is ‘piano’ coded in that language?

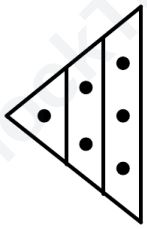
(a) li
(b) la
(c) le
(d) lu

Q23. Select the option figure that will replace the question mark (?) in the figure given below to complete the pattern.

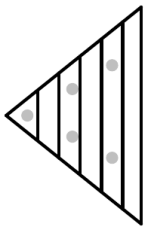
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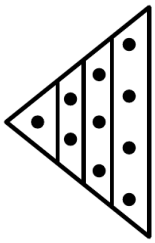
(a)



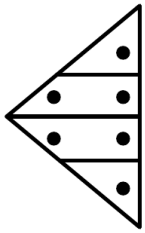
(b)



(c)



(d)

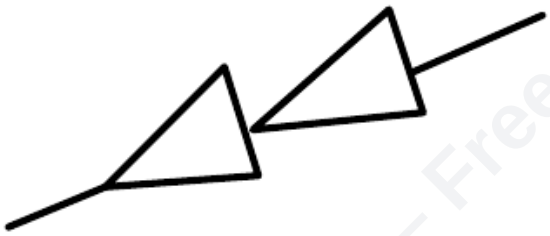


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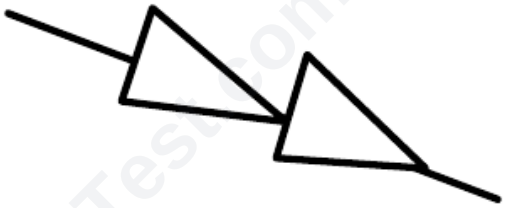
Q24. Select the figure that can replace the question mark (?) in the following series.



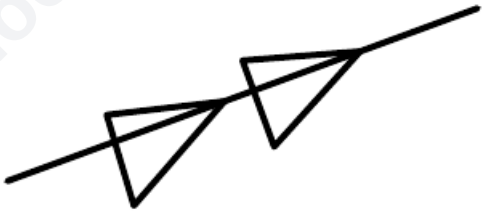
(a)



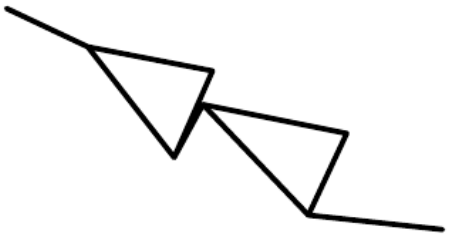
(b)



(c)



(d)



Q25. DJFL is related to HNJP in a certain way based on the English alphabetical order. In the same way, GMIO is related to KQMS. To which of the following is IOKQ related, following the same logic?

(a) MSUO
(b) SMUO
(c) SMOU
(d) MSOU

Q26. In a certain code language, ‘COKE’ is coded as ‘1357’ and ‘JOKE’ is coded as ‘5673’. What is the code for ‘J’ in the given code language?

(a) 5
(b) 6
(c) 7
(d) 3

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Q27. 22 is related to 132 following a certain logic. Following the same logic, 35 is related to 210. To which of the following is 18 related following the same logic?

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

(a) 108
(b) 113
(c) 110
(d) 101

Q28. 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 actors are singers.

All singers are dancers.

Conclusions:

(I) At least some singers are actors.

(II) Some dancers may not be singers.

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

Q29. Seven people P, Q, R, S, T, U and V are sitting around a circular table, facing the centre (but not necessarily in the same order). S is sitting to the immediate left of Q. V is sitting third to the left of S. R is sitting third to the right of T. U is sitting second to the left of R. How many people are sitting between S and R when counted from the right of R?

(a) 1
(b) 0
(c) 2
(d) 4

Q30. PWSO is related to RYUQ in a certain way based on the English alphabetical order. In the same way, MTPL is related to OVRN. To which of the following is JQMI related following the same logic?

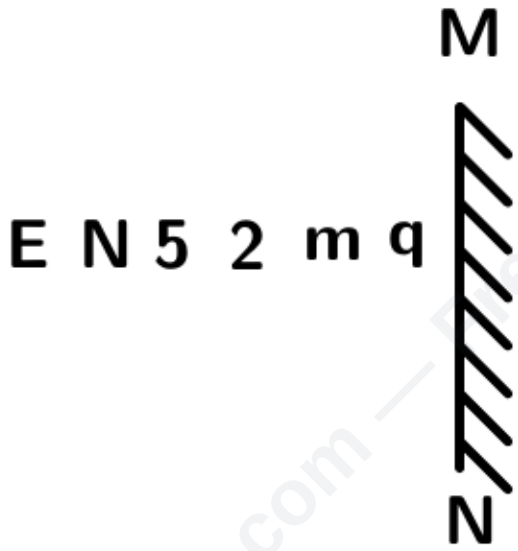
(a) SLOK
(b) SLKO
(c) LSKO
(d) LSOK

Q31. In a certain code language, ‘write this sentence’ is coded as ‘aw pm nl’ and ‘this is mine’ is coded as ‘nl wb cd’. How is ‘this’ coded in that code language?

(a) aw
(b) wb
(c) nl
(d) cd

Q32. 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)



Q33. This question has two statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Some stones are hurting.

Some stones are beautiful.

Conclusions:

(I) Some beautiful stones are hurting.

(II) Some hurting stones are beautiful

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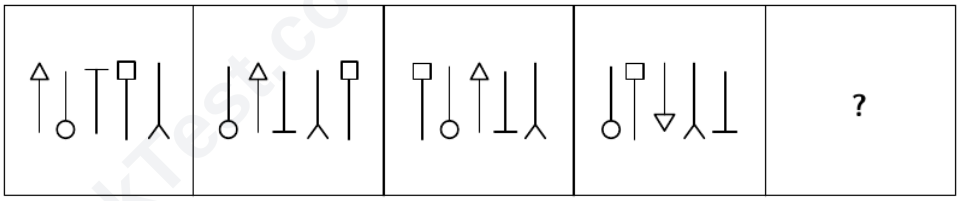
(a) Both conclusions (I) and (II) follow
(b) Neither conclusion (I) nor (II) follows
(c) Only conclusion (I) follows
(d) Only conclusion (II) follows

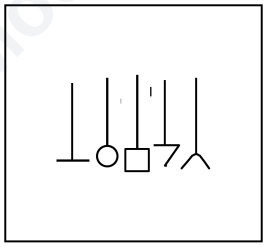
Q34. What will come in place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

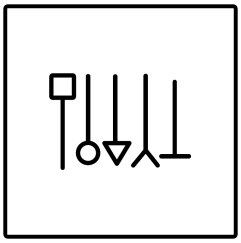
304 ÷ 3 + 55 × 5 − 2 = ?

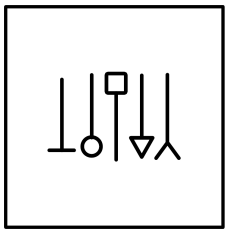
(a) 904
(b) 901
(c) 902
(d) 903

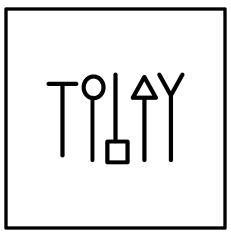
Q35. Select the figure from among the given options that can replace the question mark (?) in the following series and complete the pattern.



(a)


(b)


(c)


(d)


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Q36. What should come in place of the question mark (?) in the given series?

348 350 354 360 368 ?

(a) 378
(b) 374
(c) 372
(d) 376

Q37. A, B, C, D, E and F are six friends sitting around a circular dinner table, facing the centre (but not necessarily in the same order). E is an immediate neighbour of F. B is sitting second to the left of A. D is sitting to the immediate right of F. Who is sitting third to the left of A?

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

Q38. In a certain code language, 'PURE' is coded as '3792' and 'BURP' is coded as '9537'. What is the code for 'B' in the given code language?

(a) 9
(b) 5
(c) 3
(d) 7

Q39. 312 is related to 104 following a certain logic. Following the same logic, 363 is related to 121. To which of the following is 375 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. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.]

(a) 125
(b) 115
(c) 145
(d) 135

Q40. What will come in the place of '?' in the following equation, if '+' and '×' are interchanged and '−' and '÷' are interchanged?

18 ÷ 6 + 5 × 14 − 7 = ?

(a) 10
(b) 0
(c) -5
(d) -10

SESSION 2

Q41. What is the frequency (f) of a wave with a period of 0.04 seconds?

(a) 50 Hz
(b) 25 Hz
(c) 40 Hz
(d) 100 Hz

Q42. International Day of Non-violence is observed on _____.

(a) 15 August
(b) 26 January
(c) 2 October
(d) 26 November

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Q43. Which of the following wars took place in the year 1761?

(a) Buxar
(b) Wandiwash
(c) Panipat III
(d) Panipat II

Q44. The Sarda River rises in the _____ glacier in the Nepal Himalayas.

(a) Milam
(b) Bokhar Chu
(c) Siachen
(d) Machoi

Q45. Which of the following iron and steel plants is located in Odisha?

(a) Vijay Nagar
(b) Rourkela
(c) Bokaro
(d) Vishakhapatnam

Q46. What is the product of the following chemical reaction?

$NaCl + H_2O + CO_2 + NH_3$

(a) Bleaching powder
(b) Baking soda
(c) Gypsum
(d) Washing soda

Q47. Minor points called 'Yuko' are part of which of the following sports?

(a) Boxing
(b) Skating
(c) Judo
(d) Lawn bowls

Q48. At which sports event in India is the Raja Bhalindra Singh Trophy awarded?

(a) Senior National Kabaddi Championship
(b) SGFI Games
(c) Khelo India Youth Games
(d) National Games of India

Q49. Which great Indian classical dancer choreographed the songs for Madhuri Dixit in 'Devdas' and 'Dil To Pagal Hai' movies?

(a) Girish Hegde
(b) Prabhu Deva
(c) Birju Maharaj
(d) Farah Khan

Q50. Which famous medieval singer was born in Gwalior, Madhya Pradesh in the year 1506?

(a) Gopal Nayek
(b) Swami Haridas
(c) Chaitanya Deva
(d) Tansen

Q51. If a citizen is helping the government in protecting the monuments in his/her area, which of the following fundamental duties is he/she performing?

(a) Providing opportunities to obtain education
(b) Promoting scientific temper
(c) Valuing and preserving the rich heritage and culture

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(d) Cherishing and following noble ideas

Q52. In which year was the first-ever motion to remove a Supreme Court Justice signed by the members of Parliament?

