SSC MTS 2024 Official Paper (Held On: 07 Oct, 2024 Shift 1) (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.

yourmocktest.com/pyq/ssc-mts/ssc-mts-2024-official-paper-held-on-07-oct-2024-shift-1-previou…

Scan the QR code or click the link to open it.

SESSION 1

Q1. In a student council election, there were three contestants. All the voters participated in the voting and 10% of votes were declared invalid. The contestants got the votes in the ratio 8 : 7 : 5. If the second candidate in the list got 4725 votes, the total number of valid votes is:

(a) 10,000
(b) 11,500
(c) 13,500
(d) 9,000

Q2. A person travels equal distances with speeds of 3 km/hr, 4 km/hr and 8 km/hr, respectively, and takes a total of 425 minutes. What is the total distance (in km) travelled?

(a) 32
(b) 28
(c) 27
(d) 30

Q3. Find the simple interest (in Rs.) on Rs. 3000 as a sum borrowed at 6% per year rate of interest for 4 years.

(a) 660
(b) 680
(c) 760
(d) 720

Q4. Surendra bought an old bicycle for Rs. 2,500 and spent Rs. 300 on its repair. He sold it for Rs. 3,000. Find his profit percentage.

(a) 71/7%
(b) 112/3% ;
(c) 75/9% ;
(d) 134/11%

Q5. Find the simple interest (in Rs.) on Rs. 2500 as a sum borrowed at 9% per year rate of interest for 6 years.

(a) 1390
(b) 1310
(c) 1350
(d) 1290

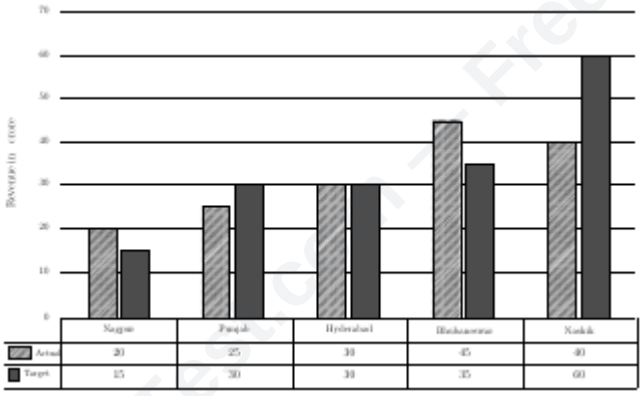
Q6. A hemispherical bowl is 264 cm round at the brim. Suppose that the bowl is half-full of beverage. If the beverage is served in hemispherical glasses 6 cm in the diameter at the top, how many people would be served?

(a) 1170
(b) 1372
(c) 1270
(d) 1470

Q7. The highest common factor of 84 and 108 is:

(a) 16
(b) 8
(c) 12
(d) 6

Q8. The following graph shows the actual and target revenue (in crores) of an industry in five different branches. Study the graph and answer the question:



The ratio of actual revenue to the target revenue over all the branches is :

(a) 16 : 17
(b) 17 : 16
(c) 14 : 13
(d) 13 : 14

Q9. What is the area of the remaining portion of a circle of radius 14 cm when a square with maximum possible area inscribed in it is removed from it? (Use $\pi = 22/7$)

(a) 518 cm^2
(b) 520 cm^2
(c) 224 cm^2
(d) 616 cm^2

Q10. A vendor wants to gain 25% by adding water to milk and selling the mixture at the cost price. Find the ratio of water and milk in the mixture.

(a) 2 : 5
(b) 1 : 4
(c) 2 : 7
(d) 1 : 5

Q11. If the cash difference between the selling price of an item at a gain of 3% and 6% is Rs. 9, which of the following options is the correct ratio between the selling prices?

(a) 101 : 103
(b) 103 : 100
(c) 103 : 106
(d) 101 : 105

Q12. Two vessels, A and B, contain spirit and water in the ratio 3 : 4 and 5 : 3, respectively. Find the ratio in which these two mixtures be mixed to obtain a new mixture in vessel C containing spirit and water in the ratio 4 : 3.

(a) 3 : 8
(b) 3 : 7
(c) 5 : 8
(d) 4 : 7

YourMockTest.com – Free Study Material

Q13. The average age of 12 men is increased by 6 years when three of them, whose ages are 36, 40 and 44 years, are replaced by 3 persons. What is the average age of the 3 persons?

(a) 58 years
(b) 64 years
(c) 67 years
(d) 50 years

Q14. If the volume and surface area of a sphere are numerically the same, then find the volume (in cm^3) of its semi-sphere. (correct to two places of decimals, use $\pi = 3.14$)

(a) 65.25
(b) 65.52
(c) 56.25
(d) 56.52

Q15. The speed of a boat in still water is 15 km/h and the speed of the current is 3 km/h. How much distance (in km) can be covered going downstream in 12 minutes?

(a) 3.5
(b) 3.7
(c) 3.4
(d) 3.6

Q16. The following table shows the number of mobile phones (in thousands) manufactured by three companies A, B and C from the year 2007 to 2011.

Year/Company Name	A	B	C
2007	450	650	540
2008	310	820	950
2009	1090	1080	1150
2010	1675	1700	1500
2011	2532	2120	2420

Which company manufactured the maximum number of mobile phones as compared to all other companies, and in which year?

(a) Company C, in 2011
(b) Company A, in 2010
(c) Company B, in 2009
(d) Company A, in 2011

Q17. Raju sold 4 laptops at a rate of Rs. 1,54,005 all together and incurred a loss of 25%. At what rate should he sell the laptops to gain a profit of 25%?

(a) Rs. 2,25,820
(b) Rs. 2,56,675
(c) Rs. 2,31,007.5
(d) Rs. 2,05,340

Q18. A sum of Rs. 2,380 is lent out into two parts, one at 25% p.a. and another at 20% p.a. If the total annual income is Rs. 500, find the money (in Rs.) lent at 25% rate.

(a) 320
(b) 240
(c) 480
(d) 560

YourMockTest.com — Free Study Material

Q19. The average age of a group of 32 women is 60 years and that of another group of 40 men is 33 years. The average age of the two groups mixed together is:

(a) 42 years
(b) 45 years
(c) 48 years
(d) 46.5 years

Q20. The marked price of a folding bed is Rs. 18,000. Aman bought it after two successive discount of 15% and 10%. He spent Rs. 830 on transportation and sold it for Rs. 18,440. Find his profit.

(a) Rs. 2,869
(b) Rs. 3,539
(c) Rs. 3,840
(d) Rs. 3,148

Q21. 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 planets are rocks.

All rocks are lakes.

Conclusions:

(I) All planets are lakes.

(II) All rocks are planets.

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

Q22. Seven friends, Kamala, Raveena, Amruta, Nisha, Gautami, Bhavana and Triveni, are sitting in a circular dining table facing the centre (but not necessarily in the same order). Raveena is sitting second to the right of Nisha. Gautami has Kamala and Triveni as immediate neighbours. Triveni is sitting third to the left of Nisha. Amruta is not an immediate neighbour of Nisha. Who is seated fourth to the left of Bhavana?

(a) Kamala
(b) Triveni
(c) Nisha
(d) Raveena

Q23. N, M, O, P, Q and R are sitting around a circular table facing the centre (but not necessarily in the same order). N sits to the immediate right of R. M sits second to the right of N. P sits second to the right of M. O sits third to the right of P. Who sits to the immediate right of Q?

(a) R
(b) O
(c) M
(d) P

Q24. What should come in place of the question mark (?) in the following series?

1, 17, 33, 49, 65, ?

(a) 79
(b) 77
(c) 80
(d) 81

YourMockTest.com — Free Study Material

Q25. What will come in the place of the question mark (?) in the following equation, if '+' and '×' are interchanged and '÷' and '−' are interchanged?

15 ÷ 5 + 8 − 4 × 7 = ?

(a) 18
(b) 25
(c) 22
(d) 12

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



(a)



(b)



(c)



(d)



Q27. In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

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

24, 73

27, 82

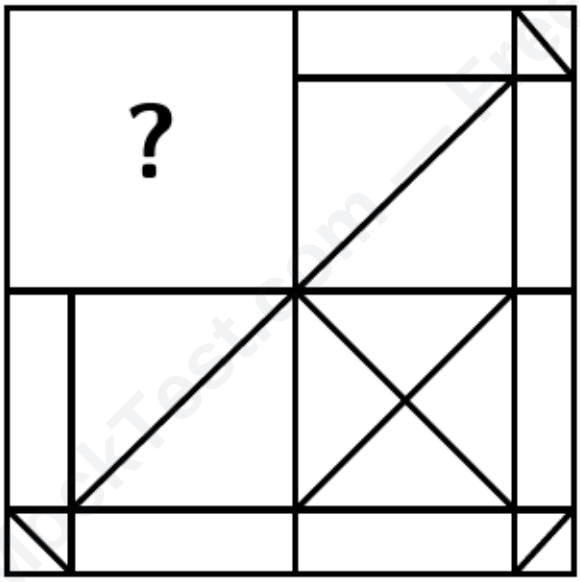
(a) 32, 101

(b) 32, 100

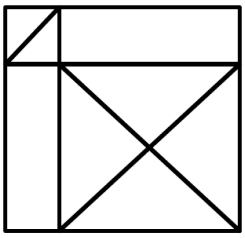
(c) 33, 101

(d) 33, 100

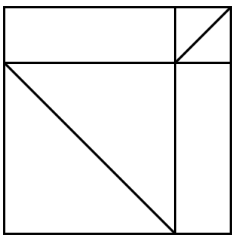
Q28. Select the option figure that will replace the question mark (?) in the figure given below to complete the pattern.



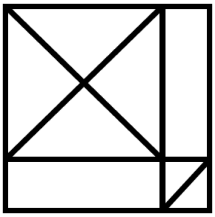
(a)



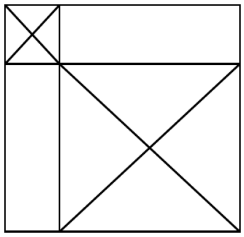
(b)



(c)



(d)



Q29. What will come in the place of '?' in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

8 + 2 − 1 × 1 ÷ 1 = ?

(a) 3
(b) 5
(c) 7
(d) 10

Q30. What should come in place of the question mark (?) in the given series based on the English alphabetical order?

GGB, HHD, IKH, JPN, ?

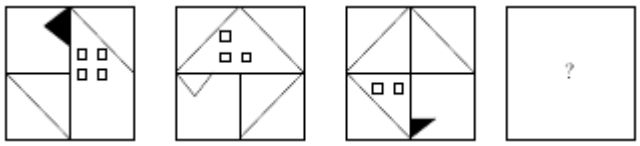
(a) OUV
(b) OWV
(c) KWV
(d) PUV

Q31. In a certain code language, 'MOVE' is coded as '3917' and 'EAST' is coded as '4692'.

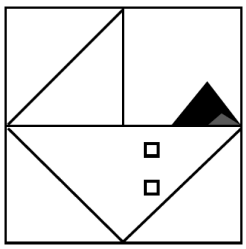
What is the code for 'E' in the given code language?

(a) 9
(b) 4
(c) 2
(d) 7

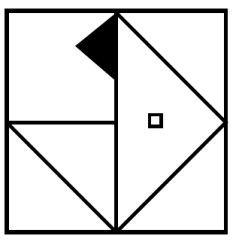
Q32. Identify the figure given in the options that when put in place of the question mark (?) will logically complete the series.



(a)

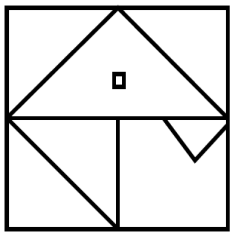


(b)

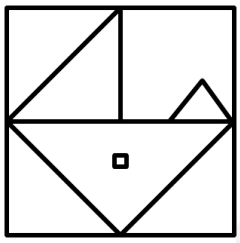


YourMockTest.com — Free Study Material

(c)



(d)



Q33. PLRN is related to QMSO in a certain way based on the English alphabetical order. In the same way, LHNJ is related to MIOK. To which of the following is HDJF related, following the same logic?

(a) EIGK
(b) EIKG
(c) IEKG
(d) IEGK

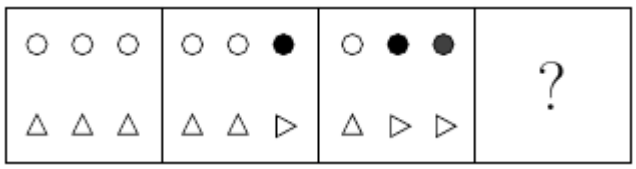
Q34. In a certain code language, 'father makes tea' is coded as 'ib fx ey' and 'tea and coffee' is coded as 'kr ey wn'. How is 'tea' coded in the given language?

