SSC CHSL Tier-1 2024: Official Paper (Held On: 03 Jul, 2024 Shift 3) (Previous Year Paper)

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

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ENGLISH LANGUAGE

Q1. The following sentence has been divided into four segments. Identify the segment that contains a grammatical error.

Don’t go / outside / because it is / raining heavy.

(a) Don’t go
(b) because it is
(c) outside
(d) raining heavy

Q2. The given sentence is divided into four segments. Select the option that has the segment with a grammatical error.

The class / teacher was / wounded in / a leg.

(a) The class
(b) teacher was
(c) wounded in
(d) a leg.

Q3. Parts of the following sentence have been given as options. Select the option that contains an error.

Today she said to her friend, “You’re the sweetest person I have met ever”.

(a) I have met ever”.
(b) the sweetest person
(c) Today she said to
(d) her friend, “You’re

Q4. The following sentence has been split into four segments. Identify the segment that contains an INCORRECT preposition.

Please remember to take / your notice to the reception area / if you want it to be displayed / upon the bulletin board.

(a) your notice to the reception area
(b) if you want it to be displayed
(c) upon the bulletin board
(d) Please remember to take

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.

The tuatara, which lives on New Zealand's islands, is affectionately known as Living fossil. It is called that because it is the only (1)___ reptile in a group of reptiles that dates back about 220 million years to the time of the dinosaurs. The colour of the tuatara is grey or olive green. It (2)__ to a length of around 60 cm. The fact that this lizard has three eyes is its most (3)___ feature. The pineal eye is the name given to the cone-shaped third eye. This eye is in a space between the brain and head. It has an eyelid over the third eye, which closes on a horizontal level. The tuatara has teeth that are (4)___ from those of other reptiles. The lower jaw has only one row of teeth, while the upper jaw has two rows. The tuatara is most active at night. It eats the eggs of birds, frogs, rats and insects. A tuatara's average lifespan is less than 77 years, but some species can live up to 100 years. In the

spring, the female tuatara lays 8 to 15 eggs. These eggs are (5)____ during summer.

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

(a) living
(b) life
(c) entity
(d) being

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

(a) develops
(b) nourishes
(c) links
(d) creates

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

(a) absorbing
(b) escalating
(c) intriguing
(d) diverting

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

(a) distinct
(b) sharp
(c) discrete
(d) separate

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

(a) germinated
(b) pollinated
(c) fertilised
(d) fructified

Q10. Select the most appropriate meaning of the given idiom.

Around the clock

(a) Something that goes on day and night
(b) Something that is done within one hour
(c) Something that is time bound
(d) Something that is done at night

Q11. Select the most appropriate option that can substitute the underlined segment in the given sentence.

There is no place on the bench.

(a) no life
(b) no room
(c) more space
(d) more place

Q12. Select the most appropriate option to fill in the blank.

Many developing nations are having a _____ economy these days.

(a) booming
(b) boosting
(c) resounding
(d) ringing

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Q13. Select the most appropriate ANTONYM of the underlined word in the given sentence.

Mr. Stein is a very cold and hard man.

(a) Relaxed
(b) Tolerant
(c) Charitable
(d) Clement

Q14. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

He was the fastest between all the contestants.

(a) No substitution
(b) amongst
(c) since
(d) from

Q15. Select the most appropriate ANTONYM of the underlined word in the following sentence.

My most vivid recollection of that summer is the ocean.

(a) Eloquent
(b) Vague
(c) Lucid
(d) Pictorial

Q16. Select the most appropriate ANTONYM of the given word.

Alive

(a) Spry
(b) Wise
(c) Dead
(d) Animated

Q17. Select the most appropriate ANTONYM of the underlined word in the following sentence.

You should never visit her without her consent.

(a) Permission
(b) Knowledge
(c) Approval
(d) Refusal

Q18. Select the most appropriate option that can substitute the underlined segment in the given sentence.

Little that I knew of the English language was not sufficient to make me an English teacher.

(a) The little
(b) A little
(c) So little
(d) Very little

Q19. Select the most appropriate synonym of the given word.

Ablaze

(a) Brazen
(b) Burning
(c) Extinguished
(d) Sharp

Q20. Select the most appropriate ANTONYM of the given word.

Sacred

(a) Grave
(b) Narrow

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(c) Profane
(d) Holy

Q21. Select the most appropriate meaning of the given idiom.

Best thing since sliced bread

(a) Extremely good, interesting
(b) Breaking news
(c) Something to be cautious about
(d) Rated well amongst cooks

Q22. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement required'.

The annual seed festival hosted in Auroville promote sharing of traditional knowledge and sustainable farming practices.

(a) promotes sharing of tradition
(b) promotes sharing of traditionally
(c) promotes sharing of traditional
(d) No improvement required

Q23. Read the sentence carefully and select the synonym of the underlined word from the given alternatives.

Everyone revered my austere father who was the high priest of the famous Shiva temple.

(a) Aged
(b) Composed
(c) Stern
(d) Morose

Q24. Select the INCORRECTLY spelt word.

(a) Magnanimos
(b) Fascination
(c) Accompanied
(d) Psychology

Q25. Select the INCORRECTLY spelt word.