(a) 1991
(b) 1988
(c) 1993
(d) 1995

Q53. Which of the following communicable diseases is caused by bacteria?

(a) Cholera
(b) Malaria
(c) Dengue
(d) Influenza

Q54. Suspended solids in water can increase the haziness of the water. Which of the following represents the measurement of haziness of water?

(a) Turbidity
(b) Solubility
(c) Salinity
(d) Viscosity

Q55. In June 2023, who was appointed as the new Research and Analysis Wing (RAW) chief?

(a) Ravi Sinha
(b) Samant Goel
(c) Rajiv Kumar
(d) Arun Kanti

Q56. In 1917, Mahatma Gandhi started his first satyagraha in India against the forced cultivation of indigo by Europeans in which of the following districts of British India?

(a) Buxar
(b) Kheda
(c) Champaran
(d) Ahmedabad

Q57. After the _____ of Hakim Mirza, Kabul was annexed by Akbar and given to Raja Man Singh as ‘jagir’.

(a) capture
(b) death
(c) victory
(d) marriage

Q58. In January 2024, Prime Minister Narendra Modi paid tributes to Savitribai Phule on her birth anniversary. In which field did Savitribai Phule make significant contributions, as highlighted by Prime Minister Modi?

(a) Literature and poetry
(b) Politics and government leadership
(c) Education and social reform
(d) Military strategy and warfare

Q59. For which English novel was Ruskin Bond honoured with the Sahitya Akademi Award in 1992?

(a) The Blue Umbrella
(b) A Little Book of Happiness
(c) The Room on the Roof
(d) Our Trees Still Grow in Dehra

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Q60. Who was the successor of Vima Kadphises in Kushana dynasty?

(a) Kujula Kadphises
(b) Menander
(c) Kanishka
(d) Kharavela

Q61. In which region of Bangladesh do the Chakma people predominantly live, among the country's various indigenous ethnic groups?

(a) Rajshahi Division
(b) Sylhet Division
(c) Chittagong Hill Tracts
(d) Sundarbans Mangrove Forest

Q62. Which Ministry of India launched the Pradhan Mantri Rojgar Protsahan Yojana (PMRPY)?

(a) Ministry of Rural Development
(b) Ministry of Labour & Employment
(c) Ministry of Finance
(d) Ministry of Social Justice and Empowerment

Q63. Who received the National Nritya Shiromani award 2019 for promoting Kathak dance form across the world?

(a) Jatin Goswami
(b) Aparna Satheesan
(c) Anita Sharma
(d) Anindita Neogy Anaam

Q64. Which Indian dynasty is associated with the creation of highly skilled bronze sculptures?

(a) Chola
(b) Mughal
(c) Mauryan
(d) Pallava

Q65. What is Gross Domestic Product (GDP) in the context of National Income Accounting?

(a) The total exports of a country
(b) The total savings of a nation
(c) The total value of all goods and services produced within a country's borders in a specific period
(d) The total income of a country's government

Q66. Change the following sentence into positive degree.

Mercury is the smallest planet in the solar system.

(a) Mercury is smaller than any other planet in the solar system.
(b) No other planet is as small as Mercury in the Solar System.
(c) Mercury is the smallest planet than any other one.
(d) The most smallest planet in the solar system is mercury.

Q67. Select the most appropriate option that can substitute the underlined words in the given sentence.

Thousands of people were killed by the train accident that took place last Wednesday.

(a) killed in
(b) killed of
(c) killed to
(d) killed from

Q68. The following sentence has been split into four segments. Identify the segment containing errors.

This item is in the public domain/ and can be used, / copied and modefied / without any restrictions.

(a) without any restrictions
(b) and can be used,

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(c) copied and modefied
(d) This item is in the public domain

Q69. Select the most appropriate option with the correct usage of the preposition to substitute the underlined segment in the given sentence.

World Press Freedom Day will be dedicated to the importance of journalism and freedom in expression in the context of the current global environmental crisis.

(a) freedom from expression
(b) freedom on expression
(c) freedom of expression
(d) freedom at expression

Q70. Select the most appropriate option that can fill the blank in the given sentence.

Out of all the flowers in the garden, the rose is the ____beautiful.

(a) least beautiful
(b) more beautiful
(c) most beautiful
(d) less beautiful

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

Caught in a time warp

(a) To avoid talking about what's important
(b) To remain unchanged from a time in the past
(c) To make extra effort
(d) To be extremely happy

Q72. Select the most appropriate option to fill in the blank.

The library books were long _____, their pages bearing the weight of the passage of time.

(a) overdate
(b) overdo
(c) overdrew
(d) overdue

Q73. The bat flew silently through the night, searching for insects to eat. The bat in this context refers to _____.

(a) a wooden tool utilized in sports like baseball or cricket
(b) the act of delivering a forceful strike or hit
(c) a measurement unit in digital information systems
(d) a mammal known for nocturnal flight and insect consumption

Q74. Select the most appropriate present tense form of the verb to fill in the blank.

They _____ football every day.

(a) plays
(b) play
(c) had been playing
(d) will play

Q75. Select the most appropriate option to fill in the blank.

I remember_____ when she used to wash dishes in a restaurant.

(a) the business
(b) the time
(c) the area
(d) the profile

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Q76. Select the most appropriate option that can substitute the underlined segment in the given sentence.

Dolphins are named among the intelligent animals on earth.

(a) most intelligent
(b) intelligenter
(c) more intelligent
(d) intelligentest

Q77. Select the sentence that has a grammatical error.

(a) After a tiring day, I had a cup of coffee with Sudhir.
(b) There is a man sitting beside cat.
(c) She saw an excellent episode of the series.
(d) She asked an easy question, and I took an hour to crack it.

Q78. Select the most appropriate synonym of the word given in brackets to fill in the blank.

My teacher's _____ (stern) warning made all the students quiet and calm.

(a) strict
(b) watchful
(c) biased
(d) pliant

Q79. Select the most appropriate option to fill in the blank.

I will try to _____ because he is a good friend of mine.

(a) get him off the hook
(b) avoid him like the plague
(c) show him the door
(d) stop him in his tracks

Q80. Select the most appropriate synonym of the underlined word.

Samira is a lady who needs extrinsic motivation and will not work on her own.

(a) Outward
(b) Amicable
(c) Intriguing
(d) Adventurous

Q81. Identify the word with a spelling error in the following sentence. Select the option that correctly rectifies the error.

She had swam the English Channel twice.

(a) swim
(b) swimming
(c) swimmed
(d) swum

Q82. Select the INCORRECTLY spelt word.

She Recieved a beautiful surprise from her partner.

(a) Beautiful
(b) Surprise
(c) Recieved
(d) Partner

Q83. Select the most appropriate option to fill in the blank.

The teacher asked us to _____ our homework by tomorrow.

(a) complete
(b) completing
(c) completed
(d) completes

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Q84. Select the most appropriate ANTONYM of the underlined word in the given sentence.

He was not able to answer as the question was ambiguous.

(a) Clear
(b) Deep
(c) Superficial
(d) Unsolvable

Q85. Select the option that can be used as a one-word substitute for the given group of words.

The allowance that is given by a husband to his wife on separation

(a) Matrimonial
(b) Alimony
(c) Affluence
(d) Dowry

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.

Forests provide essential ecosystem services (1)_____ benefit both the environment and human society. One crucial service is carbon sequestration, as forests absorb and store large amounts of carbon dioxide, helping mitigate climate change. Additionally, forests regulate water cycles (2)_____ influencing precipitation patterns and maintaining water quality. (3)_____, forests offer recreational opportunities, cultural significance, and economic benefits through timber production and (4)_____. Thus, preserving and sustainably managing forests is imperative for maintaining these (5)_____ ecosystem services.

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

(a) than
(b) that
(c) then
(d) this

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

(a) off
(b) about
(c) by
(d) between

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

(a) Moreover
(b) As long as
(c) Whatever
(d) Though

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

(a) ecotourism
(b) degradation
(c) deforestation
(d) industrialisation

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

(a) vitalise
(b) vitally
(c) vitality
(d) vital

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ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) 4%

Given:

MRP = Rs. 29,800

Sale Price = Rs. 28,608

Formula used:

Discount Percentage = (MRP - Sale Price)/MRP × 100

Calculation:

Discount Percentage = (29800 - 28608)/29800 × 100

=> Discount Percentage = 1192/29800 × 100

=> Discount Percentage = 4%

Therefore The correct answer is option (3).

Q2. Answer: (d) 4.55

Given:

Selling Price (SP) = Rs. 20

Profit = 10%

Formula used:

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

New SP for desired profit = CP × (1 + (Desired Profit)/100)

Calculation:

CP = 20/(1 + 10/100)

=> CP = 20/1.10

=> CP = Rs. 18.18 (rounded off to two decimal places)

New SP for 35% profit = 18.18 × (1 + 35/100)

=> New SP = 18.18 × 1.35

=> New SP = Rs. 24.55 (rounded off to two decimal places)

Increase in SP = New SP - Original SP

=> Increase in SP = 24.55 - 20 = Rs. 4.55

Therefore The correct answer is option (4).

Q3. Answer: (d) 250 m

Given:

A wins the race with B by 100 m in a 1 km (1000 m) race

B beats C by 50 m in a 300 m race

Formula used:

Speed = Distance / Time

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Calculation:
Let Speed of A = S_A
Let Speed of B = S_B
Let Speed of C = S_C
From the 1 km race:
Time taken by A to cover 1000 m = Time taken by B to cover 900 m
=> 1000 / S_A = 900 / S_B
=> S_A / S_B = 1000 / 900 = 10 / 9
From the 300 m race:
Time taken by B to cover 300 m = Time taken by C to cover 250 m
=> 300 / S_B = 250 / S_C
=> S_B / S_C = 300 / 250 = 6 / 5
Combining both ratios:
S_A / S_B = 10 / 9
S_B / S_C = 6 / 5
=> S_A / S_C = (10 / 9) × (6 / 5)
=> S_A / S_C = 4 / 3
In a 1 km (1000 m) race:
Time taken by A to cover 1000 m = Time taken by C to cover (1000 × 3 / 4) m
=> C covers 750 m when A covers 1000 m
=> A beats C by 1000 - 750 = 250 m
Therefore The correct answer is option (4).