(a) fx
(b) kr
(c) wn
(d) ey

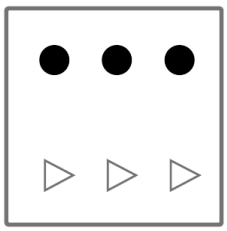
Q35. In a certain code language, 'FLOAT' is coded as '14238' and 'BLOAT' is coded as '23849'. What is the code for 'F' in the code language?

(a) 4
(b) 2
(c) 1
(d) 9

Q36. Identify the figure given in the options which when put in place of (?) will logically complete the series.

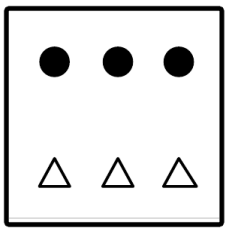


(a)

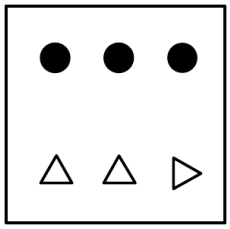


YourMockTest.com — Free Study Material

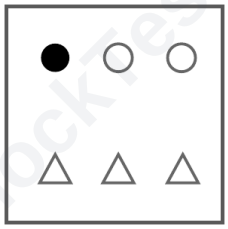
(b)



(c)



(d)



Q37. In a certain code language, 'GIFT' is coded as '5197' and 'FIST' is coded as '4157'. What is the code for 'S' in that language?

(a) 9
(b) 5
(c) 1
(d) 4

Q38. Read the given statement(s) 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 statement(s).

Statements:

Some kites are rocks.

All rocks are stones.

Conclusions:

(I) Atleast some kites are stones.

(II) All stones are rocks.

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

Q39. 519 is related to 781 following a certain logic. Following the same logic, 642 is related to 904. To which of the following is 485 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) 721
(b) 794
(c) 756

YourMockTest.com — Free Study Material

(d) 747

Q40. FI29 is related to TW49 in a certain way. In the same way, LO38 is related to ZC58. To which of the following is RU65 related following the same logic?

(a) FE85
(b) IF58
(c) EF58
(d) FI85

SESSION 2

Q41. Which of the following states had benefitted by the Indira Gandhi Canal?

(a) Rajasthan
(b) Uttar Pradesh
(c) Gujarat
(d) Madhya Pradesh

Q42. Which of the following is the style of temple architecture that is widely favoured in northern India?

(a) Vihar
(b) Madapa
(c) Nagar
(d) Dravid

Q43. 'My Country My Life' is the autobiography of:

(a) Khushwant Singh
(b) Manmohan Singh
(c) Natwar Singh
(d) Lal Krishna Advani

Q44. In which of the following systems was the charge of collecting the revenue and paying it to the Company given to the village headman, rather than the zamindar?

(a) Mahalwari
(b) Iqtadari
(c) Zamindari
(d) Ryotwari

Q45. Who among the following signed a pact with Lord Irwin on March 5, 1931?

(a) B R Ambedkar
(b) Subhas Chandra Bose
(c) Mahatma Gandhi
(d) Jawaharlal Nehru

Q46. A river is capable of forming which of the following landscapes when the river is in its middle course?

(a) Waterfalls
(b) A delta
(c) V shaped valley
(d) A meander

Q47. Which of the following mountain peaks is a part of the Himalayas?

(a) Kamet
(b) Dhupgarh
(c) Kalsubai
(d) Taramati

YourMockTest.com — Free Study Material

Q48. Which of the following is NOT related to goals of Fundamental Duties of Indian Citizens?

(a) Preserve
(b) Cherish
(c) Courage
(d) Respect

Q49. Which team won the Women's Asian Hockey Champions Trophy in 2023?

(a) Malaysia
(b) India
(c) Japan
(d) South Korea

Q50. S Abdul Nazeer was appointed as the Governor of _____ in February 2023.

(a) Kerala
(b) Maharashtra
(c) Andhra Pradesh
(d) Goa

Q51. Which Tamil superstar founded the Tamilaga Vettri Kazhagam (TVK) political party in Tamil Nadu and Puducherry on 2 February 2024 with the slogan 'Pirappokkum Ellaa Uyirkkum' (All are equal by birth)?

(a) Vijay
(b) Kamal Hassan
(c) Rajinikanth
(d) Dhanush

Q52. The digestive enzymes inside lysosomes are made by:

(a) rough endoplasmic reticulum
(b) plastids themselves
(c) Golgi apparatus
(d) mitochondria

Q53. _____ was well known for creating fusion art by adapting European theatrical techniques to Indian classical dance combined with Indian folk and tribal dance.

(a) Uday Shankar
(b) Guru Bipin Singh
(c) Kelucharan Mohapatra
(d) Birju Maharaj

Q54. What is the primary gas responsible for the leavening effect in bread when yeast ferments sugars?

(a) Carbon dioxide
(b) Nitrogen
(c) Oxygen
(d) Helium

Q55. Who was the famous Venetian traveller of the 13^(th) century who visited Kerala?

(a) Abdur Razzaq
(b) Marco Polo
(c) Barthema
(d) Nicolo Conti

Q56. What is Cash Reserve Ratio?

(a) Percentage of deposits that a central bank must keep as cash reserves with the bank
(b) Percentage of deposits that a central bank must keep as cash reserves with the government
(c) Percentage of deposits that a bank must keep as cash reserves with any bank
(d) Percentage of deposits that a bank must keep as cash reserves with the central bank

YourMockTest.com — Free Study Material

Q57. Sarhul is an agricultural festival of tribals, which is primarily celebrated in the Indian state of _____.

(a) Uttarakhand
(b) Sikkim
(c) Jharkhand
(d) Gujarat

Q58. According to Census 2011, what is the sex ratio of India?

(a) 950
(b) 998
(c) 943
(d) 933

Q59. Kalamandalam Krishnan Nair was a notable figure in which of the following classical dance forms of India?

(a) Kathakali
(b) Kuchipudi
(c) Bharatanatyam
(d) Mohiniyattam

Q60. Who was the Registrar General and Census Commissioner of India for the 2011 Indian Census?

(a) Vivek Joshi
(b) Devender Kumar Sikri
(c) Jayant Kumar Banthia
(d) Dr. C Chandramouli

Q61. Helium gas can be converted to the liquid form by the _____.

(a) hydrogen bonding interaction
(b) London forces of attraction
(c) dipole-induced dipole forces of attraction
(d) dipole-dipole forces of attraction

Q62. The sister of Harshavardhana Rajyashri was married to_____, the king of Maukhari dynasty of Kanyakubja.

(a) Grahavarman
(b) Devagupta
(c) Sasanka
(d) Isanavarman

Q63. Pandit Arvind Thatte belongs to which of the following gharanas?

(a) Indore gharana
(b) Mewati gharana
(c) Agra gharana
(d) Benaras gharana

Q64. In the inaugural year of the Nehru Cup event for football in 1982, which team emerged as the winner of the first edition?

(a) Poland
(b) Ghana
(c) Uruguay
(d) Australia

Q65. Who among the following is the ex-officio Chairperson of the Rajya Sabha as on 10 October 2023?

(a) Virendra Kumar
(b) Piyush Goyal
(c) Prakash Javadekar
(d) Jagdeep Dhankar

YourMockTest.com — Free Study Material

Q66. Select the most appropriate meaning of the underlined idiom.

He gnashed his teeth at his son's actions.

(a) expressed disappointment
(b) expressed rage
(c) expressed sadness
(d) expressed joy

Q67. Select the option that rectifies the spelling of the underlined word in the given sentence.

The concert was canceeled due to rain.

(a) Cancealed
(b) Cancaeled
(c) Cancelled
(d) Cencelled

Q68. Select the most appropriate meaning of the given idiom.

Run errands

(a) To go out to buy or do something
(b) To participate in a race through unfair means
(c) To finish running before the end point
(d) To do something incorrectly or erroneous in haste

Q69. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

He cheated in the [A] / examination, making his [B] / already-falling academic [C] / credentials worst. [D]

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

Q70. Select the most appropriate ANTONYM of the given word.

Conscious

(a) Secure
(b) Unaware
(c) Sensible
(d) Sentimental

Q71. Select the most appropriate option to fill in the blanks.

Our ___ conducted a ___ to get everyone's opinion.

(a) principle; poll
(b) principal; poll
(c) principle; pole
(d) principal; pole

Q72. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

He is waiting / at airport to receive / Mr. Smith, who is / coming from South Africa.

(a) He is waiting
(b) Mr. Smith, who is
(c) coming from South Africa.
(d) at airport to receive

Q73. Select the most appropriate degree of comparison to fill in the blank.

Many ornithologists believe that the northern mocking birds are _____ wild birds in the jungle.

(a) the noisy
(b) noisy
(c) the noisiest

YourMockTest.com — Free Study Material

(d) noisier

Q74. Select the most appropriate synonym of the word given in brackets to fill in the blank.

The rivals in the institution _____ (fabricated) evidence and manipulated the whole dataset.

(a) destroyed
(b) forged
(c) fluctuated
(d) wrecked

Q75. The following sentence has been split into four segments. Identify the segment that contains an error in phrasal verb.

Tina dropped behind of / college and / went straight / into a good job.

(a) college and
(b) went straight
(c) Tina dropped behind of
(d) into a good job

Q76. Select the INCORRECTLY spelt word.

(a) Spouse
(b) Intransigence
(c) Endengered
(d) Unambiguous

Q77. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

My friend, / Priya, looks more cheerful today / as she celebrates her birthday.

(a) No error
(b) Priya looks more cheerful today
(c) My friend,
(d) as she celebrates her birthday

Q78. Select the option that will improve the underlined part of the given sentence.

Arun asks Smita to copy the contents of the document word by word.

(a) word for word
(b) word par word
(c) word with word
(d) word to word

Q79. In the following sentence the underlined part contains an error. Alternatives to the underlined part are given as options. Select the correct alternative.

The new almirah is big than this one.

(a) bigger
(b) more big
(c) biggest
(d) more bigger

Q80. Identify the ODD word from the given options.

(a) Golf
(b) Billiards
(c) Table tennis
(d) Carrom

Q81. Select the most appropriate ANTONYM to substitute the underlined word in the given sentence.

In what ways do you find technological advancements beneficial to your daily life?

(a) unfavourable
(b) unfathomable

YourMockTest.com — Free Study Material

(c) unapproachable
(d) unwarranted

Q82. Select the correctly spelt word to fill in the blank.

We are entering a point where technology will change at _____ speeds.

(a) extreme
(b) inferier
(c) suprime
(d) modarate

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

Leisure activities can improve an individual's physical and mental health by _____ stress, and offering a pleasurable experience.

(a) reconstructing
(b) irritating
(c) relieving
(d) upsetting

Q84. Select the most appropriate ANTONYM of the given word.

Entice

(a) Allure
(b) Repulse
(c) Invite
(d) Tangle

Q85. Select the most appropriate option to fill in the blank

School classrooms have _____ very little over the last century.

(a) changed
(b) freed
(c) startled
(d) unconcerned

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.

Dolphins 1_____ regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2_____ about dolphins, the more we realise that their society is more complex 3_____ people previously imagined. They look 4_____ other dolphins when they are ill, care for pregnant 5_____ and protect the weakest in the community, as we do.

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

(a) has
(b) was
(c) are
(d) is

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

(a) learns
(b) learning
(c) learned
(d) learn

YourMockTest.com — Free Study Material

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

(a) for
(b) the
(c) than
(d) to

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

(a) up
(b) on
(c) after
(d) into

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

(a) mothers
(b) brothers
(c) fathers
(d) uncles

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) 13,500

Shortcut Trick
The valid votes are distributed among the three candidates in the ratio 8 : 7 : 5.
Total ratio parts = 8 + 7 + 5 = 20 parts.
The second candidate's share is 7 parts, which is given as 4725 votes.
Value of 1 part = 4725 ÷ 7 = 675 votes.
Total valid votes = 20 parts × 675 = 13500.
Therefore The correct answer is 13,500.
Alternate Method
Given:
Ratio of votes received by the three contestants = 8 : 7 : 5
Votes received by the second candidate = 4725
10% of total votes were declared invalid (Note: This is extraneous data since we only need the total valid votes).
8 Parts
Candidate 1
7 Parts
Candidate 2
4725 Votes

5 Parts

Candidate 3

Total Valid Votes = 20 Parts

Calculations:

Let the number of valid votes obtained by the three candidates be 8x, 7x, and 5x respectively.