Q4. Answer: (a) 1200

Given:
Principal (P) = Rs. 2500
Rate (R) = 8% per year
Time (T) = 6 years
Formula used:
Simple Interest (SI) = (P × R × T)/100
Calculation:
SI = (2500 × 8 × 6)/100
=> SI = 120000/100
=> SI = Rs. 1200
Therefore The correct answer is option 1.

Q5. Answer: (a) 200

Given:
Selling price (SP) = Rs. 237
Gain = 18.5%
Formula used:
Cost Price (CP) = SP/(1 + (Gain%)/100)
Calculation:
CP = 237/(1 + 18.5/100)
=> CP = 237/(1 + 0.185)
=> CP = 237/1.185
=> CP = Rs. 200
Therefore The correct answer is option 1.

Q6. Answer: (a) 3 : 2

Shortcut Trick
Area of Square = $(Side)^2 = 6^2 = 36$ cm²
Area of Rhombus = $(d1 \times d2) \div 2 = (8 \times 6) \div 2 = 24$ cm²

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Required Ratio = 36 : 24 = 3 : 2

Therefore The correct answer is 3 : 2.

Alternate Method

Given:

Side of the square (a) = 6 cm

Diagonals of the rhombus (d1, d2) = 8 cm and 6 cm

Formula Used:

Area of square = a^2

Area of rhombus = (d1 × d2) ÷ 2

Calculations:

=> Area of the square = 6 × 6 = 36 cm^2

=> Area of the rhombus = (8 × 6) ÷ 2 = 24 cm^2

=> Required Ratio = Area of square : Area of rhombus

=> Required Ratio = 36 : 24

=> Required Ratio = 3 : 2

Therefore The correct answer is 3 : 2.

Additional Information

Area and Perimeter of a Rhombus

The area of a rhombus is strictly evaluated as half the product of its diagonals: Area = (d1 × d2) ÷ 2. The perimeter is 4 × side. Additionally, the relationship between its sides and diagonals is given by: $4a^2 = d1^2 + d2^2$.

Properties of a Rhombus

All four sides of a rhombus are equal in length. The diagonals bisect each other exactly at right angles (90°), effectively splitting the rhombus into four identical right-angled triangles.

Properties of a Square

A square is simply a specialized rhombus where all interior angles are identically 90°. Its diagonals are completely equal in length and bisect each other at 90° as well. Area = $Side^2$ or $(Diagonal)^2 \div 2$.

Q7. Answer: (b) 130

Given:

The original breadth of a rectangular box is 25 cm.

The box was then remade in such a way that its length was increased by 30% but the breadth decreased by 20% and the area increased by 100 cm^2.

Formula used:

New Length = Original Length × 1.3

New Breadth = Original Breadth × 0.8

New Area = Original Area + 100

Original Area = Original Length × Original Breadth

Calculation:

Let the original length be L cm.

Original Breadth = 25 cm

Original Area = L × 25 cm^2

New Length = L × 1.3

New Breadth = 25 × 0.8 = 20 cm

New Area = (L × 25) + 100

New Area = (L × 1.3) × 20

=> (L × 25) + 100 = (L × 1.3) × 20

=> 25L + 100 = 26L

=> 26L - 25L = 100

=> L = 100

New Length = 100 × 1.3 = 130 cm

Therefore The correct answer is option 2.

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Q8. Answer: (a) 900

Given:
Principal (P) = Rs. 2000
Rate (R) = 9% per year
Time (T) = 5 years
Formula used:
Simple Interest (SI) = (P × R × T)/100
Calculation:
SI = (2000 × 9 × 5)/100
=> SI = 90000/100
=> SI = Rs. 900
Therefore The correct answer is option 1.

Q9. Answer: (d) 64%

Given:
The salary of an employee is reduced by 80% and then the reduced salary is increased by 80%.
Formula used:
Let the original salary be Rs. 100.
Reduced Salary = Original Salary × (1 - Reduction Percentage/100)
New Salary after Increase = Reduced Salary × (1 + Increase Percentage/100)
Percentage Loss = [(Original Salary - New Salary) / Original Salary] × 100
Calculation:
Original Salary = Rs. 100
Reduced Salary = 100 × (1 - 80/100)
=> Reduced Salary = 100 × 0.2 = Rs. 20
New Salary after Increase = 20 × (1 + 80/100)
=> New Salary after Increase = 20 × 1.8 = Rs. 36
Percentage Loss = [(100 - 36) / 100] × 100
=> Percentage Loss = [64 / 100] × 100
=> Percentage Loss = 64%
Therefore The correct answer is option 4.

Q10. Answer: (b) 59.3 kg

Given:
The average weight of 30 male workers = 62.5 kg
The average weight of 20 female workers = 54.5 kg
Total number of workers = 50
Formula used:
Total weight of all workers = (Total weight of male workers) + (Total weight of female workers)
Average weight of all workers = (Total weight of all workers) / (Total number of workers)
Calculations:
Total weight of 30 male workers = 30 × 62.5 = 1875 kg
Total weight of 20 female workers = 20 × 54.5 = 1090 kg
Total weight of all workers = 1875 + 1090
=> Total weight of all workers = 2965 kg
Average weight of all workers = 2965 / 50 = 59.3 kg
Therefore The correct answer is option (2).

Q11. Answer: (d) 7128

Given:
Height (h) = 63 cm
Base Radius (r) = 16 cm
Painting Rate = Rs. 1.75/cm²

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Formula used:
Total Surface Area of Cone = π r (r + l)
Where l is the slant height and l = √(r² + h²)
Calculation:
l = √(16² + 63²)
l = √(256 + 3969)
l = √4225
l = 65 cm
Total Surface Area = π r (r + l)
=> Total Surface Area = 22/7 × 16 × (16 + 65)
=> Total Surface Area = 22/7 × 16 × 81
=> Total Surface Area = 4073.14 cm2
Cost of Painting = Total Surface Area × Painting Rate
=> Cost of Painting = 4073.14 × 1.75
=> Cost of Painting = 7128
Therefore The correct answer is option (4).

Q12. Answer: (b) 27 min

Given:
Speed of thief = 111/2 km/h = 23/2 km/h
Speed of policeman = 131/2 km/h = 27/2 km/h
Distance ahead = 900 m = 0.9 km
Formula used:
Time (t) = Distance / (Relative Speed)
Calculations:
Relative Speed = Speed of policeman - Speed of thief
=> Relative Speed = (27/2) - (23/2) km/h
=> Relative Speed = 4/2 km/h = 2 km/h
Time (t) = Distance / Relative Speed
=> t = 0.9 km / 2 km/h
=> t = 0.45 hours
=> t = 0.45 × 60 minutes = 27 minutes
Therefore The correct answer is option (2).

Q13. Answer: (d) 5

Given:
Find the HCF of 90, 230 and 325.
Formula used:
To find the HCF, we use the prime factorization method:
Calculation:
Write the given numbers as the product of prime factors
90 = 2 × 3² × 5
230 = 2 × 5 × 23
325 = 5² × 13
Since HCF is the greatest common factor of given numbers
Hence HCF = 5
The HCF of 90, 230, and 325 = 5
Therefore The correct answer is option (4).

Q14. Answer: (b) 805

Given:
The average mark in an exam = 60.
Marks of 115 students had to be changed from 85 to 50 each.

New average = 55.
Formula used:
Total marks = Average × Number of students
Calculation:
Let the total number of students be n.
Original total marks = 60 × n
Marks reduced per student = 85 - 50 = 35
Total marks reduced = 115 × 35
New total marks = 60 × n - 115 × 35
New average = 55
=> 55n = 60n - 115 × 35
=> 5n = 115 × 35
=> n = 805
Therefore The correct answer is option (2).

Q15. Answer: (a) 2 to 4

Given:
A body is moving in a straight line and its distance at various instants of time is shown in a table.
Formula used:
The body is not moving if the distance does not change over a period of time.
Calculation:
If the distance remains constant between any time intervals, the body is not moving during that time.
Let's check the given options:
Option 1: 2 to 4 seconds, Distance covered = (14 - 14) = 0 m
Option 2: 5 to 6 seconds, Distance covered = (24 - 20) = 4 m
Option 3: 0 to 1 second, Distance covered = (5 - 0) = 5 m
Option 4: 1 to 3 seconds, Distance covered = (14 - 5) = 9 m
=> The body is not moving during the interval 2 to 4 seconds.
Therefore The correct answer is option 1.

Q16. Answer: (b) 20

Given:
The average weight of a certain number of apples in a basket was 0.5 kg.
10 apples with an average weight of 0.7 kg are removed from the basket.
5 apples with an average weight of 0.6 kg are added to the basket.
The average weight of the apples in the basket decreases by 0.1 kg.
Formula used:
Initial total weight of apples = n × 0.5
Weight removed = 10 × 0.7
Weight added = 5 × 0.6
New total weight = Initial total weight - Weight removed + Weight added
New average weight = (New total weight) / (n - 10 + 5)
New average weight = 0.4 kg
Calculation:
Initial total weight = 0.5n
Weight removed = 10 × 0.7 = 7 kg
Weight added = 5 × 0.6 = 3 kg
New total weight = 0.5n - 7 + 3 = 0.5n - 4
New average weight = (0.5n - 4) / (n - 5)
New average weight = 0.4 kg
=> (0.5n - 4) / (n - 5) = 0.4
=> 0.5n - 4 = 0.4(n - 5)

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=> 0.5n - 4 = 0.4n - 2
=> 0.5n - 0.4n = 4 - 2
=> 0.1n = 2
=> n = 20
Therefore The correct answer is option 2.

Q17. Answer: (a) 51.2

Given:
Weights of family members (in kg) = 40, 49, 56, 72, 39
Formula used:
Average weight = (Sum of all weights) / (Number of members)
Calculation:
Sum of weights = 40 + 49 + 56 + 72 + 39
=> Sum of weights = 256
Number of members = 5
Average weight = 256 / 5
=> Average weight = 51.2
Therefore The correct answer is option (1).

Q18. Answer: (b) 16 and 4

Given:
The mean proportional between the numbers p and q is 8.
Formula used:
Mean Proportional (M) = √(p × q)
Calculation:
√(p × q) = 8
=> p × q = 8^2
=> p × q = 64
Option 1: 12 and 3
=> 12 × 3 = 36
Option 2: 16 and 4
=> 16 × 4 = 64
Option 3: 12 and 16
=> 12 × 16 = 192
Option 4: 10 and 6
=> 10 × 6 = 60
Therefore The correct answer is option (2).