=> Votes of the second candidate = 7x

=> 7x = 4725

=> x = 4725 ÷ 7

=> x = 675

The total number of valid votes is the sum of votes received by all candidates.

=> Total valid votes = 8x + 7x + 5x

=> Total valid votes = 20x

=> Total valid votes = 20 × 675

=> Total valid votes = 13500

Therefore The correct answer is 13,500.

Additional Information

Ratio Distribution

When a quantity is divided into a ratio a : b : c, the total quantity corresponds to the sum of the ratio parts (a + b + c).

Valid vs Invalid Votes

Total votes cast = Valid votes + Invalid votes. Invalid votes are removed from the pool before calculating the individual shares of candidates.

Extraneous Information

Examiners often include extra data (like the 10% invalid votes in this problem) that is not required to find the final value, testing the candidate's ability to extract only relevant data.

Q2. Answer: (d) 30

Given:

Speeds of travel = 3 km/hr, 4 km/hr, and 8 km/hr.

Total time taken = 425 minutes.

Formula Used:

Time = Distance / Speed

Total Distance = Sum of individual distances

Calculation:

Let each distance travelled be d km.

Time taken at 3 km/hr = d / 3 hours

Time taken at 4 km/hr = d / 4 hours

Time taken at 8 km/hr = d / 8 hours

Total time = (d / 3) + (d / 4) + (d / 8)

Total time = 425 minutes = 425 / 60 hours = 85/12

=> (d / 3) + (d / 4) + (d / 8) = 85/12

(8d / 24) + (6d / 24) + (3d / 24) = 85/12

(8d + 6d + 3d) / 24 = 85/12

17d / 24 = 85/12

d = (85 × 24)/(17 × 12)

d = 10.

Total Distance = 3d = 3 × 10

Total Distance = 30 km

The total distance travelled is 30 km.

Q3. Answer: (d) 720

Given:

Principal (P) = Rs. 3000

Rate of Interest (R) = 6% per year

Time (T) = 4 years
Formula Used:
Simple Interest (SI) = (P × R × T) / 100
Calculation:
SI = (Rs. 3000 × 6 × 4) / 100
=> SI = (72000) / 100
=> SI = Rs. 720
The simple interest is Rs. 720.

Q4. Answer: (a) 71/7%

Given:
Cost Price (CP) = Rs. 2,500
Repair Cost = Rs. 300
Selling Price (SP) = Rs. 3,000
Formula Used:
Profit Percentage = Profit/CP × 100
Calculation:
Profit = SP - (CP + Repair Cost)
Profit = Rs. 3,000 - (Rs. 2,500 + Rs. 300) = Rs. 200
Profit Percentage = 200/2800 × 100
Profit Percentage = 71/7 %
The correct answer is option 1.

Q5. Answer: (c) 1350

Given:
Principal (P) = Rs. 2500
Rate of interest (R) = 9% per year
Time (T) = 6 years
Formula Used:
Simple Interest (SI) = (P × R × T) / 100
Calculation:
SI = (2500 × 9 × 6) / 100
SI = 135000 / 100
=> SI = 1350
The simple interest on Rs. 2500 at 9% per year for 6 years is Rs. 1350.

Q6. Answer: (b) 1372

Given:
Hemispherical bowl circumference = 264 cm.
Diameter of hemispherical glasses = 6 cm.
Formula Used:
Circumference of a circle: $C = 2\pi r$
Volume of a hemisphere: $V = (2/3)\pi r^3$
Calculation:
Circumference = 264 cm
From the formula, $2\pi r = 264$
$r = 264 / (2 \times (22/7)) = 42$ cm
Radius of the bowl = 42 cm
Volume of the bowl = $(2/3) \times (22/7) \times (42)^3$
Volume of the bowl = $(2/3) \times (22/7) \times 74088 = 155232$ cm³
Since the bowl is half-full, the volume of the beverage:
Volume of beverage = 155232 / 2 = 77616 cm³
Radius of the glass = 3 cm

YourMockTest.com — Free Study Material

Volume of one glass = (2/3) × (22/7) × $(3)^3$

Volume of one glass = (2/3) × (22/7) × 27 = 396/7 cm^3

Number of glasses = 77616 / (396/7) = 77616 × 7/396

Number of glasses = 1372

Therefore The correct answer is option (2).

Q7. Answer: (c) 12

Given:

The numbers are 84 and 108.

Calculation:

Prime factorization of 84:

84 = $2^2 \times 3^1 \times 7^1$

Prime factorization of 108:

108 = $2^2 \times 3^3$

Common prime factors = 2^2 and 3^1

HCF = $2^2 \times 3^1$

=> HCF = 4 × 3

=> HCF = 12

The highest common factor of 84 and 108 is 12.

Q8. Answer: (a) 16 : 17

Given:

Actual and target revenue (in crores) of an industry in five different branches.

Solution:

Sum of all the actual revenue over all the branches is = 20 + 25 + 30 + 45 + 40 = 160

Sum of all the actual target over all the branches is = 15 + 30 + 30 + 35 + 60 = 170

Now, the ratio of actual revenue to the target revenue over all the branches = 160/170 = 16/17.

Q9. Answer: (c) 224 cm^2

Shortcut Trick

Radius (r) = 14 cm. Area of Circle = 22/7 × 14 × 14 = 616 cm^2.

For a square inscribed in a circle, the diagonal = diameter = 28 cm.

Area of Square = 1/2 × $(diagonal)^2$ = 1/2 × 28 × 28 = 392 cm^2.

Remaining Area = 616 − 392 = 224 cm^2.

Therefore The correct answer is 224 cm^2.

Alternate Method

Given:

Radius (r) of the circle = 14 cm

Formula Used:

1. Area of Circle = π r^2

2. Area of Square = $(d^2)/2$ (where d is the diagonal)

Calculations:

=> Area of the circle = 22/7 × 14 × 14

=> Area of the circle = 22 × 2 × 14 = 616 cm^2

=> For the maximum square inscribed in a circle, Diagonal (d) = Diameter = 2 × 14 = 28 cm

=> Area of the square = (28 × 28)/2 = 14 × 28 = 392 cm^2

=> Remaining Area = Area of Circle − Area of Square

=> Remaining Area = 616 − 392 = 224 cm^2

Therefore The correct answer is 224 cm^2.

Additional Information

Inscribed Square Property

When a square is inscribed in a circle, its diagonal is equal to the diameter of the circle (d = 2r). The side of the square (a) = √2 × r.

YourMockTest.com — Free Study Material

Circumscribed Square Property

When a circle is inscribed in a square, the side of the square is equal to the diameter of the circle (a = 2r).

Area Ratio

The ratio of the area of a circle to the area of the maximum inscribed square is always π : 2.

Q10. Answer: (b) 1 : 4

Calculation :

Let assume that cost price of 1 litre of milk is Rs 100

To gain a profit of 25% mixture was sold of Rs 125

Now the quantity of mixture is = 125 / 100 = 5 / 4 litre

Because Quantity of milk = 1 litre

Therefore Quantity of water = (5 / 4) - 1

=> 1 / 4 litre

Reuired ratio of water and milk :- 1/4 : 1

=> 1 : 4

Therefore The correct answer is 1 : 4.

Q11. Answer: (c) 103 : 106

Given:

The cash difference between the selling prices of an article at a profit of 3% and 6% is Rs. 9.

Calculation:

Let the cost price (CP) of the article be Rs. 100.

Selling price at a 3% profit = 100 × (103/100) = Rs. 103

Selling price at a 6% profit = 100 × (106/100) = Rs. 106

The difference between the selling prices is given as Rs. 9:

106 - 103 = 9

Ratio of SP of first article to second article = 103 : 106

To simplify this ratio, divide both numbers by their greatest common divisor (GCD), which is 1:

Ratio = 103 : 106

Therefore The ratio of the two selling prices is 103:106.

Q12. Answer: (a) 3 : 8

Given:

Vessel A contains spirit and water in the ratio 3:4.

Vessel B contains spirit and water in the ratio 5:3.

We need to find the ratio in which these two mixtures be mixed to obtain a new mixture in vessel C containing spirit and water in the ratio 4:3.

Calculation:

Let the quantity of the mixture from vessel A be x and from vessel B be y.

Spirit in vessel A = 3/(3+4) = 3/7

Water in vessel A = 4/7

Spirit in vessel B = 5/(5+3) = 5/8

Water in vessel B = 3/8

Spirit in vessel C = 4/(4+3) = 4/7

Water in vessel C = 3/7

Using the rule of allegation:

Ratio = ((5/8 - 4/7))/((4/7 - 3/7))

Numerator: 5/8 - 4/7 = (35 - 32)/56 = 3/56

Denominator: 4/7 - 3/7 = 1/7

Ratio = (3/56)/(1/7) = 3/56 × 7/1 = (3 × 7)/56 = 21/56 = 3/8

The ratio in which the two mixtures should be mixed is 3:8.

YourMockTest.com — Free Study Material

Q13. Answer: (b) 64 years

Given:

The average age of 12 men is increased by 6 years when three of them, whose ages are 36, 40, and 44 years, are replaced by 3 persons.

Formula Used:

Increase in total age = Increase in average age × Number of men

Calculation:

Initial total age of 12 men = Sum of their average ages = 12 × initial average age

New total age of 12 men = Sum of new average ages = 12 × (initial average age + 6)

Increase in total age = New total age - Initial total age

Increase in total age = 12 × (initial average age + 6) - 12 × initial average age

Increase in total age = 12 × 6 = 72

Let the sum of ages of the three new persons be x.

Sum of ages of three replaced persons = 36 + 40 + 44

Sum of ages of three replaced persons = 120

Increase in total age = x - 120

=> x - 120 = 72

=> x = 192

Average age of the three new persons = x / 3 = 192 / 3 = 64 years

The average age of the 3 persons is 64 years.

Q14. Answer: (d) 56.52

Given:

Volume and surface area of a sphere are numerically the same.

Formula Used:

Volume of a sphere = $4/3\pi r^3$

Surface area of a sphere = $4\pi r^2$

Calculation:

Given that the volume and surface area of the sphere are the same:

$4/3\pi r^3 = 4\pi r^2$

=> r = 3

Now, we need to find the volume of the semi-sphere:

Volume of the semi-sphere = $1/2 \times 4/3\pi r^3$

=> $1/2 \times 4/3 \times 3.14 \times 3^3$

=> $1/2 \times 4/3 \times 3.14 \times 27$

=> $1/2 \times (4 \times 3.14 \times 27)/3$

=> $1/2 \times 113.04$

=> 56.52

The volume of the semi-sphere is 56.52 cm^3.

Q15. Answer: (d) 3.6

Given:

Speed of the boat in still water = 15 km/h.

Speed of the current = 3 km/h.

Time = 12 minutes = 12/60 hours = 1/5 hours.

Formula Used:

Distance = Speed x Time

Calculation:

Speed downstream = Speed of the boat in still water + Speed of the current

Speed downstream = 15 km/h + 3 km/h

Speed downstream = 18 km/h

Distance = Speed downstream x Time

Distance = 18 km/h x 1/5 h
Distance = 18 x 1/5
Distance = 18/5
Distance = 3.6 km
The distance covered going downstream in 12 minutes is 3.6 km.

Q16. Answer: (d) Company A, in 2011

Calculation:
From the table, we can summarize:
In 2007, Company B manufactured the most with 650 thousand.
In 2008, Company C manufactured the most with 950 thousand.
In 2009, Company C manufactured the most with 1150 thousand.
In 2010, Company B manufactured the most with 1700 thousand.
In 2011, Company A manufactured the most with 2532 thousand.
Company A manufactured the most mobile phones, with 2532 thousand units, in the year 2011
Therefore The correct answer is option 4.