Q19. Answer: (a) Rs. 12000

Shortcut Trick
Total interest for 2 years = Rs. 4,820 => Interest for 1 year = Rs. 2,410.
Overall interest rate = (2,410 ÷ 31,000) × 100 = 241/31%.
Using Alligation: (9% − 241/31%) : (241/31% − 7%) = 38/31 : 24/31 = 19 : 12.
Sum at 9% = (12 ÷ 31) × 31,000 = Rs. 12,000.
Therefore The correct answer is Rs. 12000.
Alternate Method
Given: Total Sum = Rs. 31,000, Total Interest = Rs. 4,820, Time = 2 years.
Formula Used: Simple Interest (SI) = (P × R × T) ÷ 100
=> Let the sum lent at 9% be x and at 7% be (31,000 − x).
=> Interest from first part = (x × 9 × 2) ÷ 100 = 0.18x
=> Interest from second part = ((31,000 − x) × 7 × 2) ÷ 100 = 0.14 × (31,000 − x)
=> 0.18x + 4,340 − 0.14x = 4,820
=> 0.04x = 4,820 − 4,340

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=> 0.04x = 480

=> x = 480 ÷ 0.04 = 12,000

Therefore The correct answer is Rs. 12000.

Additional Information

Simple Interest vs Compound Interest

Simple Interest is calculated only on the principal amount, whereas Compound Interest is calculated on the principal plus accumulated interest.

Alligation Method in SI

When a sum is divided into two parts with different interest rates, the ratio of the two parts can be found using the alligation of their respective rates against the average rate.

Effective Rate of Interest

Effective Rate = (Total Interest ÷ Total Principal) × (100 ÷ Time). This helps in comparing different investment schemes directly.

Q20. Answer: (d) Only 2016

Given:

2015 = 500

2016 = 600

2017 = 700

Formula Used:

Percentage Increase = (Current year - Previous year)/(Previous year) × 100

Calculation:

Increase in year 2016 from 2015:

=> (600 - 500)/500 × 100

=> 100/500 × 100 = 20% %

Increase in year 2017 from 2016:

=> (700 - 600)/600 × 100

=> 100/600 × 100 = 16.66% %

Therefore Maximum percentage increase was in 2016.

Q21. Answer: (c) CBA

The logic followed here is:

Hence, "Option 3" is the correct answer.

Q22. Answer: (a) li

According to the given information,

Thus, according to the given codes 'nl' is the code for the word 'this'.

Hence, the correct answer is "Option 1".

Q23. Answer: (a) [figure]

The figure which is most suitable as the last part of the given figure is shown below:

Thus, option Figure 1 completes the given figures.

Hence, "Option 1" is the correct answer.

Q24. Answer: (c) [figure]

The logic followed here is :

1) The whole element is rotated 45º anticlockwise.

2) One line is added in each figure subsequently.

Thus, the final series is :

Hence, "Option 3" is the correct answer.

Q25. Answer: (d) MSOU

The logic followed here is:

DJFL is related to HNJP

And,

GMIO is related to KQMS

Similarly,

IOKQ is related to

Hence, "Option 4" is the correct answer.

Q26. Answer: (b) 6

The logic followed here is:

'COKE' is coded as '1357'

'JOKE' is coded as '5673'

Thus, the code for 'J' is '2'.

Hence, "Option 2" is the correct answer.

Q27. Answer: (a) 108

The logic followed here is:

22 is related to 132 → 22 × 6 = 132

And,

35 is related to 210 → 35 × 6 = 210

Similarly,

18 is related to ? → 18 × 6 = 108

Hence, "Option 1" is the correct answer.

Q28. Answer: (b) Both I and II follow

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

Conclusions:

(I) At least some singers are actors → Follow (As all actors are singers and all singers are dancers. As whole actors comes in singers, therefore it is false.)

(II) Some dancers may not be singers → Follow (As all singers are dancers. As whole actors comes in singers which whole comes in dancers, therefore it is true.)

Therefore Here, Both I and II follow.

Hence, the correct answer is "Option 2"

Q29. Answer: (a) 1

Given: Seven people P, Q, R, S, T, U and V are sitting around a circular table, facing the centre.

1) S is sitting to the immediate left of Q.

2) V is sitting third to the left of S.

3) U is sitting second to the left of R.

4) R is sitting third to the right of T.

After positioning T only, one position is left which will be occupied by the only person left i.e. P.

Thus, according to the final arrangement one person is sitting between S and R when counted from the right of R.

Hence, "Option 1" is the correct answer.

Q30. Answer: (d) LSOK

The logic followed here is:

PWSO is related to RYUQ

And,

MTPL is related to OVRN

Similarly,

JQMI is related to

Hence, "Option 4" is the correct answer.

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Q31. Answer: (c) nl

According to the given information,

Thus, according to the given codes 'nl' is the code for the word 'this'.

Hence, the correct answer is "Option 3".

Q32. Answer: (d) [figure]

The correct mirror image of the given figure when the mirror is placed at MN is as shown below:

Here. option figure 4 shows the mirror image of the given figure.

Hence, the correct answer is "Option 4".

Q33. Answer: (b) Neither conclusion (I) nor (II) follows

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

Conclusions:

(I) Some beautiful stones are hurting → Does not follow (As re statement can not be true)

(II) Some hurting stones are beautiful → Does not follow (As some stones are hurting and some stones are beautiful. As some part of beautiful is common with stones which has some part common with hurting, so it is possible but not definite.)

Therefore Here, Neither conclusion (I) nor (II) follows.

Hence, the correct answer is "Option 2"

Q34. Answer: (d) 903

Given: 304 ÷ 3 + 55 × 5 − 2 = ?

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

304 ÷ 3 + 55 × 5 − 2 = ? => 304 × 3 - 55 ÷ 5 + 2 = ?

=> 304 × 3 - 55 ÷ 5 + 2 = ?

=> 304 × 3 - 11 + 2 = ?

=> 912 + 2 - 11 = ?

=> 914 - 11 = ?

=> 903 = ?

Hence, "Option 4" is the correct answer.

Q35. Answer: (c) [figure]

The logic followed here is :

1) First box series →

All the element are flipped vertically.

The first two elements from the left end interchange positions.

The last two elements from the left end interchange positions.

2) Second box series →

All the element are shift anticlockwise.

Thus, the final series is :

Hence, "Option 3" is the correct answer.

Q36. Answer: (a) 378

The logic followed here is:

Hence, "Option 1" is the correct answer.

Q37. Answer: (b) D

Given: A, B, C, D, E and F are six friends sitting around a circular dinner table, facing the centre.

1) D is sitting to the immediate right of F.

2) E is an immediate neighbour of F.

3) B is sitting second to the left of A.

After positioning A and B only, one position is left which will be occupied by the only person left i.e. C.

Thus, according to the final arrangement D is sitting third to the left of A.

Hence, "Option 2" is the correct answer.

Q38. Answer: (b) 5

The logic followed here is:

'PURE' is coded as '3792'

'BURP' is coded as '9537'

Thus, the code for 'B' is '5'.

Hence, "Option 2" is the correct answer.

Q39. Answer: (a) 125

The logic followed here is:

312 is related to 104 → 312 ÷ 3 = 104

And,

363 is related to 121 → 363 ÷ 3 = 121

Similarly,

375 is related to ? → 375 ÷ 3 = 125

Hence, "Option 1" is the correct answer.

Q40. Answer: (d) -10

Given: 18 ÷ 6 + 5 × 14 − 7 = ?

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

18 ÷ 6 + 5 × 14 − 7 = ? => 18 - 6 × 5 + 14 ÷ 7 = ?

=> 18 - 6 × 5 + 14 ÷ 7 = ?

=> 18 - 6 × 5 + 2 = ?

=> 18 + 2 - 30 = ?

=> 20 - 30 = ?

=> -10 = ?

Hence, "Option 4" is the correct answer.

Q41. Answer: (b) 25 Hz

The correct answer is option 2.

Key Points

• The frequency (f) of a wave is the reciprocal of its period (T).

• The formula to calculate frequency is f = 1/T.

• Given the period T = 0.04 seconds, applying the formula gives f = 1/0.04.

• Therefore, the frequency of the wave is f = 25 Hz.

Additional Information

• Frequency (f):

• Frequency is the number of complete wave cycles that pass a point per unit of time, typically measured in Hertz (Hz).

• 1 Hz is equal to one cycle per second.

• Period (T):

• The period is the time taken for one complete cycle of the wave to pass a given point.

• It is usually measured in seconds (s).

• Relationship between Period and Frequency:

• The period is the inverse of the frequency: T = 1/f.

• Similarly, frequency is the inverse of the period: f = 1/T.

• Wave Cycles:

• A wave cycle consists of one complete wave oscillation, typically measured from crest to crest or trough to trough.

Q42. Answer: (c) 2 October

The correct answer is Thu Oct 02 2025 00:00:00 GMT+0530 (India Standard Time).

Key Points

• The International Day of Non-Violence is observed on October 2nd each year.

• This date was chosen to honor the birthday of Mahatma Gandhi, the leader of the Indian independence movement and a pioneer of the philosophy and strategy of non-violence.

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• The day was established by the United Nations General Assembly in 2007.
• The resolution for the International Day of Non-Violence was co-sponsored by 140 countries.

Additional Information

• Mahatma Gandhi:
• Born on October 2, 1869, in Porbandar, India.
• Known for his principles of Satyagraha (truth and non-violence).
• Played a crucial role in India's struggle for independence from British rule.
• Assassinated on January 30, 1948, in New Delhi, India.
• Non-Violence:
• A philosophy and strategy for social change that rejects the use of violence.
• Prominent non-violent leaders include Martin Luther King Jr., Nelson Mandela, and Cesar Chavez.
• Non-violence is also a principle in various religious traditions, including Hinduism, Buddhism, and Christianity.
• United Nations General Assembly:
• One of the six principal organs of the United Nations.
• Comprises all 193 member states of the UN.
• Responsible for making important decisions on peace and security, admission of new members, and budgetary matters.
• Resolutions adopted by the General Assembly are non-binding but carry significant moral weight.
• Global Observances:
• International days are occasions to educate the public on issues of concern.
• They mobilize political will and resources to address global problems.
• Examples include International Women's Day (March 8), World Health Day (April 7), and International Day of Peace (September 21).

Q43. Answer: (c) Panipat III

The correct answer is Panipat III.

Key Points

• The Third Battle of Panipat was fought on January 14, 1761, between the Maratha Empire and the Durrani Empire (Afghan forces led by Ahmad Shah Abdali).
• This battle is considered one of the largest and bloodiest fought in the 18th century, involving over 125,000 soldiers.
• The Marathas were led by their commander-in-chief, Sadashivrao Bhau, while the Afghan forces were commanded by Ahmad Shah Abdali.
• The battle resulted in a decisive victory for the Durrani Empire, marking the end of Maratha expansion in North India.

Additional Information

• Causes of the Battle:
• The Marathas aimed to expand their influence in Northern India, which led to conflicts with regional powers including the Durrani Empire.
• The battle was also a result of the declining Mughal Empire, which left a power vacuum in the region.
• Key Figures:
• Ahmad Shah Abdali, also known as Ahmad Shah Durrani, was the founder of the Durrani Empire and one of the most successful military leaders of his time.
• Sadashivrao Bhau, the Maratha commander-in-chief, was the nephew of the Peshwa and a capable military leader.
• Consequences:
• The defeat at Panipat weakened the Maratha Empire significantly, leading to internal strife and a temporary setback in their quest for dominance.
• The battle also paved the way for the eventual rise of British power in India as the Marathas were one of the main obstacles to their expansion.
• Historical Significance:
• The Third Battle of Panipat is remembered for its high casualties and the significant impact it had on the Indian subcontinent's political landscape.
• It is often studied as a key example of the complex interplay of regional powers during the 18th century in India.

Q44. Answer: (a) Milam

The correct answer is Milam.

Key Points

• The Sarda River originates from the Milam Glacier in the Nepal Himalayas.
• Milam Glacier is located in the Pithoragarh district of Uttarakhand, India.
• The glacier is about 16 km long and lies at an altitude of approximately 3,870 meters above sea level.
• The Sarda River, also known as Kali or Mahakali River, forms a part of the India-Nepal border.
• The river eventually joins the Ghaghara River, a major left-bank tributary of the Ganges.

Additional Information

• Himalayan Glaciers:
• Glaciers in the Himalayas are crucial sources of freshwater for rivers in the region.
• They play a vital role in sustaining the hydrology and ecology of the surrounding areas.
• Hydrological Importance:
• The Sarda River is an important water source for irrigation and hydroelectricity in both India and Nepal.
• It supports agriculture and provides drinking water to millions of people.
• Geopolitical Significance:
• The Sarda River forms a natural border between India and Nepal, and there are various treaties and agreements regarding its use.
• Both countries collaborate on issues related to water sharing and flood management.
• Milam Glacier Trek:
• The Milam Glacier is a popular trekking destination, attracting adventure enthusiasts from around the world.
• The trek offers stunning views of the Himalayan landscape and a chance to explore remote villages.

Q45. Answer: (b) Rourkela

The correct answer is Rourkela.

Key Points

• Rourkela Steel Plant (RSP) is located in Rourkela, Odisha, and was the first integrated steel plant in the public sector in India.
• It was set up with the collaboration of Germany and started production in 1959.
• RSP is operated by the Steel Authority of India Limited (SAIL), which is one of the largest state-owned steel-making companies in India.
• The plant is known for producing a wide variety of steel products, including hot-rolled coils, plates, and pipes.
• Rourkela is strategically located in the mineral-rich state of Odisha, making it ideal for steel production due to the availability of raw materials like iron ore.

Additional Information

• Vijay Nagar:
• Vijay Nagar is home to the Vijayanagar Steel Plant, which is operated by JSW Steel in Karnataka.
• It is one of the largest steel plants in India with a production capacity of over 12 million tonnes per year.
• Bokaro:
• Bokaro Steel Plant is located in Bokaro, Jharkhand, and is operated by SAIL.
• It is known for producing flat products like hot-rolled and cold-rolled coils and sheets.
• Vishakhapatnam:
• Vishakhapatnam Steel Plant, also known as Vizag Steel, is located in Andhra Pradesh.
• It is operated by Rashtriya Ispat Nigam Limited (RINL), a public sector enterprise.
• Steel Authority of India Limited (SAIL):
• SAIL is one of the largest state-owned steel-making companies in India and operates multiple integrated steel plants across the country.
• It was established in 1954 and is headquartered in New Delhi.

Q46. Answer: (b) Baking soda

The correct answer is Baking soda.

Key Points

• Baking soda is chemically known as sodium bicarbonate (NaHCO3).
• The reaction of NaCl, H2O, CO2, and NH3 produces baking soda as one of the products.
• This reaction is part of the Solvay process, an industrial method for producing sodium carbonate (Na2CO3).
• Baking soda is used in various applications including cooking, cleaning, and as an antacid.

Additional Information

• Solvay Process:
• Developed by Ernest Solvay in 1861.
• It is an industrial method for the production of sodium carbonate (washing soda).
• Involves the reaction of sodium chloride, ammonia, and carbon dioxide in water.
• The process is more environmentally friendly compared to the older Leblanc process.
• Applications of Sodium Bicarbonate:
• Used in baking as a leavening agent.
• Commonly used as an antacid to treat heartburn and indigestion.
• Utilized in fire extinguishers for chemical and electrical fires.
• Employed in cleaning products due to its mild abrasive properties.
• Chemical Properties of Sodium Bicarbonate:
• It is a white crystalline solid or a fine powder.
• Soluble in water, producing a mildly alkaline solution.
• When heated, it decomposes to produce sodium carbonate, water, and carbon dioxide.
• Environmental Impact:
• The Solvay process is less polluting than the Leblanc process, producing fewer byproducts.
• Baking soda itself is non-toxic and environmentally benign.

Q47. Answer: (c) Judo

The correct answer is Judo.

Key Points

• Yuko is a scoring term used in Judo competitions.
• It was part of the traditional judo scoring system but was removed in 2017 to simplify the scoring.
• Yuko was awarded for techniques that were not as dominant as Ippon or Waza-ari but still demonstrated control and skill.
• In modern Judo, the remaining scores are Ippon and Waza-ari, with Ippon being the highest score leading to an immediate win.

Additional Information

• Judo:
• A modern martial art, combat, and Olympic sport created in Japan by Kano Jigoro in 1882.
• The objective is to either throw or takedown an opponent, immobilize, or otherwise subdue them with a pin, or force an opponent to submit with a joint lock or a choke.
• Ippon:
• The highest score in Judo, awarded for a throw that places the opponent on their back with considerable force and speed or for a submission.
• Waza-ari:
• A score awarded for a throw that is not quite an Ippon but still effective, or for controlling the opponent on the ground for a certain period.
• Golden Score:
• In case of a tie at the end of the match, the Golden Score rule is applied, where the first player to score wins.

Q48. Answer: (d) National Games of India

The correct answer is National Games of India.

Key Points

• The Raja Bhalindra Singh Trophy is awarded during the National Games of India.
• This trophy is awarded to the state or union territory with the best overall performance in the National Games.
• The National Games of India is a multi-sport event held at intervals, where athletes from across the country compete.
• The trophy is named in honor of Raja Bhalindra Singh, who was a notable sports administrator and the president of the Indian Olympic Association.

Additional Information

• National Games of India:
• The National Games are organized by the Indian Olympic Association.
• The first edition of the National Games was held in 1924 in Lahore.
• It aims to identify and nurture talent for international competitions like the Asian Games and the Olympics.
• Raja Bhalindra Singh:

• Raja Bhalindra Singh was a member of the Patiala royal family.
• He played a significant role in promoting sports in India.
• He also served as the President of the Indian Olympic Association from 1960 to 1975.
• Indian Olympic Association (IOA):
• The IOA is responsible for the selection and management of athletes representing India in the Olympic Games.
• It was established in 1927 and is affiliated with the International Olympic Committee.
• Multi-Sport Events:
• Multi-sport events like the National Games help in the comprehensive development of athletes across various sports.
• They provide a platform for athletes to compete at a high level and gain valuable experience.

Q49. Answer: (c) Birju Maharaj

The correct answer is Birju Maharaj.

Key Points

• Birju Maharaj is one of the most celebrated Indian classical dancers, known for his expertise in Kathak dance.
• He choreographed the song "Kahe Chhed Mohe" for Madhuri Dixit in the film 'Devdas' (2002).
• He also choreographed the Kathak sequences for the song "Kaahe Chhed" in the film 'Dil To Pagal Hai' (1997), performed by Madhuri Dixit.
• Birju Maharaj has received numerous awards, including the Padma Vibhushan, India's second-highest civilian award.

Additional Information

• Kathak Dance:
• Kathak is one of the eight major forms of Indian classical dance.
• It is traditionally attributed to the traveling bards of ancient northern India known as Kathakars or storytellers.
• The dance form emphasizes intricate footwork, spins, and expressive gestures.
• Devdas (2002):
• Directed by Sanjay Leela Bhansali, the film is based on the 1917 novel of the same name by Sarat Chandra Chattopadhyay.
• Madhuri Dixit played the role of Chandramukhi, a courtesan.
• The film is known for its elaborate set designs and classical dance performances.
• Dil To Pagal Hai (1997):
• Directed by Yash Chopra, the film is a musical romantic drama.
• Madhuri Dixit played the role of Pooja, a dancer and choreographer.
• The film was notable for its contemporary dance sequences.
• Padma Vibhushan:
• It is the second-highest civilian award in India after the Bharat Ratna.
• It is awarded for exceptional and distinguished service in any field including government service.
• Birju Maharaj received this honor in 1986 for his contributions to Indian classical dance.

Q50. Answer: (d) Tansen

The correct answer is Tansen.

Key Points

• Tansen, also known as Ramtanu, was born in 1506 in Gwalior, Madhya Pradesh.
• He was one of the Navaratnas (nine gems) at the court of Emperor Akbar.
• Tansen is often regarded as the greatest musician in Indian classical music.
• He was a disciple of Swami Haridas and later became a prominent figure in the court of Akbar.
• Tansen is known for his contributions to Hindustani classical music, including the creation of several ragas.

Additional Information

• Navaratnas:
• Refers to the nine extraordinary talents in Emperor Akbar's court.
• Included notable figures such as Birbal, Raja Todar Mal, and Abul Fazl.
• Swami Haridas:
• A renowned musician and spiritual figure of the Bhakti movement.
• Guru of Tansen and believed to be an avatar of Lalita, a companion of Krishna.
• Hindustani Classical Music:

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• A genre of Indian classical music from North India.
• Involves complex ragas and talas, forming the melodic and rhythmic structure.
• Ragas:
• Frameworks for musical improvisation and composition in Indian classical music.
• Each raga has its own distinctive mood and set of rules.