Q17. Answer: (b) Rs. 2,56,675

Shortcut Trick
Ratio of Selling Prices based on percentage: SP1 (75%) : SP2 (125%) = 3 : 5.
Value of 3 units = Rs. 1,54,005.
Value of 1 unit = 1,54,005 ÷ 3 = Rs. 51,335.
Required SP2 (5 units) = 51,335 × 5 = Rs. 2,56,675.
Therefore The correct answer is Rs. 2,56,675.
Alternate Method
Given:
Total Selling Price (SP1) = Rs. 1,54,005
Loss percentage = 25%
Desired Profit percentage = 25%
Formula Used:
Cost Price (CP) = [SP × 100] ÷ [100 − Loss%]
New Selling Price = [CP × (100 + Profit%)] ÷ 100
Calculations:
=> CP = [1,54,005 × 100] ÷ [100 − 25]
=> CP = [1,54,005 × 100] ÷ 75
=> CP = 1,54,005 × (4 ÷ 3)
=> CP = 51,335 × 4 = Rs. 2,05,340
=> New SP = [2,05,340 × (100 + 25)] ÷ 100
=> New SP = [2,05,340 × 125] ÷ 100
=> New SP = 2,05,340 × (5 ÷ 4)
=> New SP = 51,335 × 5 = Rs. 2,56,675
Therefore The correct answer is Rs. 2,56,675.
Additional Information
Cost Price relation with SP
When SP and Profit/Loss% are given, CP = (SP × 100) ÷ (100 ± P/L%). Use plus for profit and minus for loss.
Direct SP Transformation
To find new SP from old SP directly: New SP = Old SP × (100 + New Gain%) ÷ (100 − Old Loss%).
Profit/Loss as Fraction
25% loss means SP is 3/4 of CP. 25% profit means SP is 5/4 of CP. Ratio = 3/4 : 5/4 = 3 : 5.

Q18. Answer: (c) 480

Given:
Total sum lent = Rs. 2380

Interest rate for first part = 25% p.a.
Interest rate for second part = 20% p.a.
Total annual income = Rs. 500
Formula Used:
Let the sum lent at 25% be x.
Then, sum lent at 20% = (2380 - x).
Total income = Income from first part + Income from second part
Income from first part = x × 25 / 100
Income from second part = (2380 - x) × 20 / 100
Calculation:
x × 25 / 100 + (2380 - x) × 20 / 100 = 500
=> 25x / 100 + 20(2380 - x) / 100 = 500
=> 25x + 20 × 2380 - 20x = 500 × 100
=> 25x + 47600 - 20x = 50000
=> 5x + 47600 = 50000
=> x = 2400 / 5 = 480
The money lent at 25% rate is Rs. 480.

Q19. Answer: (b) 45 years

Shortcut Trick
Simplify ratio of the number of people: Women : Men = 32 : 40 = 4 : 5.
Weighted average = [(Ratio1 × Avg1) + (Ratio2 × Avg2)] ÷ (Ratio1 + Ratio2)
Average age = (4 × 60 + 5 × 33) ÷ (4 + 5)
Average age = (240 + 165) ÷ 9 = 405 ÷ 9 = 45 years.
Therefore The correct answer is 45 years.
Alternate Method
Given:
Number of women (n1) = 32 | Average age (A1) = 60 years
Number of men (n2) = 40 | Average age (A2) = 33 years
Formula:
Combined Average = (n1A1 + n2A2) ÷ (n1 + n2)
32 Women: 60 yrs
40 Men: 33 yrs
Mixed Average = 45 years
Calculations:
=> Total age of women = 32 × 60 = 1920 years
=> Total age of men = 40 × 33 = 1320 years
=> Total age of combined group = 1920 + 1320 = 3240 years
=> Total number of people = 32 + 40 = 72
=> Mixed Average = 3240 ÷ 72
=> Mixed Average = 45 years
Therefore The correct answer is 45 years.
Additional Information
Weighted Average Concept
When two groups with different averages are mixed, the resulting average depends on the relative number of elements in each group. Ratio of quantities can be used instead of actual values.
Deviation Method
Assume a temporary average (A). Net Deviation = ∑(n_i × (A_i − A)). Correct Average = A + (Net Deviation ÷ Total n).
Alligation Rule
(Quantity 1 ÷ Quantity 2) = (Higher Average − Mixed Average) ÷ (Mixed Average − Lower Average).

YourMockTest.com — Free Study Material

Q20. Answer: (c) Rs. 3,840

Shortcut Trick

Successive discount multiplying factor = (1 − 0.15) × (1 − 0.10) = 0.85 × 0.9 = 0.765

Buying price before transport = 18000 × 0.765 = Rs. 13,770

Total CP = 13770 + 830 (Transportation) = Rs. 14,600

Profit = SP − Total CP = 18440 − 14600 = Rs. 3,840

Therefore The correct answer is Rs. 3,840.

Alternate Method

Given:

Marked Price (MP) = Rs. 18,000

Successive discounts = 15% and 10%

Transportation cost = Rs. 830

Selling Price (SP) = Rs. 18,440

Formula Used:

Selling price after successive discounts = MP × (1 − D1/100) × (1 − D2/100)

Total CP = Buying Price + Overhead expenses

Profit = SP − Total CP

Calculations:

=> Price of the bed after discounts = 18000 × (1 − 15/100) × (1 − 10/100)

=> Price = 18000 × (85/100) × (90/100)

=> Price = 18000 × 0.85 × 0.9 = Rs. 13,770

=> Total CP for Aman = 13770 + 830 = Rs. 14,600

=> Profit earned = SP − Total CP

=> Profit = 18440 − 14600 = Rs. 3,840

Therefore The correct answer is Rs. 3,840.

Additional Information

Successive Discounts

When two discounts D1% and D2% are given consecutively, the effective equivalent discount is given by (D1 + D2 − D1×D2/100)%.

Overhead Expenses

Any additional money spent on transportation, repairs, or maintenance is always added to the base buying price to determine the actual total Cost Price (CP).

Profit and Loss Baseline

Both Profit and Loss percentages are always calculated on the total Cost Price unless specifically mentioned otherwise in the question context.

Q21. Answer: (d) Only conclusion I follows.

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

Conclusions:

(I) All planets are lakes → Follow (As all planets are rocks and all rocks are lakes. As whole planets comes in rocks which whole comes in lakes, therefore it is true.)

(II) All rocks are planets → Does not follow (As all planets are rocks and all rocks are lakes. So it is possible but not definite.)

Therefore Here, Only conclusion I follows.

Hence, the correct answer is "Option 4".

Q22. Answer: (b) Triveni

Given: Seven friends, Kamala, Raveena, Amruta, Nisha, Gautami, Bhavana and Triveni, are sitting in a circular dining table facing the centre.

1) Raveena is sitting second to the right of Nisha.

2) Triveni is sitting third to the left of Nisha.

3) Gautami has Kamala and Triveni as immediate neighbours.

4) Amruta is not an immediate neighbour of Nisha.

After positioning Amruta only one position is left which will be occupied by the only person left i.e. Bhavana

Thus, according to the final arrangement, Triveni is seated fourth to the left of Bhavana.
Hence, "Option 2" is the correct answer.

Q23. Answer: (d) P

Given: N, M, O, P, Q and R are sitting around a circular table facing the centre.
1) N sits to the immediate right of R.
2) M sits second to the right of N.
3) P sits second to the right of M.
4) O sits third to the right of P.
After positioning O only one position is left which will be occupied by the only person left i.e. Q.
Thus, according to the final arrangement, P sits to the immediate right of Q.
Hence, "Option 4" is the correct answer.

Q24. Answer: (d) 81

The Logic followed here is:
Hence, "Option 4" is the correct answer.

Q25. Answer: (d) 12

Given: 15 ÷ 5 + 8 − 4 × 7 = ?
According to the question, after '+' and '×' are interchanged and '÷' and '−' are interchanged:
15 ÷ 5 + 8 − 4 × 7 = ? => 15 - 5 × 8 ÷ 4 + 7 = ?
=> 15 - 5 × 8 ÷ 4 + 7 = ?
=> 15 - 5 × 2 + 7 = ?
=> 15 + 7 - 10 = ?
=> 22 - 10 = ?
=> 12 = ?
Hence, "Option 4" is the correct answer.

Q26. 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".

Q27. Answer: (d) 33, 100

The Logic followed here is:
Given:
24, 73
24 × 3 + 1 = 73
72 + 1 = 73
73 = 73 (LHS = RHS)
And,
27, 82
27 × 3 + 1 = 83
81 + 1 = 83
83 = 83 (LHS = RHS)
So, checking each option one by one:
Option 1) 32, 101
32 × 3 + 1 = 101
96 + 1 = 101
97 ≠ 101 (LHS ≠ RHS)
Option 2) 32, 100
32 × 3 + 1 = 100
96 + 1 = 100
97 ≠ 100 (LHS ≠ RHS)

YourMockTest.com — Free Study Material

Option 3) 33, 101
33 × 3 + 1 = 101
99 + 1 = 101
100 ≠ 101 (LHS ≠ RHS)
Option 4) 33, 100
33 × 3 + 1 = 100
99 + 1 = 100
100 = 100 (LHS = RHS)
Thus, out of all the options, '33, 100' follows the same logic as given.
Hence, "Option 4" is the correct answer.

Q28. Answer: (a) [figure]

The figure which when put in place of '?' will logically complete the pattern is shown below:
Thus, option Figure 1 will logically complete the pattern given.
Hence, "Option 1" is the correct answer.

Q29. Answer: (c) 7

Given: 8 + 2 − 1 × 1 ÷ 1 = ?
According to the question, after '+' and '-' are interchanged and '×' and '÷' are interchanged:
8 + 2 − 1 × 1 ÷ 1 = ? => 8 - 2 + 1 ÷ 1 × 1 = ?
=> 8 - 2 + 1 ÷ 1 × 1 = ?
=> 8 - 2 + 1 × 1 = ?
=> 8 + 1 - 2 = ?
=> 9 - 2 = ?
=> 7 = ?
Hence, "Option 3" is the correct answer.

Q30. Answer: (c) KWV

The logic followed here is:
Hence, "Option 3" is the correct answer.

Q31. Answer: (a) 9

The logic followed here is:
'MOVE' is coded as '3917'
'EAST' is coded as '4692'
Thus, code for 'E' is '9'.
Hence, "Option 1" is the correct answer.

Q32. Answer: (d) [figure]

The logic followed here is:
1) The whole element is rotated 90º anticlockwise.
2) The number of square element is decreasing subsequently.
3) The smallest triangle element is alternately shaded.
Thus, final series is:
Hence, "Option 4" is the correct answer.

Q33. Answer: (c) IEKG

The logic followed here is:
PLRN is related to QMSO
And,
LHNJ is related to MIOK
Similarly,
HDJF is related to
Hence, "Option 3" is the correct answer.

Q34. Answer: (d) ey

According to the given information,

Thus, according to the given codes the code 'ey' is for the word 'tea'.

Hence, the correct answer is "Option 4".

Q35. Answer: (c) 1

The logic followed here is:

'FLOAT' is coded as '14238'

'EAST' is coded as '4692'

Thus, code for 'F' is '1'.

Hence, "Option 3" is the correct answer.

Q36. Answer: (a) [figure]

The logic followed here is:

1) One triangle element from the right end is rotated 90º clockwise subsequently.

2) The number of circle element shaded is increasing subsequently.

Thus, final series is:

Hence, "Option 1" is the correct answer.

Q37. Answer: (d) 4

The logic followed here is:

'GIFT' is coded as '5197'

'FIST' is coded as '4157'

Thus, code for 'S' is '4'.

Hence, "Option 4" is the correct answer.

Q38. Answer: (d) Only conclusion (I) follows.

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

Conclusions:

(I) Atleast some kites are stones → Follow (As some kites are rocks and all rocks are stones. As whole rocks comes in stones and has some part common with stones, therefore it is true.)

(II) All stones are rocks → Does not follow (As all rocks are stones. So it is possible but not definite.)

Therefore Here, Only conclusion (I) follows.

Hence, the correct answer is "Option 4".

Q39. Answer: (d) 747

The Logic followed here is:

519 is related to 781

519 + 262 = 781

781 = 781 (LHS = RHS)

And,

642 is related to 904

642 + 262 = 904

904 = 904 (LHS = RHS)

Similarly,

485 is related to

485 + 262 = ?

747 = ?

Hence, "Option 4" is the correct answer.

Q40. Answer: (d) FI85

The logic followed here is:

FI29 is related to TW49

And,

LO38 is related to ZC58

Similarly,

RU65 is related to

Hence, "Option 4" is the correct answer.

Q41. Answer: (a) Rajasthan

The correct answer is Rajasthan.

Key Points

• The Indira Gandhi Canal, previously known as the Rajasthan Canal, is one of the largest canal projects in India.

• It primarily benefits the state of Rajasthan, especially the north-western part of the state.

• The canal provides irrigation facilities to the arid and semi-arid regions of Rajasthan, transforming the desert areas into fertile lands.

• The project has significantly contributed to the agricultural development and economic upliftment of the region.

• The canal also supplies drinking water to several districts in Rajasthan, enhancing the quality of life for the local population.

Additional Information

• Indira Gandhi Canal Project

• It is the longest canal in India, with a total length of approximately 650 kilometers.

• The project was initiated in 1958 and completed in the 1980s, named after the former Prime Minister of India, Indira Gandhi.

• The main source of water for the canal is the Sutlej and Beas rivers, and it is a part of the larger Bhakra-Nangal Project.

• The canal traverses through the Thar Desert, one of the most arid regions in India.

• Impact on Agriculture

• The canal has facilitated the cultivation of crops like wheat, mustard, cotton, and groundnut in regions that were previously desert.

• It has led to the introduction of modern irrigation techniques and increased the use of fertilizers and improved seeds, boosting agricultural productivity.

• Drinking Water Supply

• Besides irrigation, the canal also plays a crucial role in providing drinking water to cities like Bikaner, Jaisalmer, and Barmer.

• This has helped in alleviating water scarcity issues in these regions, especially during summer months.

• Environmental and Social Impact

• The project has led to the creation of green belts and afforestation in the canal's command area.

• It has also led to socio-economic changes by providing employment opportunities and improving living standards in rural Rajasthan.

Q42. Answer: (c) Nagar

The correct answer is Nagar.

Key Points

• Nagar is the style of temple architecture that is predominantly found in northern India.

• This architectural style is characterized by its curvilinear towers known as Shikhara.

• Nagar temples typically have a square sanctum (Garbha Griha) with a central tower.

• Examples of Nagar architecture include the Kandariya Mahadeva Temple in Khajuraho and the Sun Temple in Modhera.

Additional Information

• Vihar

• Vihar refers to Buddhist monastic dwellings, not to temple architecture.

• These structures were used as residences for monks and places for meditation and learning.

• Mandapa

• Mandapa is a pillared hall or pavilion in Indian architecture, often used as an entrance to a temple.

• It is not a style of temple architecture but an integral part of temple design.

• Dravid

• Dravid or Dravidian architecture is the style of temple architecture that is predominantly found in southern India.

• It is characterized by pyramid-shaped towers and intricate carvings.

• Examples include the Meenakshi Temple in Madurai and the Brihadeeswarar Temple in Thanjavur.

• Temple Architecture in India

• Indian temple architecture is classified into three main styles: Nagara (North Indian), Dravidian (South Indian), and Vesara (a mix

of both).

• Each style has its distinct features and cultural significance.

Q43. Answer: (d) Lal Krishna Advani

The correct answer is Lal Krishna Advani.

Key Points

• Lal Krishna Advani, often referred to as L.K. Advani, is a prominent Indian politician and one of the founding members of the Bharatiya Janata Party (BJP).

• He served as the Deputy Prime Minister of India from 2002 to 2004 under Prime Minister Atal Bihari Vajpayee.

• My Country My Life is his autobiography, published in 2008, detailing his political journey and experiences over several decades.

• The book provides an insight into the political landscape of India, especially focusing on the rise of the BJP and its major political strategies and campaigns.

Additional Information

• Bharatiya Janata Party (BJP)

• The BJP is one of the two major political parties in India, the other being the Indian National Congress.

• Founded in 1980, the BJP follows the ideology of Hindutva and advocates for Hindu nationalism.

• The party has been in power at the central government multiple times, with significant leaders including Atal Bihari Vajpayee and Narendra Modi.

• Atal Bihari Vajpayee

• Atal Bihari Vajpayee was the 10th Prime Minister of India, serving three terms between 1996 and 2004.

• He was a senior leader of the BJP and played a crucial role in its growth and political strategies.

• Vajpayee is known for his efforts in economic reforms, nuclear tests, and improving India's international relations.

• Indian Political Landscape

• India follows a multi-party system, with numerous regional and national parties.

• The political landscape has been dominated by the Congress Party for several decades post-independence, with the BJP emerging as a significant force in the late 20th century.

• Coalition politics has become common in India, often requiring parties to form alliances to achieve a majority in the parliament.

• Autobiographies of Indian Politicians

• Autobiographies offer a personal glimpse into the lives and careers of politicians, providing context to their decisions and ideologies.

• Other notable political autobiographies include "The Accidental Prime Minister" by Sanjaya Baru and "My Experiments with Truth" by Mahatma Gandhi.

Q44. Answer: (a) Mahalwari

The correct answer is Mahalwari.

Key Points

• The Mahalwari system was a land revenue system implemented in British India.

• Under this system, the village headman, known as the 'lambardar,' was responsible for collecting revenue from the villagers.

• The revenue collected by the lambardar was then paid to the British East India Company.

• This system was introduced by Holt Mackenzie in 1822 and later modified by Lord William Bentinck in 1833.

• The Mahalwari system was primarily implemented in the North-Western Provinces, parts of Central India, and Punjab.

Additional Information

• Zamindari System

• Also known as the Permanent Settlement System, it was introduced by Lord Cornwallis in 1793.

• Under this system, zamindars were recognized as the landowners and were responsible for collecting and paying revenue to the Company.

• The zamindars were granted hereditary rights over the land and were supposed to pay a fixed amount of revenue annually.

• This system was primarily implemented in Bengal, Bihar, and Orissa.

• Ryotwari System

• This system was introduced by Thomas Munro in 1820.

• Under the Ryotwari system, the individual cultivator or ryot was recognized as the landowner.

• The ryots were directly responsible for paying the land revenue to the British government.

• This system was primarily implemented in Madras, Bombay, parts of Assam, and Coorg provinces.

• Iqtadari System
• The Iqtadari system was introduced during the Delhi Sultanate period.
• Under this system, the land was divided into Iqtas, and the responsibility of collecting revenue was given to the Iqtadars.
• The Iqtadars were responsible for maintaining law and order and providing military assistance to the Sultan.

Q45. Answer: (c) Mahatma Gandhi

The correct answer is Mahatma Gandhi.

Key Points

• The Gandhi-Irwin Pact was signed on March 5, 1931.
• The agreement was between Mahatma Gandhi and the then Viceroy of India, Lord Irwin.
• As part of the pact, the Indian National Congress agreed to participate in the Round Table Conference in London.
• In return, the British government agreed to release political prisoners who were not involved in violence and to allow peaceful picketing of liquor and foreign cloth shops.

Additional Information

• Salt March (Dandi March)
• A non-violent protest against the British salt monopoly in colonial India led by Mahatma Gandhi.
• The 24-day march began on March 12, 1930, and ended on April 6, 1930.
• It was a direct action campaign of tax resistance and nonviolent protest.
• The march is considered a pivotal event in the Indian independence movement.
• Round Table Conferences
• A series of three conferences organized by the British government to discuss constitutional reforms in India.
• The first conference was held in London from November 1930 to January 1931, the second from September to December 1931, and the third from November to December 1932.
• Mahatma Gandhi attended the second conference as the sole representative of the Indian National Congress.
• Irwin Declaration
• Also known as the "Delhi Declaration," it was issued by Lord Irwin on October 31, 1929.
• It promised a dominion status for India in an unspecified future.
• The declaration was a response to growing demands for self-governance in India.
• Simon Commission
• A group of seven British Members of Parliament sent to India in 1927 to study constitutional reform.
• The commission was met with widespread protests across India because it did not include any Indian members.
• The slogan "Simon Go Back" became popular during the protests.

Q46. Answer: (d) A meander

The correct answer is A meander.

Key Points

• A meander is a bend or curve in a river, typically occurring in the river's middle course.
• In the middle course, the river has more energy and volume, promoting lateral (sideways) erosion rather than vertical erosion.
• Meanders form due to the erosion of the river banks on the outer side of bends and deposition on the inner side.
• This process is driven by the helicoidal flow of the river, which causes the water to corkscrew down its channel, enhancing the erosion and deposition cycles.

Additional Information

• Waterfalls:
• Formed where rivers flow over hard rock followed by soft rock, leading to vertical erosion.
• Typically found in the upper course of the river.
• Delta:
• Formed at the river mouth where it meets a standing body of water like a sea or lake.
• Occurs due to deposition of sediment carried by the river as it loses energy upon entering the standing water.
• V-shaped valley:
• Characteristic of the upper course of a river.
• Formed by vertical erosion of the river cutting down into the bedrock.
• Floodplains:
• Flat areas adjacent to the river, formed by the deposition of sediment during floods.

YourMockTest.com — Free Study Material

• Common in the middle and lower courses of the river.

Q47. Answer: (a) Kamet

The correct answer is Kamet.

Key Points

• Kamet is the second highest mountain in the Garhwal region of Uttarakhand, India.
• It is a part of the Himalayas and specifically located in the Zanskar Range.
• Kamet stands at an elevation of 7,756 meters (25,446 feet).
• It is the third highest peak in India, outside of the Karakoram range.
• The peak was first summited in 1931 by Frank Smythe, Eric Shipton, and R.L. Holdsworth.

Additional Information

• Himalayas
• The Himalayas are a mountain range in Asia, separating the plains of the Indian subcontinent from the Tibetan Plateau.
• The range has some of the planet's highest peaks, including the very highest, Mount Everest in Nepal.
• The Himalayas span five countries: Bhutan, India, Nepal, China, and Pakistan.
• The name "Himalaya" means "abode of snow" in Sanskrit, reflecting the vast amounts of snow and ice that cover the range.
• Zanskar Range
• The Zanskar Range is a mountain range in the union territory of Ladakh that separates Zanskar from Ladakh.
• It is a sub-range of the Himalayas and stretches from the eastern part of Ladakh to the Himachal Pradesh border.
• The range has many high peaks, with Kamet being one of the most prominent.
• Mountaineering in India
• India offers a variety of mountaineering opportunities, with the Himalayas being a prime destination.
• The Indian Mountaineering Foundation (IMF) is the apex body for mountaineering and allied sports in India.
• Several high-altitude peaks in India are popular among climbers, including Nanda Devi, Kanchenjunga, and Kamet.
• Climatic Conditions
• The Himalayas play a crucial role in influencing the climate of the Indian subcontinent, particularly the monsoon.
• The high peaks block cold winds from Central Asia, keeping South Asia warmer in winter.
• The range also causes orographic precipitation, leading to diverse ecosystems and weather patterns across the region.

Q48. Answer: (c) Courage

The correct answer is Courage.

Key Points

• The Fundamental Duties are enshrined in Part IVA of the Indian Constitution under Article 51A.
• They were added by the 42nd Amendment Act of 1976, upon the recommendations of the Swaran Singh Committee.
• These duties emphasize the responsibilities of Indian citizens to contribute to the nation’s unity, integrity, and sovereignty.
• Key goals include preserving the rich heritage, promoting harmony, protecting the environment, and respecting the Constitution and national institutions.
• Unlike the options "Preserve," "Cherish," and "Respect," the term "Courage" is not explicitly mentioned as a Fundamental Duty.

Additional Information

• Fundamental Duties:
• There are 11 Fundamental Duties listed in Article 51A of the Indian Constitution.
• They are moral obligations intended to promote a sense of discipline and commitment among citizens.
• These duties are non-justiciable, meaning they cannot be enforced by courts for their violation.
• Examples of Fundamental Duties:
• To abide by the Constitution and respect its ideals and institutions, the National Flag, and the National Anthem.
• To cherish and follow the noble ideals that inspired the national struggle for freedom.
• To protect and improve the natural environment including forests, lakes, rivers, and wildlife.
• To develop the scientific temper, humanism, and the spirit of inquiry and reform.
• 42nd Amendment Act:
• Also known as the "Mini-Constitution" due to its wide-ranging impact.
• It brought about significant changes to the Constitution, including the addition of Fundamental Duties.
• It aimed to strengthen the power of the central government and ensure the unity and integrity of the nation.

YourMockTest.com — Free Study Material

• Swaran Singh Committee:
• Formed in 1976 to make recommendations on the amendment of the Constitution.
• Suggested the inclusion of Fundamental Duties in the Constitution.
• Its recommendations led to the 42nd Amendment Act which added Part IVA to the Constitution.

Q49. Answer: (b) India

The correct answer is India.

Key Points

• India won the Women's Asian Hockey Champions Trophy in 2023.
• The tournament took place in Ranchi, Jharkhand, India.
• India defeated Japan in the final to secure the title.
• This victory marked India's fourth title in the history of the Women's Asian Hockey Champions Trophy.
• The Indian team displayed outstanding performance throughout the tournament, led by their captain Savita Punia.