Q51. Answer: (c) Valuing and preserving the rich heritage and culture

The correct answer is Valuing and preserving the rich heritage and culture.

Key Points

• Valuing and preserving the rich heritage and culture is one of the fundamental duties listed in Article 51A of the Indian Constitution.
• This duty emphasizes the importance of protecting and conserving the cultural heritage of India.
• It includes the responsibility of every citizen to safeguard the monuments, places, and objects of artistic or historic interest.
• This duty aims to promote a sense of pride among citizens for the rich cultural legacy of the country.

Additional Information

• Fundamental Duties:
• Fundamental Duties are enshrined in Article 51A of the Indian Constitution.
• These duties are intended to serve as a constant reminder to citizens of their responsibilities towards the nation.
• They were added by the 42nd Amendment Act, 1976.
• There are 11 Fundamental Duties listed under Article 51A.
• Protection of Monuments:
• The Archaeological Survey of India (ASI) is responsible for the preservation of ancient monuments and archaeological sites.
• There are laws such as the Ancient Monuments and Archaeological Sites and Remains Act, 1958, that protect these sites.
• Cultural Heritage:
• India is home to 40 UNESCO World Heritage Sites as of 2023.
• The cultural heritage includes monuments, traditions, languages, and art forms passed down through generations.
• Citizens' Role:
• Citizens can participate in heritage walks, awareness campaigns, and volunteer for organizations dedicated to heritage conservation.
• Reporting vandalism or illegal activities around heritage sites to authorities is also a way to contribute to preservation.

Q52. Answer: (a) 1991

The correct answer is 1991.

Key Points

• The first-ever motion to remove a Supreme Court Justice in India was signed in 1991.
• The motion was targeted at Justice V. Ramaswami, who faced allegations of financial irregularities.
• The motion was initiated by the then Law Minister Subramanian Swamy.
• The process led to the formation of a three-member judicial committee to investigate the charges.
• Although the committee found him guilty, the motion did not pass in the Lok Sabha due to lack of requisite majority.

Additional Information

• Impeachment Process of Judges
• The procedure for the removal of judges is outlined in Article 124(4) and Article 217 of the Indian Constitution.
• A judge can be removed on grounds of proven misbehavior or incapacity.
• The process can be initiated in either House of Parliament.
• The motion needs to be supported by a specified number of members before it can be admitted.
• Judicial Committee
• Once the motion is admitted, a three-member committee investigates the charges.
• The committee consists of a Supreme Court judge, a Chief Justice of a High Court, and a distinguished jurist.
• Final Decision
• If the committee finds the judge guilty, the House can take up the motion for debate and voting.
• The motion must be passed by a two-thirds majority of members present and voting in each House of Parliament.
• Historical Context
• Justice V. Ramaswami was the first Supreme Court judge to face an impeachment motion.

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• The case highlighted the need for transparency and accountability in the judiciary.

Q53. Answer: (a) Cholera

The correct answer is Cholera.

Key Points

• Cholera is an acute diarrheal infection caused by ingestion of food or water contaminated with the bacterium Vibrio cholerae.

• It can cause severe dehydration and, if untreated, can lead to death within hours.

• Cholera outbreaks are often linked to inadequate access to clean water and sanitation facilities.

• The disease is most common in places with poor sanitation, crowding, war, and famine.

• Cholera can be prevented with proper sanitation, clean drinking water, and oral cholera vaccines.

Additional Information

• Vibrio cholerae: The bacterium responsible for cholera, which produces a toxin that causes the rapid loss of fluids and electrolytes.

• Symptoms: Include severe watery diarrhea, vomiting, and leg cramps. In severe cases, it can lead to shock and death within hours.

• Transmission: Mainly occurs through the consumption of contaminated water or food. Person-to-person transmission is rare.

• Prevention: Access to safe drinking water, improved sanitation, and hygiene practices are critical to preventing cholera.

• Treatment: Prompt rehydration with oral rehydration salts (ORS) or intravenous fluids, and antibiotics in severe cases, are effective treatments for cholera.

Q54. Answer: (a) Turbidity

The correct answer is Turbidity.

Key Points

• Turbidity is the measure of the degree to which water loses its transparency due to the presence of suspended particulates.

• It is an important indicator of water quality and clarity, with higher turbidity indicating higher levels of suspended solids.

• Turbidity is commonly measured in Nephelometric Turbidity Units (NTU).

• High turbidity can indicate potential contamination and can affect aquatic life by reducing the amount of light penetrating the water.

Additional Information

• Solubility:

• Solubility refers to the ability of a substance to dissolve in a solvent, forming a homogeneous solution at a specified temperature and pressure.

• It is typically expressed in terms of the maximum amount of solute that can dissolve in a given amount of solvent.

• Salinity:

• Salinity is the measure of all the salts dissolved in water, usually expressed in parts per thousand (ppt).

• It is an important factor in determining the chemical and physical properties of water.

• Viscosity:

• Viscosity is the measure of a fluid's resistance to flow or deformation.

• It is an intrinsic property of the fluid and is influenced by temperature and pressure.

Q55. Answer: (a) Ravi Sinha

The correct answer is Ravi Sinha.

Key Points

• Ravi Sinha was appointed as the new chief of the Research and Analysis Wing (RAW) in June 2023.

• He succeeded Samant Goel, the previous head of RAW.

• Ravi Sinha is a 1988-batch officer of the Indian Police Service (IPS).

• Prior to his appointment, he was serving as the Special Secretary in the Cabinet Secretariat.

• His appointment was approved by the Appointments Committee of the Cabinet (ACC), headed by Prime Minister Narendra Modi.

Additional Information

• Research and Analysis Wing (RAW):

• RAW is India's primary foreign intelligence agency.

• It was established in September 1968 following the Indo-Pakistani War of 1965.

• The agency's primary function is to gather intelligence related to foreign threats to India's national security.

• RAW operates under the aegis of the Cabinet Secretariat.

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• Appointments Committee of the Cabinet (ACC):
• The ACC is responsible for appointments to several top posts under the Government of India.
• It is composed of the Prime Minister and the Minister of Home Affairs.
• The ACC has the authority to approve appointments to various key positions including heads of central intelligence agencies.
• Indian Police Service (IPS):
• IPS is one of the three All India Services of the Government of India.
• Officers of the IPS provide senior-level leadership to police forces both at the Centre and in states.
• They are recruited through the Civil Services Examination conducted by the Union Public Service Commission (UPSC).
• Cabinet Secretariat:
• The Cabinet Secretariat is responsible for the administration of the Government of India.
• It functions directly under the Prime Minister and coordinates between various ministries and departments of the government.
• The Secretary to the Cabinet is the administrative head of the Secretariat.

Q56. Answer: (c) Champaran

The correct answer is Champaran.

Key Points

• The first satyagraha led by Mahatma Gandhi in India was held in Champaran district of Bihar in 1917.
• It was a significant movement against the forced cultivation of indigo by European planters.
• Gandhi's involvement was sparked by the plight of the farmers who were compelled to grow indigo on a portion of their land and sell it at prices fixed by the British planters.
• Gandhi's successful intervention in Champaran marked the beginning of the mass civil disobedience movement in India.

Additional Information

• Satyagraha:
• A method of nonviolent resistance or civil resistance developed by Mahatma Gandhi.
• The term means "truth force" or "soul force".
• It played a crucial role in the Indian independence movement and influenced movements for civil rights and freedom across the world.
• Indigo Cultivation:
• Indigo was a significant cash crop during the British rule in India.
• Farmers were forced to grow indigo on a part of their land, often to the detriment of their food crops.
• The exploitation and harsh conditions led to widespread resentment and resistance among the farmers.
• Champaran Movement Impact:
• Highlighted the plight of farmers under colonial rule.
• Led to the abolition of the Tinkathia system, which compelled farmers to grow indigo.
• Marked a significant milestone in the Indian struggle for independence.
• Role of Local Leaders:
• Local leaders like Raj Kumar Shukla played a vital role in bringing Gandhi to Champaran.
• The movement also saw the involvement of other prominent leaders like Rajendra Prasad and Anugrah Narayan Sinha.

Q57. Answer: (b) death

The correct answer is death.

Key Points

• Hakim Mirza, also known as Mirza Muhammad Hakim, was the ruler of Kabul and a half-brother of Mughal Emperor Akbar.
• After his death in 1585, Akbar annexed Kabul into the Mughal Empire.
• Kabul was subsequently given to Raja Man Singh as a 'jagir' by Akbar.
• This consolidation helped Akbar strengthen his control over the north-western frontier of his empire.

Additional Information

• Akbar the Great:
• Akbar, the third Mughal Emperor, reigned from 1556 to 1605.
• He is known for his military conquests, administrative innovations, and efforts to foster religious tolerance.
• Akbar's reign significantly expanded the Mughal Empire and is often referred to as a golden age in Indian history.
• Raja Man Singh:
• Raja Man Singh was a prominent general in Akbar’s court and one of his Navaratnas (nine gems).

• He played a crucial role in several military campaigns, including those in Bengal, Bihar, and Kabul.
• Kabul:
• Kabul was an important strategic location for the Mughal Empire, serving as a gateway to Central Asia.
• The region was known for its economic and cultural significance during the Mughal period.
• Jagir:
• A 'jagir' was a type of land grant given by the Mughal Emperor to his nobles and officials in lieu of a salary.
• The holder of a jagir, known as a jagirdar, was responsible for the administration and revenue collection of the area.

Q58. Answer: (c) Education and social reform

The correct answer is Education and social reform.

Key Points

• Savitribai Phule is recognized as one of the first female teachers in India.
• She, along with her husband Jyotirao Phule, played a pivotal role in promoting women's education.
• She was a social reformer who worked tirelessly for the upliftment of women and the lower castes in 19th century India.
• Savitribai Phule established several schools for girls in Maharashtra and was a pioneer in the field of education.
• Her efforts also included fighting against social evils such as child marriage and the caste system.