Additional Information

• Women's Asian Hockey Champions Trophy
• The Women's Asian Hockey Champions Trophy is an annual women's field hockey tournament for Asian teams, organized by the Asian Hockey Federation.
• The tournament features the top national teams from Asia competing for the title.
• It was first held in 2010 and has been a significant event in the women's field hockey calendar.
• The competition aims to promote and enhance the level of women's hockey in the Asian region.
• Indian Women's Hockey Team
• The Indian Women's Hockey Team has shown remarkable progress and consistency in recent years.
• The team is known for its strong defense, skillful midfield, and potent attack.
• Coached by Janneke Schopman, the team has achieved significant milestones on the international stage.
• Key players include Rani Rampal, Savita Punia, and Vandana Katariya.
• Hockey in India
• Hockey is a popular sport in India, with a rich history and tradition.
• India has won multiple Olympic medals in hockey, with the men's team being particularly successful historically.
• Efforts are being made to promote and develop women's hockey in the country.
• The Hockey India Federation governs the sport and organizes domestic and international competitions.

Q50. Answer: (c) Andhra Pradesh

The correct answer is Andhra Pradesh.

Key Points

• S Abdul Nazeer was appointed as the Governor of Andhra Pradesh on February 2023.
• His appointment came following the retirement of the previous Governor, Biswa Bhusan Harichandan, who was transferred to Chhattisgarh.
• Before his appointment as Governor, S Abdul Nazeer served as a judge in the Supreme Court of India.
• He has been involved in several landmark judgments, including the controversial Ayodhya case and the Triple Talaq case.

Additional Information

• Role of a Governor in India
• The Governor is the constitutional head of each state in India.
• Their duties are similar to those of the President of India but at the state level.
• They act on the advice of the Council of Ministers headed by the Chief Minister.
• Governors have the power to grant pardons, reprieves, and respites.
• Supreme Court of India
• It is the highest judicial forum and final court of appeal in India.
• It was established on January 28, 1950, two days after India became a republic.
• The Supreme Court consists of the Chief Justice of India and a sanctioned strength of 34 judges.
• Ayodhya Verdict
• Delivered on November 9, 2019, it resolved the long-standing dispute over the land in Ayodhya.
• The Supreme Court ruled in favor of building a Ram temple at the disputed site.
• The court also ordered the allocation of alternative land for the construction of a mosque.

• Triple Talaq Case
• A landmark judgment delivered on August 22, 2017.
• The Supreme Court declared the practice of instant triple talaq (talaq-e-biddat) as unconstitutional.
• The judgment led to the enactment of the Muslim Women (Protection of Rights on Marriage) Act, 2019.

Q51. Answer: (a) Vijay

The correct answer is Vijay.

Key Points

• Vijay, the Tamil superstar, founded the Tamilaga Vettri Kazhagam (TVK) political party.
• The political party was established on 2 February 2024.
• The party operates in the regions of Tamil Nadu and Puducherry.
• The slogan for the party is 'Pirappokkum Ellaa Uyirkkum' which translates to 'All are equal by birth'.

Additional Information

• Vijay is a highly influential figure in Tamil cinema, known for his extensive fan base and social influence.
• Political participation by actors in Tamil Nadu is a common phenomenon, with several film stars having successfully transitioned into politics.
• The slogan 'Pirappokkum Ellaa Uyirkkum' emphasizes equality and social justice, which are important themes in Tamil politics.
• Vijay's entry into politics follows the tradition of Tamil film stars like M.G. Ramachandran, Jayalalithaa, and Kamal Haasan, who have also pursued political careers.
• The establishment of TVK marks a significant development in Tamil Nadu's political landscape, potentially influencing future electoral outcomes and policies.

Q52. Answer: (a) rough endoplasmic reticulum

The correct answer is rough endoplasmic reticulum.

Key Points

• The rough endoplasmic reticulum (RER) is responsible for synthesizing digestive enzymes that are later transported to lysosomes.
• RER is characterized by the presence of ribosomes on its surface, which play a critical role in protein synthesis.
• Proteins synthesized in the RER are transported to the Golgi apparatus for further modification and sorting.
• Lysosomal enzymes are tagged with a specific marker, mannose-6-phosphate, in the Golgi apparatus before being directed to lysosomes.

Additional Information

• Endoplasmic Reticulum (ER)
• The ER is a network of membranous tubules and sacs that plays a key role in protein and lipid synthesis.
• There are two types of ER: rough ER, which is studded with ribosomes, and smooth ER, which lacks ribosomes.
• The smooth ER is involved in lipid synthesis and detoxification processes.
• Golgi Apparatus
• The Golgi apparatus modifies, sorts, and packages proteins and lipids for secretion or delivery to other organelles.
• It consists of a series of flattened membrane-bound sacs called cisternae.
• The Golgi apparatus is critical for processing lysosomal enzymes and ensuring they are delivered to lysosomes.
• Lysosomes
• Lysosomes are membrane-bound organelles containing hydrolytic enzymes that break down waste materials and cellular debris.
• They play a key role in intracellular digestion and recycling of cellular components.
• Lysosomes maintain an acidic environment optimal for enzyme activity.
• Ribosomes
• Ribosomes are molecular machines responsible for protein synthesis in the cell.
• They can be found free in the cytoplasm or attached to the rough ER.
• Ribosomes translate mRNA into polypeptide chains, which are then folded into functional proteins.

Q53. Answer: (a) Uday Shankar

The correct answer is Uday Shankar.

Key Points

• Uday Shankar was a pioneering Indian dancer and choreographer who is credited with creating a new fusion style of dance.
• He combined European theatrical techniques with traditional Indian classical dance forms, as well as Indian folk and tribal dance.

• Uday Shankar's innovative approach helped to modernize Indian dance and brought it to an international audience.
• He founded the Uday Shankar India Culture Centre in Almora in 1938 to train dancers in his unique style.
• His influence extended to the realms of film and music, where he collaborated with various artists to promote Indian culture globally.

Additional Information

• Fusion Dance
• A dance style that blends elements from different genres and traditions to create a new, hybrid form.
• It often involves the integration of classical, folk, and contemporary dance techniques.
• Classical Dance in India
• India has several classical dance forms, such as Bharatanatyam, Kathak, Odissi, and Kathakali.
• These dances are characterized by their complex movements, expressions, and storytelling through dance.
• Indian Folk Dance
• Folk dances in India are diverse and reflect the cultural traditions of various regions.
• They are often performed during festivals, weddings, and other community celebrations.
• European Theatrical Techniques
• These techniques include elements of staging, lighting, and choreography that are commonly used in Western theater productions.
• Incorporating these techniques can enhance the visual and dramatic appeal of dance performances.

Q54. Answer: (a) Carbon dioxide

The correct answer is Carbon dioxide.

Key Points

• Carbon dioxide (CO_2) is the primary gas responsible for the leavening effect in bread when yeast ferments sugars.
• Yeast, a microorganism, consumes the sugars present in the dough and produces carbon dioxide and alcohol as by-products.
• The carbon dioxide gas gets trapped within the dough, causing it to expand and rise, resulting in the soft and airy texture of bread.
• Besides carbon dioxide, the fermentation process also produces ethanol, but this evaporates during baking.

Additional Information

• Yeast Fermentation:
• Yeast fermentation is a metabolic process that converts sugar into acids, gases, or alcohol.
• Saccharomyces cerevisiae is the most commonly used yeast in bread making.
• Leavening Agents:
• Leavening agents are substances used in dough and batter to produce a foaming action, which lightens and softens the finished product.
• Besides yeast, other leavening agents include baking soda (sodium bicarbonate) and baking powder.
• Proofing:
• Proofing is the process of allowing dough to rise before baking.
• During proofing, yeast ferments the dough, producing carbon dioxide and causing the dough to expand.
• Gluten:
• Gluten is a protein found in wheat, barley, and rye that gives dough its elasticity.
• It helps trap carbon dioxide produced by yeast, aiding in the rising process.

Q55. Answer: (b) Marco Polo

The correct answer is Marco Polo.

Key Points

• Marco Polo was a Venetian merchant and explorer who traveled extensively in the 13th century.
• He is renowned for his travels through Asia, documented in his book "The Travels of Marco Polo", which provides a detailed account of his journeys.
• Marco Polo visited several regions including China, India, and Persia, and his travels brought him to the southern part of India, including Kerala.
• His observations and writings offered Europeans a glimpse into the cultures and practices of the East during the medieval period.
• Marco Polo's journey to Kerala is notable for his detailed descriptions of the local economy, culture, and the spice trade that the region was famous for.

Additional Information

• Nicolo Conti

• Nicolo Conti was an Italian merchant and explorer from Venice who traveled to India in the 15th century.

• His travel accounts provide valuable insights into the social and economic conditions of India during that time.

• He is known for his visit to the Vijayanagara Empire in South India.

• Abdur Razzaq

• Abdur Razzaq was a Persian scholar and diplomat who visited India in the 15th century.

• He served as an ambassador to the court of the Vijayanagara Empire.

• His writings offer a detailed account of the political and cultural landscape of medieval India.

• Barthema

• Ludovico di Varthema, also known as Barthema, was an Italian traveler and writer.

• He visited India in the early 16th century.

• His travel narratives provide insights into the trade and customs of the regions he visited, including Kerala.

• Spice Trade in Kerala

• Kerala, located on the southwestern coast of India, was historically known for its spice trade, particularly in pepper, cardamom, and cinnamon.

• The region attracted traders from various parts of the world, including Europe, the Middle East, and China.

• Ancient ports like Muziris (modern-day Kodungallur) played a crucial role in facilitating trade between Kerala and other civilizations.

Q56. Answer: (d) Percentage of deposits that a bank must keep as cash reserves with the central bank

The correct answer is Percentage of deposits that a bank must keep as cash reserves with the central bank.

Key Points

• The Cash Reserve Ratio (CRR) is a crucial monetary policy tool used by central banks to control liquidity and inflation.

• Banks are mandated to keep a certain percentage of their deposits as cash reserves with the central bank.

• CRR ensures that banks do not run out of cash to meet the withdrawal demands of their customers.

• Higher CRR reduces the money available for banks to lend, thus controlling inflation, while a lower CRR increases the lending capacity of banks.

Additional Information

• Statutory Liquidity Ratio (SLR)

• Banks are required to maintain a certain percentage of their net demand and time liabilities (NDTL) in the form of liquid assets like cash, gold, or government securities.

• SLR is used by central banks to regulate the credit growth in the economy.

• Monetary Policy

• Monetary policy refers to the actions undertaken by a nation's central bank to control money supply and achieve macroeconomic goals such as controlling inflation, consumption, growth, and liquidity.

• Central banks use tools like CRR, SLR, repo rate, and reverse repo rate to implement monetary policy.

• Repo Rate

• The rate at which the central bank of a country lends money to commercial banks in the event of any shortfall of funds.

• It is used by monetary authorities to control inflation.

• Reverse Repo Rate

• The rate at which the central bank borrows money from commercial banks within the country.

• It is a monetary policy instrument which can be used to control the money supply in the country.

Q57. Answer: (c) Jharkhand

The correct answer is Jharkhand.

Key Points

• Sarhul is an important festival for tribal communities, particularly the Munda, Oraon, and Ho tribes, primarily celebrated in Jharkhand.

• The festival marks the beginning of the New Year and the advent of the spring season.

• It involves worshipping trees and nature, signifying the harmony between humans and nature.

• Traditional rituals include the offering of flowers and leaves to the village deity, and the celebration involves singing, dancing, and feasting.

YourMockTest.com – Free Study Material

• Sarhul is observed on the third day of the moon or the fortnight of Chaitra, as per the Hindu calendar.

Additional Information

• Chhau Dance

• Chhau Dance is a traditional tribal dance form associated with the state of Jharkhand.

• It incorporates martial arts, mock combat, and folklore, often performed during festivals like Sarhul.

• The dance is known for its vigorous movements and elaborate masks.

• It is recognized as an intangible cultural heritage by UNESCO.

• Santhal Tribe

• The Santhal tribe is one of the largest tribal communities in Jharkhand.

• They are known for their rich cultural heritage, including music, dance, and traditional crafts.

• Their primary occupation is agriculture and they celebrate several nature-centric festivals.

• The Santhal rebellion of 1855-56 is a significant event in Indian history, showcasing their fight against British colonial rule.

• Jharkhand Cuisine

• The cuisine of Jharkhand is known for its simplicity and use of local ingredients.

• Popular dishes include Dhuska, Litti Chokha, and Rugra.

• Traditional meals often include rice, lentils, vegetables, and a variety of pickles.

• Festivals and celebrations feature special dishes prepared with seasonal and local produce.

• Geography of Jharkhand

• Jharkhand is located in eastern India, sharing borders with Bihar, West Bengal, Odisha, Chhattisgarh, and Uttar Pradesh.

• The state is known for its rich mineral resources, including coal, iron ore, copper, and mica.

• It has a diverse landscape with forests, hills, and rivers, contributing to its significant biodiversity.

• The state capital is Ranchi, which is a major center for education and industry.

Q58. Answer: (c) 943

The correct answer is 943.

Key Points

• According to Census 2011, the sex ratio of India is 943 females per 1000 males.

• The sex ratio is a key demographic indicator that reflects the number of females per 1000 males in a population.

• The sex ratio in India has shown an improvement from 933 in Census 2001 to 943 in Census 2011.

• The state of Kerala has the highest sex ratio of 1084, while Haryana has the lowest sex ratio of 879 as per Census 2011.

Additional Information

• Sex Ratio

• The sex ratio is a critical social indicator to measure the extent of gender equality in a society.

• It is influenced by various factors including birth rates, death rates, and migration patterns.

• Child Sex Ratio

• The child sex ratio (0-6 years) in Census 2011 is 919 females per 1000 males.

• This ratio is a significant indicator as it reflects the gender equality at birth and early childhood.

• Importance of Balanced Sex Ratio

• A balanced sex ratio is crucial for the stability of a society and ensures equal opportunities for both genders.

• An imbalanced sex ratio can lead to various social issues such as skewed marriage patterns, increased gender-based violence, and societal instability.

• Government Initiatives

• The Indian government has launched various initiatives like Beti Bachao Beti Padhao to improve the sex ratio.

• These programs aim to address the root causes of gender inequality and promote the value of girl children in society.

Q59. Answer: (a) Kathakali

The correct answer is Kathakali.

Key Points

• Kalamandalam Krishnan Nair was a prominent Kathakali artist from Kerala, India.

• He was renowned for his versatility and exceptional skill in portraying a wide range of characters in Kathakali performances.

• Kalamandalam Krishnan Nair played a pivotal role in reviving and popularizing Kathakali in the modern era.

• He was honored with numerous awards, including the Padma Shri and the Sangeet Natak Akademi Award.

• He was a dedicated teacher at Kerala Kalamandalam, contributing significantly to the training of the next generation of Kathakali artists.

Additional Information

• Kathakali

• Kathakali is a classical dance-drama form that originated in Kerala, India.

• It is known for its elaborate costumes, intricate makeup, detailed gestures, and well-defined body movements.

• Kathakali performances are based on themes from Hindu epics like the Ramayana and Mahabharata.

• The dance form combines elements of dance, drama, music, and ritual.

• Musicians and vocalists play a crucial role in Kathakali, providing the rhythmic and narrative support for the performance.

• Bharatanatyam

• Originating from Tamil Nadu, Bharatanatyam is one of the oldest classical dance forms in India.

• It is characterized by its fixed upper torso, bent legs, and intricate footwork combined with expressive hand gestures.

• Bharatanatyam is traditionally performed by women and is known for its grace, purity, tenderness, and sculpturesque poses.

• Kuchipudi

• Kuchipudi is a classical Indian dance form from Andhra Pradesh.

• It involves fast rhythmic footwork, dramatic characterization, and expressive eye movements.

• Kuchipudi performances often narrate stories from Hindu epics and mythology.

• Mohiniyattam

• Mohiniyattam is a classical dance form from Kerala, traditionally performed by women.

• It is known for its graceful and sensuous movements, resembling the dance of the celestial enchantress Mohini.

• Mohiniyattam includes elements of both Bharatanatyam and Kathakali in its performance style.

Q60. Answer: (d) Dr. C Chandramouli

The correct answer is Dr. C Chandramouli.

Key Points

• Dr. C Chandramouli served as the Registrar General and Census Commissioner of India during the 2011 Census.

• The 2011 Census was the 15th National Census of India since 1872.

• Dr. C Chandramouli is an Indian Administrative Service (IAS) officer from the Tamil Nadu cadre of the 1985 batch.

• The 2011 Census involved a massive exercise of data collection, covering over 1.2 billion people.

• The Census was conducted in two phases: the house-listing and housing census phase and the population enumeration phase.

Additional Information

• Registrar General and Census Commissioner of India

• The office of the Registrar General and Census Commissioner of India falls under the Ministry of Home Affairs, Government of India.

• This office is responsible for conducting and managing the demographic surveys, including the Census and the Civil Registration System (CRS).

• The Census of India is one of the largest administrative exercises conducted in the world.

• The Census data is crucial for planning and policy-making at various levels of government.

• Indian Census

• The first synchronous census was conducted in India in 1881.

• The Indian Census is conducted once every 10 years.

• The data collected includes demographic, socio-economic, and cultural information.

• The Census helps in determining the population size, growth rate, density, sex ratio, literacy rate, and other vital statistics.

• 2011 Indian Census Highlights

• India's population as per the 2011 Census was 1.21 billion.

• The literacy rate in 2011 was 74.04%, a significant increase from the previous census.

• The sex ratio was 943 females per 1000 males.

• The state of Uttar Pradesh had the highest population, while Sikkim had the least.

• Use of Technology in Census

• The 2011 Census saw the use of technology for data collection and processing.

• Handheld devices were used for data entry in some areas to improve accuracy and efficiency.

• GIS (Geographic Information Systems) was utilized to map data geographically.

YourMockTest.com — Free Study Material

• Technology played a significant role in ensuring a more streamlined and error-free census process.

Q61. Answer: (b) London forces of attraction

The correct answer is London forces of attraction.

Key Points

• Helium gas can be liquefied due to the presence of weak intermolecular forces known as London dispersion forces.
• These forces arise from the momentary distribution of electrons in an atom, leading to a temporary dipole.
• London forces are the only intermolecular forces that act between helium atoms, which are non-polar.
• Despite being weak, these forces are sufficient to hold helium atoms together in the liquid state at very low temperatures.
• Heike Kamerlingh Onnes was the first to liquefy helium in 1908 by cooling it to below its boiling point of 4.2 K.

Additional Information

• Intermolecular Forces
• These are forces of attraction or repulsion between neighboring particles (atoms, molecules, or ions).
• Types include London dispersion forces, dipole-dipole interactions, and hydrogen bonding.
• London dispersion forces are the weakest, while hydrogen bonds are the strongest among them.
• Helium
• Helium is a noble gas with the atomic number 2 and is the second lightest and second most abundant element in the observable universe.
• It is colorless, odorless, tasteless, non-toxic, and inert, making it extremely stable.
• Liquefaction of Gases
• This process involves cooling a gas to a temperature below its critical point, where it can condense into a liquid.
• It is used in various industrial processes, including the production of liquefied natural gas (LNG).
• Critical Temperature
• The highest temperature at which a substance can exist as a liquid is called its critical temperature.
• For helium, this temperature is extremely low, making its liquefaction a significant scientific achievement.

Q62. Answer: (a) Grahavarman

The correct answer is Grahavarman.

Key Points

• Rajyashri, the sister of Harshavardhana, was married to Grahavarman.
• Grahavarman was the king of the Maukhari dynasty, which ruled over Kanyakubja (modern-day Kannauj).
• The Maukhari dynasty played a significant role in the political landscape of northern India during the early medieval period.
• The marriage alliance between Rajyashri and Grahavarman helped strengthen the political ties between the Vardhana dynasty and the Maukhari dynasty.

Additional Information

• Harshavardhana
• Harshavardhana, also known as Harsha, was a prominent Indian emperor who ruled North India from 606 to 647 CE.
• He belonged to the Vardhana dynasty and was known for his efforts to establish a strong and unified empire in northern India.
• Harsha was a patron of arts and culture, and his court was adorned with scholars like Banabhatta and Xuanzang.
• His reign marked a period of prosperity and cultural flourishing in North India.
• Maukhari Dynasty
• The Maukhari dynasty was an influential ruling dynasty in North India during the 6th and 7th centuries CE.
• They initially served as vassals of the Gupta Empire before establishing their independent rule.
• The Maukhari rulers were known for their administrative efficiency and military prowess.
• Their capital was Kanyakubja (Kannauj), which became a significant center of power in North India.
• Kanyakubja (Kannauj)
• Kanyakubja, also known as Kannauj, is an ancient city located in the present-day Indian state of Uttar Pradesh.
• It has been a prominent political, cultural, and commercial center since ancient times.
• Kannauj was known for its rich cultural heritage and was a major center of learning and arts.
• Throughout history, Kannauj has been a coveted seat of power for various dynasties, including the Maukhari and the Vardhana dynasties.
• Political Alliances in Ancient India
• Marriage alliances were a common strategy for establishing political ties and securing peace between different dynasties.

• Such alliances helped in strengthening mutual trust and cooperation between ruling families.
• They played a crucial role in the consolidation of power and expansion of empires in ancient India.
• These alliances also facilitated cultural exchange and integration between different regions.

Q63. Answer: (b) Mewati gharana

The correct answer is Mewati gharana.

Key Points

• Pandit Arvind Thatte is a renowned harmonium player associated with the Mewati gharana.
• The Mewati gharana was founded by Ustad Ghagge Nazir Khan in the late 19th century.
• This gharana is known for its emphasis on the emotional expression and devotional elements of Hindustani classical music.
• Pandit Arvind Thatte has accompanied many legendary musicians, including Pandit Jasraj, who is also a prominent figure in the Mewati gharana.

Additional Information

• Mewati gharana
• It emphasizes clarity in the rendition of ragas, intricate taans (rapid melodic passages), and a blend of khayal and devotional music.
• The gharana has produced several notable musicians, including Pandit Jasraj, Pandit Sanjeev Abhyankar, and Pandita Tripti Mukherjee.
• Mewati gharana performances often incorporate elements from other gharanas, making their style versatile and unique.
• Harmonium
• The harmonium is a keyboard instrument that produces sound when air flows over free metal reeds.
• It is widely used in Indian classical music, devotional music, and various folk traditions.
• The instrument is played with one hand operating the bellows and the other pressing the keys.
• Pandit Jasraj
• Pandit Jasraj was a legendary Indian classical vocalist belonging to the Mewati gharana.
• He was known for his soulful renditions, extensive repertoire, and for popularizing the Mewati gharana globally.
• Pandit Jasraj received numerous awards, including the Padma Vibhushan, India's second-highest civilian honor.

Q64. Answer: (c) Uruguay

The correct answer is Uruguay.

Key Points

• Uruguay won the inaugural Nehru Cup in 1982, held in India.
• The Nehru Cup was initiated to promote international football in India.
• The tournament attracted several international teams, enhancing its prestige.
• Uruguay's victory in the first edition set a high standard for the competition.

Additional Information

• Nehru Cup
• The Nehru Cup is an international football tournament organized by the All India Football Federation (AIFF).
• It was named after Jawaharlal Nehru, the first Prime Minister of India.
• The tournament has been held intermittently since its inception in 1982.
• The format typically includes national teams from various countries, contributing to its competitive nature.
• Uruguay National Football Team
• Uruguay is known for its strong footballing tradition and success on the international stage.
• The team has won the FIFA World Cup twice, in 1930 and 1950.
• Uruguay is also a multiple-time winner of the Copa America, South America's primary football competition.
• The team's style of play is characterized by strong defense and tactical discipline.
• All India Football Federation (AIFF)
• The AIFF is the governing body for football in India, responsible for organizing national competitions and managing the national team.
• Established in 1937, the AIFF is affiliated with FIFA, the global governing body for football.
• The AIFF aims to develop and promote football at all levels in India.
• It organizes several tournaments, including the I-League and Indian Super League (ISL).

YourMockTest.com — Free Study Material

Q65. Answer: (d) Jagdeep Dhankar

The correct answer is Jagdeep Dhankar.

Key Points

• As of 10 October 2023, Jagdeep Dhankar is the ex-officio Chairperson of the Rajya Sabha.

• He holds the position by virtue of being the Vice President of India.

• Jagdeep Dhankar assumed office as the Vice President of India on 11 August 2022.

• The Vice President of India automatically becomes the Chairperson of the Rajya Sabha upon taking office.

• The Rajya Sabha, also known as the Council of States, is the upper house of India's bicameral Parliament.

Additional Information

• Role of the Vice President

• The Vice President is the second-highest constitutional office in India, after the President.

• The Vice President's primary duty is to act as the Chairperson of the Rajya Sabha.

• In the event of the President's death, resignation, or removal, the Vice President may act as the President until a new President is elected.