Additional Information

• Women's Education in India:
• Women's education in India has been a major concern since the early 19th century, with social reformers like Savitribai Phule playing a crucial role.
• Access to education for women has significantly improved, but disparities still exist, particularly in rural areas.
• Government schemes like Beti Bachao Beti Padhao aim to promote gender equality and improve women's education.
• Social Reform Movements:
• Social reform movements in India have aimed to eradicate social evils and promote equality and justice.
• Key figures include Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, and Jyotirao Phule.
• These movements addressed issues like sati, child marriage, untouchability, and women's rights.
• Jyotirao Phule:
• Jyotirao Phule was an Indian social activist, thinker, and writer.
• He, along with his wife Savitribai, founded the first Indian girl’s school in Pune in 1848.
• Phule was a strong advocate for the education of women and lower caste members.
• Impact of Education on Social Reform:
• Education has been a key tool in driving social reform and improving the socio-economic status of marginalized communities.
• Educated individuals are better equipped to challenge societal norms and advocate for their rights.
• Education fosters critical thinking and promotes values of equality, justice, and democracy.

Q59. Answer: (d) Our Trees Still Grow in Dehra

The correct answer is Our Trees Still Grow in Dehra.

Key Points

• Ruskin Bond was honoured with the Sahitya Akademi Award in 1992 for his English novel "Our Trees Still Grow in Dehra".
• The award recognizes and promotes excellence in Indian literature.
• "Our Trees Still Grow in Dehra" is a collection of short stories that reflect Bond's attachment to Dehradun and his life experiences.
• The book is a blend of nostalgia and the author's observations of the changing landscapes and people in Dehra.
• Ruskin Bond is renowned for his simple and poignant writing style that captures the essence of rural India.

Additional Information

• Sahitya Akademi Award:
• The Sahitya Akademi Award is a literary honour in India, presented annually by the Sahitya Akademi, India's National Academy of Letters.
• It recognizes outstanding works of literature in the 24 major Indian languages, including English.
• The award includes a plaque and a cash prize.
• It is one of the most prestigious literary awards in India, aimed at promoting and preserving Indian literature.
• Ruskin Bond:
• Ruskin Bond is an acclaimed Indian author of British descent, known for his vivid portrayal of life in the Indian hill stations.

• He has written numerous novels, short stories, essays, and children's books.
• Bond has received several awards for his contribution to literature, including the Padma Shri and Padma Bhushan.
• His works often reflect his deep connection with nature and the simplicity of rural life.
• Other Notable Works by Ruskin Bond:
• "The Room on the Roof" – His first novel, which won the John Llewellyn Rhys Prize in 1957.
• "The Blue Umbrella" – A beloved children's story that was adapted into a film.
• "A Flight of Pigeons" – A novella that was adapted into the film "Junoon".
• "Delhi Is Not Far" – A novel that showcases the author's talent for storytelling.

Q60. Answer: (c) Kanishka

The correct answer is Kanishka.

Key Points

• Kanishka was the successor of Vima Kadphises and is one of the most notable rulers of the Kushana dynasty.
• Kanishka's reign is generally believed to have begun around 78 AD, which also marks the start of the Saka Era.
• He is renowned for his military, spiritual, and cultural achievements, significantly expanding the Kushana Empire.
• Kanishka is also known for his patronage of Buddhism and convening the Fourth Buddhist Council in Kashmir.

Additional Information

• Kushana Dynasty
• The Kushana dynasty ruled over regions in Central Asia and the northern Indian subcontinent from approximately 1st to 3rd centuries AD.
• The dynasty is known for its contributions to the cultural and artistic heritage of the region, including the spread of Gandhara art.
• Key rulers include Kujula Kadphises, Vima Kadphises, and Kanishka.
• Fourth Buddhist Council
• Held under the patronage of Kanishka in Kashmir around 1st century AD.
• This council led to the compilation of significant Buddhist texts and the spread of Mahayana Buddhism.
• Saka Era
• The Saka Era began in 78 AD during the reign of Kanishka.
• It is one of the historical Indian calendars still in use in some contexts today.
• Gandhara Art
• A style of Buddhist visual art that developed in what is now northwestern Pakistan and eastern Afghanistan between the 1st and 7th centuries AD.
• Gandhara art is known for its syncretic style combining Indian, Greek, and Persian influences.

Q61. Answer: (c) Chittagong Hill Tracts

The correct answer is Chittagong Hill Tracts.

Key Points

• The Chakma people predominantly reside in the Chittagong Hill Tracts region of Bangladesh.
• The Chittagong Hill Tracts is located in the southeastern part of Bangladesh and is known for its hilly terrain and dense forests.
• Alongside the Chakmas, other indigenous groups such as the Marma and Tripura also inhabit this region.
• The Chakmas are the largest ethnic group in the Chittagong Hill Tracts, and their culture and traditions are distinct from the majority Bengali population.

Additional Information

• Chittagong Hill Tracts
• The Chittagong Hill Tracts is divided into three districts: Bandarban, Rangamati, and Khagrachari.
• It covers an area of approximately 13,295 square kilometers, making it a significant region in terms of both geography and biodiversity.
• Chakma People
• The Chakmas practice Theravada Buddhism, which is a major part of their cultural identity.
• They have their own language, Chakma, which belongs to the Indo-Aryan language family.
• Indigenous Rights
• The Chittagong Hill Tracts Peace Accord was signed in 1997, aimed at resolving long-standing conflicts between the government and indigenous groups.
• The Accord granted the indigenous communities certain administrative and cultural autonomy.

• Geopolitical Significance

• The region shares borders with India and Myanmar, making it strategically important.

• Issues related to land rights, migration, and integration of indigenous people remain significant challenges in the area.

Q62. Answer: (b) Ministry of Labour & Employment

The correct answer is Ministry of Labour & Employment.

Key Points

• The Pradhan Mantri Rojgar Protsahan Yojana (PMRPY) was launched by the Ministry of Labour & Employment.

• This scheme aims to incentivize employers for generating new employment opportunities.

• Under PMRPY, the Government of India pays the full employer's contribution towards the Employees' Provident Fund (EPF) and Employees' Pension Scheme (EPS) for new employees for a period of three years.

• The scheme is targeted towards workers earning wages up to Rs. 15,000 per month.

• PMRPY was launched to accelerate employment generation in the country.

Additional Information

• Employees' Provident Fund (EPF):

• EPF is a retirement benefit scheme for salaried employees managed by the Employees' Provident Fund Organisation (EPFO).

• Both employer and employee contribute 12% of the employee's basic salary towards EPF.

• Employees' Pension Scheme (EPS):

• EPS is a pension scheme managed by the EPFO, providing pension benefits to employees after retirement.

• The employer's contribution towards EPS is 8.33% of the employee's basic salary, subject to a maximum of Rs. 1,250 per month.

• Unorganized Sector:

• The unorganized sector comprises workers who are not employed in fixed, formal jobs or are not covered by any social security measures.

• Examples include casual laborers, small-scale farmers, and self-employed individuals.

• Social Security Schemes in India:

• Social security schemes in India are designed to provide financial support and security to individuals in the event of retirement, disability, or other contingencies.

• Examples include the Atal Pension Yojana, Pradhan Mantri Shram Yogi Maan-Dhan, and the National Pension System.

Q63. Answer: (d) Anindita Neogy Anaam

The correct answer is Anindita Neogy Anaam.

Key Points

• Anindita Neogy Anaam is a renowned Kathak dancer known for her remarkable contributions to the dance form.

• She received the National Nritya Shiromani award in 2019 for promoting Kathak across the globe.

• The award was presented at the 10th Cuttack Mahotsav: International Dance and Music Festival held in Odisha.

• Anindita is celebrated for her innovative approach in blending traditional Kathak with contemporary elements, making it more appealing to the younger generation.

Additional Information

• Kathak Dance Form:

• Kathak is one of the eight classical dance forms of India, originating from Northern India.

• It is characterized by intricate footwork, spins, and expressive gestures.

• The dance form traditionally narrates stories from Indian epics, folklore, and mythology.

• Kathak has three main gharanas (schools) - Lucknow, Jaipur, and Banaras, each with its unique style and emphasis.

• National Nritya Shiromani Award:

• This award is given to exceptional dancers who have significantly contributed to the promotion and preservation of Indian classical dance forms.

• It recognizes artists who have achieved excellence in their field and have promoted the art form both nationally and internationally.

• Cuttack Mahotsav:

• An international festival that celebrates dance and music, held annually in Cuttack, Odisha.

• The festival aims to promote cultural exchange and provides a platform for artists from various parts of the world to showcase their talents.

• Role of Dance Festivals:

• Dance festivals play a crucial role in preserving and promoting cultural heritage.
• They provide a platform for emerging artists to perform and gain recognition.
• Such festivals encourage the younger generation to appreciate and learn classical dance forms.

Q64. Answer: (a) Chola

The correct answer is Chola.

Key Points

• The Chola dynasty is renowned for its exceptional craftsmanship in creating bronze sculptures, particularly during the 9th to 13th centuries.
• Chola bronze sculptures are characterized by their intricate details and lifelike representation of deities, especially those of Shiva, Parvati, and Nataraja.
• The lost-wax casting technique, also known as "cire perdue," was predominantly used by Chola artisans to achieve high precision in their sculptures.
• The most iconic representation of Chola bronze art is the Nataraja, depicting Lord Shiva in his cosmic dance form, which symbolizes the cycle of creation and destruction.

Additional Information

• Lost-Wax Casting Technique:
• An ancient method of metal casting where a molten metal is poured into a mold created from a wax model.
• The wax model is melted and drained away, leaving a hollow form that is filled with molten metal to create the sculpture.
• Nataraja:
• A depiction of the Hindu god Shiva as the cosmic dancer who performs his divine dance to destroy a weary universe and make preparations for the god Brahma to start the process of creation.
• The Nataraja iconography is highly symbolic, with the dance representing the rhythmic movement of the universe.
• Patronage of Arts:
• The Chola dynasty was known for its patronage of arts, including temple architecture, painting, and sculpture.
• Under their rule, many grand temples were constructed, which served as hubs for artistic activity.
• Chola Temples:
• Notable for their grandeur and intricate architectural designs.
• The Brihadeeswarar Temple in Thanjavur is one of the most famous examples of Chola architecture.

Q65. Answer: (c) The total value of all goods and services produced within a country's borders in a specific period

The correct answer is The total value of all goods and services produced within a country's borders in a specific period.

Key Points

• Gross Domestic Product (GDP) represents the total market value of all final goods and services produced within a country during a specific period, usually a year or a quarter.
• It is a key indicator used to gauge the health of a country's economy and overall economic activity.
• GDP can be measured using three approaches: production (or output) approach, income approach, and expenditure approach.
• Real GDP is adjusted for inflation, providing a more accurate reflection of an economy's size and how it is growing over time.
• The growth rate of GDP is used to compare the economic performance of different countries or regions.

Additional Information

• Gross National Product (GNP):
• GNP measures the total economic output produced by a country's residents, regardless of the location of the production.
• It includes GDP plus income earned by residents from overseas investments minus income earned within the domestic economy by foreign residents.
• Net National Product (NNP):
• NNP is derived by subtracting depreciation (the loss of value of capital goods over time) from GNP.
• It represents the net value of goods and services produced by a country's residents.
• Purchasing Power Parity (PPP):
• PPP is an economic theory that compares different countries' currencies through a "basket of goods" approach.
• It is used to determine the relative value of currencies and to compare the cost of living between different countries.
• Per Capita GDP:
• Per Capita GDP is the average economic output per person, calculated by dividing the GDP by the total population.
• It is often used as an indicator of the standard of living and economic well-being of a country's residents.

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Q66. Answer: (b) No other planet is as small as Mercury in the Solar System.

The correct answer is '2' i.e. No other planet is as small as Mercury in the Solar System..

Key Points

• The given sentence is in the superlative degree.

• To change it to the positive degree, the structure used is "No other + noun + is as + positive form of adjective + as + subject".

• In this case, the sentence structure becomes "No other planet is as small as Mercury in the Solar System".

Correct sentence: No other planet is as small as Mercury in the Solar System.

Additional Information

• Comparative Degree:

• Structure: Subject + verb + comparative adjective + than + other + noun.

• Example: Mercury is smaller than any other planet in the Solar System.

• Usage: To compare two entities.

• Superlative Degree:

• Structure: Subject + verb + the + superlative adjective + noun.

• Example: Mercury is the smallest planet in the Solar System.

• Usage: To show the highest degree of comparison among three or more entities.

Q67. Answer: (a) killed in

The correct answer is '1' i.e. killed in.

Key Points

• The phrase "killed in" is correctly used to indicate the cause or event in which the people were killed.

• "Killed by" would imply a direct agent causing death, such as a person or an object, rather than an event.

• In the context of events like accidents, the correct preposition to use is "in".

Correct sentence: Thousands of people were killed in the train accident that took place last Wednesday.

Additional Information

• Using Prepositions in Context:

• "Killed by": Used when a person or an object directly causes the death.

• Example: He was killed by a falling tree.

• "Killed in": Used when referring to an event or situation causing the death.

• Example: They were killed in a car accident.

Q68. Answer: (c) copied and modefied

The correct answer is '3' i.e. copied and modefied.

Key Points

• The phrase "copied and modefied" contain a spelling error.

• When listing actions, it is important to ensure that each action follows the same grammatical form.

• In this case, the correct form should be "used, copied, and modified" to maintain parallelism.

Correct sentence: This item is in the public domain and can be used, copied, and modified without any restrictions.

Additional Information

• Parallel Structure:

• Definition: Parallel structure, or parallelism, means using the same pattern of words to show that two or more ideas have the same level of importance.

• Example: "She likes hiking, biking, and swimming" (parallel) vs. "She likes hiking, to bike, and swimming" (not parallel).

• Usage: Ensures clarity and improves the readability of your writing.

Q69. Answer: (c) freedom of expression

The correct answer is '3' i.e. freedom of expression.

Key Points

• The phrase "freedom of expression" is a standard term used to refer to the right to express one's opinions publicly.

• The other options "freedom from expression," "freedom on expression," and "freedom at expression" are not commonly used and do not convey the intended meaning.

Correct sentence: World Press Freedom Day will be dedicated to the importance of journalism and freedom of expression in the context of the current global environmental crisis.

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Additional Information

• Freedom of Expression: This is a fundamental human right as recognized by various international treaties and national constitutions. It covers the freedom to hold opinions and to receive and impart information and ideas without interference.

Q70. Answer: (c) most beautiful

The correct answer is '3' i.e. most beautiful.

Key Points

• When comparing more than two items or people, we use the superlative form of the adjective.

• The superlative form of "beautiful" is "most beautiful".

• Superlatives are often preceded by "the" when used in sentences.

Correct sentence: Out of all the flowers in the garden, the rose is the most beautiful.

Additional Information

• Comparative Form:

• Usage: Used to compare two items or people.

• Structure: Adjective + "er" or "more" + adjective.

• Example: She is more beautiful than her sister.

• Superlative Form:

• Usage: Used to compare more than two items or people, indicating the highest degree of the quality.

• Structure: Adjective + "est" or "most" + adjective.

• Example: She is the most beautiful girl in the class.

Q71. Answer: (b) To remain unchanged from a time in the past

The solution is in Hindi. Read it online.

Q72. Answer: (d) overdue

The correct answer is 'overdue'.

Key Points

• The word "overdue" means past the due date or delayed beyond the expected time.

• When referring to library books that have not been returned on time, "overdue" is the most appropriate term.

• The other options: "overdate," "overdo," and "overdrew" do not fit the context as appropriately.

Therefore, the correct answer is 'Option 4'.

Complete Sentence: The library books were long overdue, their pages bearing the weight of the passage of time.

Additional Information

• Overdate: Not a standard word in this context.

• Overdo: Means to do something to an excessive degree.

• Overdrew: The past tense of overdraw, typically used in financial contexts.

Q73. Answer: (d) a mammal known for nocturnal flight and insect consumption

The correct answer is 'Option 4'.

Key Points

• The word "bat" in this context refers to a mammal known for nocturnal flight and insect consumption.

• The bat flies silently through the night, which is a characteristic behavior of the mammal.

• The other options: "a wooden tool utilized in sports like baseball or cricket," "the act of delivering a forceful strike or hit," and "a measurement unit in digital information systems" do not fit the context appropriately.

Therefore, the correct answer is 'Option 4'.

Complete Sentence: The bat flew silently through the night, searching for insects to eat.

Additional Information

• A wooden tool utilized in sports like baseball or cricket: This refers to the equipment used to hit the ball in various sports.

• The act of delivering a forceful strike or hit: This refers to the action of hitting something with force.

• A measurement unit in digital information systems: This is a unit of measurement in computing, often referring to bits or bytes.

Q74. Answer: (b) play

The correct answer is 'play'.

Key Points

• The verb "play" is the simple present tense form of the verb "play."
• The sentence describes an action that occurs regularly ("every day"), so the simple present tense "play" is required.
• Options 1, 3, and 4 are grammatically incorrect in this context.

Therefore, the correct answer is Option 2.

Complete Sentence: "They play football every day."

Additional Information

• Option 1: "plays" is incorrect because "plays" is used for singular subjects, whereas "they" is a plural subject.
• Option 3: "had been playing" is incorrect because it is in the past perfect continuous tense, which does not fit the context of the sentence.
• Option 4: "will play" is incorrect because it is in the future tense, which does not fit the context of the sentence.

Q75. Answer: (b) the time

The solution is in Hindi. Read it online.

Q76. Answer: (a) most intelligent

The correct answer is '1' i.e. most intelligent.

Key Points

• The given sentence is a superlative form comparison, indicating that dolphins are one of the top animals in terms of intelligence.
• To correctly express this, the phrase "the intelligent animals" should be replaced with "the most intelligent animals".
• The other options (intelligenter, more intelligent, intelligentest) are either incorrect in form or do not fit the context of the sentence.

Correct sentence: Dolphins are named among the most intelligent animals on earth.

Additional Information

• Comparative Form:
• Structure: Adjective + -er or more + Adjective.
• Example: Dolphins are more intelligent than many other animals.
• Usage: Used for comparing two entities.
• Superlative Form:
• Structure: the + Adjective + -est or the most + Adjective.
• Example: Dolphins are the most intelligent animals in the ocean.
• Usage: Used for comparing one entity with all others in its group.

Q77. Answer: (b) There is a man sitting beside cat.

The correct answer is '2' i.e. There is a man sitting beside cat..

Key Points

• The given sentence has a grammatical error concerning the use of prepositions.
• The word "beside" should be followed by an article "a" or "the" before the noun "cat".
• The correct sentence should be "There is a man sitting beside a/the cat".

Correct sentence: There is a man sitting beside a/the cat.

Additional Information

• Use of Prepositions:
• Beside: This preposition means "next to" or "at the side of". It often needs to be followed by an article when referring to a specific noun.
• Example: She sits beside the fireplace.
• Other Common Prepositions:
• In: Used to indicate location or position within something.
• On: Used to indicate surface or position on a surface.
• At: Used to indicate a specific point or place.

Q78. Answer: (a) strict

The solution is in Hindi. Read it online.

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Q79. Answer: (a) get him off the hook

The solution is in Hindi. Read it online.

Q80. Answer: (a) Outward

The solution is in Hindi. Read it online.

Q81. Answer: (d) swum

The correct answer is option 4.

Key Points

The misspelled word is 'swam'.

• The correct spelling would be 'swum'.

• The word 'swum' is the past participle of 'swim'.

Therefore, the correct answer would be 'swum'.

Additional Information

Let's understand the correct usage of 'swim' in different tenses -

• Present Tense - I swim every morning.

• Past Tense - I swam yesterday.

• Present Perfect Tense - I have swum in the lake.

Q82. Answer: (c) Recieved

The solution is in Hindi. Read it online.

Q83. Answer: (a) complete

The correct answer is 'complete'.

Key Points

• The verb "complete" means to finish making or doing.

• In the context of the sentence, the teacher is instructing students to finish their homework by tomorrow.

• The other options: "completing," "completed," and "completes" do not fit the context as appropriately.

Therefore, the correct answer is 'Option 1'.

Complete Sentence: The teacher asked us to complete our homework by tomorrow.

Additional Information

• Completing: Present participle form; not suitable for this context.

• Completed: Past participle form; not suitable for this context.

• Completes: Third person singular present form; not suitable for this context.

Q84. Answer: (a) Clear

The solution is in Hindi. Read it online.

Q85. Answer: (b) Alimony

The solution is in Hindi. Read it online.

Q86. Answer: (b) that

The solution is in Hindi. Read it online.

Q87. Answer: (c) by

The solution is in Hindi. Read it online.

Q88. Answer: (a) Moreover

The solution is in Hindi. Read it online.

Q89. Answer: (a) ecotourism

The solution is in Hindi. Read it online.

Q90. Answer: (d) vital

The solution is in Hindi. Read it online.

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