• Rajya Sabha (Council of States)

• The Rajya Sabha is a permanent body and is not subject to dissolution, unlike the Lok Sabha.

• Members of the Rajya Sabha are elected by the elected members of State Legislative Assemblies and by the members of the Electoral college for Union Territories.

• One-third of the members of the Rajya Sabha retire every two years.

• Functions of the Rajya Sabha Chairperson

• The Chairperson presides over the sessions of the Rajya Sabha.

• He/she ensures the orderly conduct of business and adherence to parliamentary procedures and rules.

• The Chairperson has the authority to discipline members for unruly behavior and can suspend them if necessary.

• Historical Context

• The position of Vice President and Chairperson of the Rajya Sabha was established by the Constitution of India, which came into effect on 26 January 1950.

• Dr. S. Radhakrishnan was the first Vice President of India and the first Chairperson of the Rajya Sabha.

Q66. Answer: (b) expressed rage

The solution is in Hindi. Read it online.

Q67. Answer: (c) Cancelled

The solution is in Hindi. Read it online.

Q68. Answer: (a) To go out to buy or do something

The solution is in Hindi. Read it online.

Q69. Answer: (a) D

html

The correct answer is Option 1.

Key Points

• The primary issue in the sentence is the use of the word "worst" instead of the correct form "worse."

• The comparative form "worse" should be used here instead of the superlative form "worst".

• The correct phrase should be "credentials worse," ensuring grammatical correctness and clarity.

• Thus, the error is located in part D of the sentence.

Therefore, the correct answer is D.

Correct Sentence: "He cheated in the examination, making his already-falling academic credentials worse."

Additional Information

• A: "He cheated in the" – This part of the sentence is grammatically correct and does not require any changes.

• B: "examination, making his" – This part of the sentence is grammatically correct and does not require any changes.

• C: "already-falling academic" – This part of the sentence is grammatically correct and does not require any changes.

• No error – This would be the correct option if there were no mistakes in the sentence, but there is an error in part D.

YourMockTest.com – Free Study Material

Q70. Answer: (b) Unaware

The solution is in Hindi. Read it online.

Q71. Answer: (b) principal; poll

The solution is in Hindi. Read it online.

Q72. Answer: (d) at airport to receive

The correct answer is Option 4.

Key Points

• The primary issue in the sentence is the omission of the article "the" before the term "airport."

• Singular countable nouns typically require an article ("the" in this context).

• The correct phrase should be "at the airport to receive," ensuring grammatical correctness and clarity.

• Thus, the error is located in part 4 of the sentence.

Therefore, the correct answer is 4.

Correct Sentence: "He is waiting at the airport to receive Mr. Smith, who is coming from South Africa."

Additional Information

• 1: "He is waiting," – This part of the sentence is grammatically correct and does not require any changes.

• 2: "Mr. Smith, who is" – This part of the sentence is grammatically correct and does not require any changes.

• 3: "coming from South Africa." – This part of the sentence is grammatically correct and does not require any changes.

• No error – This would be the correct option if there were no mistakes in the sentence, but there is an error in part 4.

Q73. Answer: (c) the noisiest

html

The correct answer is 'the noisiest'.

Key Points

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

• In this case, the superlative form "the noisiest" is used to indicate that northern mockingbirds are the most noisy among all wild birds in the jungle.

• Options 1, 2, and 4 are incorrect because they do not appropriately express the intended superlative comparison.

Therefore, the correct answer is Option 3.

Complete Sentence: "Many ornithologists believe that the northern mocking birds are the noisiest wild birds in the jungle."

Additional Information

• Option 1: "the noisy" is incorrect because it is not in the superlative form.

• Option 2: "noisy" is incorrect because it is in the positive degree.

• Option 4: "noisier" is incorrect because it is in the comparative degree, not superlative.

Q74. Answer: (b) forged

The solution is in Hindi. Read it online.

Q75. Answer: (c) Tina dropped behind of

html

The correct answer is Option 3.

Key Points

• The primary issue in the sentence is the incorrect use of the phrasal verb "dropped behind of".

• The correct phrasal verb should be "dropped out of".

• The phrase "dropped out of" means to leave a school or college before completing the course.

• Thus, the error is located in part 3 of the sentence.

Therefore, the correct answer is Option 3.

Correct Sentence: "Tina dropped out of college and went straight into a good job."

Additional Information

• Option 1: "college and" – This part of the sentence is grammatically correct and does not require any changes.

• Option 2: "went straight" – This part of the sentence is grammatically correct and does not require any changes.

• Option 4: "into a good job" – This part of the sentence is grammatically correct and does not require any changes.

YourMockTest.com – Free Study Material

Q76. Answer: (c) Endengered

The solution is in Hindi. Read it online.

Q77. Answer: (a) No error

The correct answer is: No error.

The sentence is grammatically correct, and there are no errors in this sentence.

Q78. Answer: (a) word for word

Sure, here is the solution formatted in HTML:

html

The correct answer is Option 1.

Key Points

• The expression “word for word” is an idiomatic phrase that means to copy or repeat exactly the same words in the same order.

• The other options are incorrect as they do not follow standard English idiomatic usage.

• Thus, “word for word” is the correct choice to improve the sentence.

Therefore, the correct answer is Option 1.

Correct Sentence: "Arun asks Smita to copy the contents of the document word for word."

Additional Information

• Option 2: "word par word" is incorrect because "par" is not the correct preposition in this context.

• Option 3: "word with word" is incorrect as it does not convey the same meaning as "word for word".

• Option 4: "word to word" is not a standard idiomatic expression and hence is incorrect.

• No error – This would be the correct option if there were no mistakes in the sentence, but the original sentence is not using the standard phrase.

This HTML format includes the provided solution, key points, the correct sentence, and additional information.

Q79. Answer: (a) bigger

The correct answer is Option 1.

Key Points

• The primary issue in the sentence is the incorrect comparative form of the adjective "big."

• Comparative adjectives are used to compare differences between the two objects they modify (larger, smaller, faster, higher).

• The correct comparative form of "big" is "bigger."

• Thus, the sentence should be corrected to "bigger than this one."

Therefore, the correct answer is Option 1.

Correct Sentence: "The new almirah is bigger than this one."

Additional Information

• Option 2: "more big" is incorrect because "big" is a one-syllable adjective, and for one-syllable adjectives, we add "-er" to make the comparative form.

• Option 3: "biggest" is incorrect because "biggest" is the superlative form, used to compare more than two items or people.

• Option 4: "more bigger" is incorrect because it is a double comparative, which is grammatically incorrect.

Q80. Answer: (a) Golf

The logic followed here is:

Option 1) Golf → Outdoor game

Option 2) Billiards → Indoor game

Option 3) Table tennis → Indoor game

Option 4) Carrom → Indoor game

Hence, "Option 1" is the odd one out.

Q81. Answer: (a) unfavourable

The solution is in Hindi. Read it online.

Q82. Answer: (a) extreme

The solution is in Hindi. Read it online.

YourMockTest.com — Free Study Material

Q83. Answer: (c) relieving

The correct answer is 'relieving'.

Key Points

• The word "relieving" means reducing or alleviating pain or stress.

• Engaging in leisure activities is known to help in reducing stress.

• The other options: "reconstructing," "irritating," and "upsetting" do not fit the context as appropriately.

Therefore, the correct answer is 'Option 3'.

Complete Sentence: Leisure activities can improve an individual's physical and mental health by relieving stress, and offering a pleasurable experience.

Additional Information

• Reconstructing: means to build or form something again.

• Irritating: means causing annoyance or discomfort.

• Upsetting: means causing emotional distress or worry.

Q84. Answer: (b) Repulse

The solution is in Hindi. Read it online.

Q85. Answer: (a) changed

The solution is in Hindi. Read it online.

Q86. Answer: (c) are

The correct answer is 'are'.

Key Points

• The subject "Dolphins" is plural, so the correct auxiliary verb is "are."

• The sentence is written in present tense, describing a general truth about dolphins.

• 'Are regarded' is the correct passive construction showing dolphins are considered friendly by people.

• Options like "is," "was," or "has" do not agree with the plural subject or tense requirement.

Therefore, the correct answer is 'Option 3'.

Complete Passage: Dolphins 1. are regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2. __*about dolphins, the more we realise that their society is more complex 3.* people previously imagined. They look 4. other dolphins when they are ill, care for pregnant 5. __*and protect the weakest in the community, as we do.*

Additional Information

• Has: Incorrect, as "has regarded" is grammatically wrong here and mismatched with plural subject.

• Was: Incorrect, as it indicates past tense, while the passage describes a present truth.

• Is: Incorrect, as "is" is singular and does not agree with plural "dolphins."

Q87. Answer: (d) learn

The correct answer is 'learn'.

Key Points

• The subject of the sentence is "we," which requires the base verb form "learn" in present tense.

• The structure "the more we learn... the more we realise" is a standard comparative construction in English.

• 'Learn' expresses a continuous truth about gaining knowledge of dolphins, fitting the passage context.

• Other options like "learns," "learning," and "learned" are grammatically incorrect in this context.

Therefore, the correct answer is 'Option 4'.

Complete Passage: Dolphins 1. are regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2. learn about dolphins, the more we realise that their society is more complex 3. ___*people previously imagined. They look 4.* other dolphins when they are ill, care for pregnant 5. ___*and protect the weakest in the community, as we do.*

Additional Information

• Learns: Used with third-person singular subjects (he/she/it learns), not suitable with "we."

• Learning: Present participle/gerund, but does not fit the comparative construction.

• Learned: Past tense, does not match the ongoing truth the sentence conveys.

YourMockTest.com — Free Study Material

Q88. Answer: (c) than

The correct answer is 'than'.

Key Points

• The sentence uses a comparative structure: "more complex ___ people previously imagined."

• The correct word to complete a comparison is "than."

• "Than" logically connects the complexity of dolphin society with what people earlier believed.

• Options like "for," "the," or "to" do not fit the comparative grammar and meaning of the sentence.

Therefore, the correct answer is 'Option 3'.

Complete Passage: Dolphins 1. are regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2. learn about dolphins, the more we realise that their society is more complex 3. than people previously imagined. They look 4. __*other dolphins when they are ill, care for pregnant 5.* __*and protect the weakest in the community, as we do.*

Additional Information

• For: Incorrect, as it shows purpose or reason, not comparison.

• The: Incorrect, as it is a definite article and does not fit the comparative construction.

• To: Incorrect, as it suggests direction or relation, not comparison.

Q89. Answer: (c) after

The correct answer is 'after'.

Key Points

• The phrasal verb "look after" means to take care of someone, which perfectly fits the context of dolphins caring for others when ill.

• The sentence emphasizes dolphins' protective and nurturing behavior, similar to human society.

• "After" is the correct choice as it conveys responsibility and care for others' well-being.

• Other options like "up," "on," or "into" do not convey the meaning of caring or protection.

Therefore, the correct answer is 'Option 3'.

Complete Passage: Dolphins 1. are regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2. learn about dolphins, the more we realise that their society is more complex 3. than people previously imagined. They look 4. after other dolphins when they are ill, care for pregnant 5. ____*and protect the weakest in the community, as we do.*

Additional Information

• Up: Usually part of "look up," meaning search or admire, not relevant here.

• On: "Look on" means watch without involvement, unsuitable in this caring context.

• Into: "Look into" means investigate or examine, which does not fit the idea of caregiving.

Q90. Answer: (a) mothers

The correct answer is 'mothers'.

Key Points

• The sentence describes dolphins caring for pregnant members of their species.

• The most appropriate word is "mothers," since pregnancy is biologically associated with females preparing for childbirth.

• This highlights dolphins' nurturing and protective social behavior, similar to human care for expectant mothers.

• Other options like "brothers," "fathers," or "uncles" are irrelevant because they cannot be pregnant.

Therefore, the correct answer is 'Option 1'.

Complete Passage: Dolphins 1. are regarded as the friendliest creatures in the sea, and stories of them helping drowning sailors have been common since Roman times. The more we 2. learn about dolphins, the more we realise that their society is more complex 3. than people previously imagined. They look 4. after other dolphins when they are ill, care for pregnant 5. mothers and protect the weakest in the community, as we do.

Additional Information

• Brothers: Cannot be associated with pregnancy, hence contextually incorrect.

• Fathers: Male dolphins do not experience pregnancy, so this does not fit.

• Uncles: Irrelevant in the biological and caregiving context described here.

More previous year papers and mock tests: **www.yourmocktest.com/pyq**