(a) Relevant
(b) Chief
(c) Jugement
(d) Colleague

GENERAL INTELLIGENCE

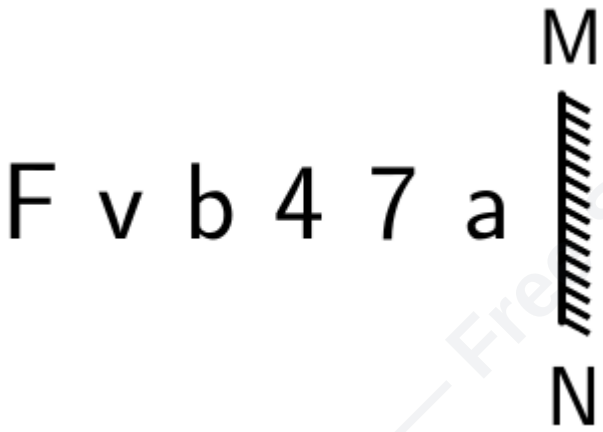
Q26. Three of the following four are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group?

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

(a) QWD
(b) EKR
(c) RXE
(d) TZD

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

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(a)



(b)



(c)



(d)



Q28. What should come in place of "?" in the given series?

34 58 106 202 394 ?

(a) 798
(b) 778
(c) 792
(d) 774

Q29. In a certain code language, 'GCJL' is coded as '14-6-20-24' and 'WTRO' is coded as '46-40-36-30'. What is the code for 'BZKQ' in the given code language?

(a) 2-52-22-34
(b) 3-51-20-33
(c) 4-52-21-32
(d) 4-52-22-34

Q30. If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark (?) in the following equation?

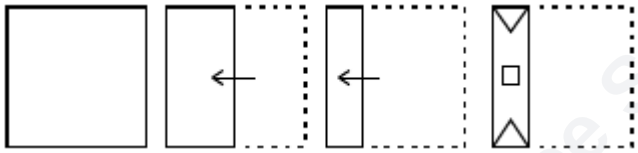
93 A 3 C 15 B 5 D 12 = ?

(a) 92
(b) 91

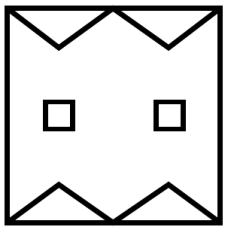
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(c) 93
(d) 94

Q31. A paper is folded and cut as shown below. How will it appear when unfolded?



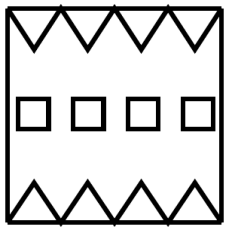
(a)



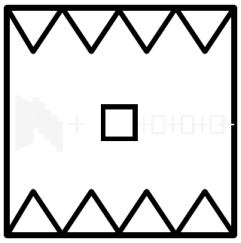
(b)



(c)



(d)



Q32. In a certain code language, 'time and money' is coded as 'zoo zee zig' and 'time and tide' is coded as 'zee zoo zaa'. Which word is coded as 'zaa' in that language?

(a) time
(b) and
(c) money
(d) tide

Q33. What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and '×' and '÷' are interchanged?

73 - 27 × 9 + 5 ÷ 13 = ?

(a) 11
(b) 17

(c) 9
(d) 23

Q34. 'A + B' means 'A is B's brother'.
'A – B' means 'A is B's wife'.
'A × B' means 'A is B's father'.
'A ÷ B' means 'A is B's daughter'.
Using operations with the same meaning as given above, which of the following options shows 'M is the mother of O'?

(a) M ÷ N + O
(b) M ÷ N × O
(c) M – N × O
(d) M – N + O

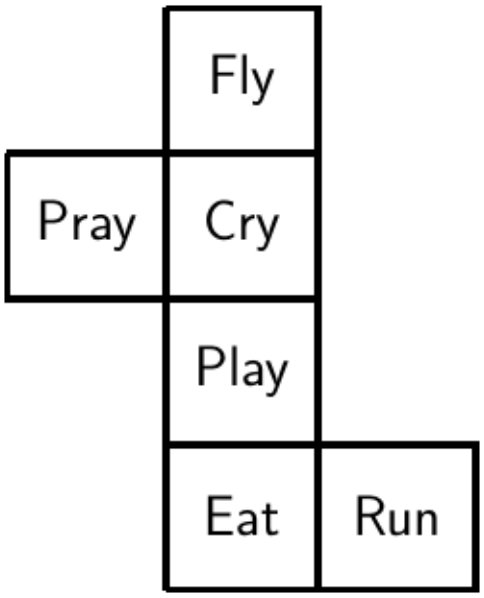
Q35. If 29 December 1956 was a Saturday, then what was the day of the week on 16 January 1967?

(a) Monday
(b) Friday
(c) Saturday
(d) Sunday

Q36. What should come in place of? in the given series?
8, 15, 29, 57,113 ?

(a) 224
(b) 223
(c) 225
(d) 222

Q37. What would be the word on the opposite side of 'Run' if the given sheet is folded to form a cube?



(a) Play
(b) Fly
(c) Pray
(d) Cry

Q38. If 26 September 2005 was Monday, then what was the day of the week on 26 September 2017?

(a) Saturday
(b) Sunday
(c) Tuesday

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(d) Wednesday

Q39. What should come in place of the question mark (?) in the given series based on the English alphabetical order?

FQN, CLL, ZGJ, WBH, ?

(a) SVF
(b) TVE
(c) SVE
(d) TWF

Q40. PCNZ is related to ALWQ in a certain way based on the English alphabetical order. In the same way, RYLD is related to EHUS. To which of the following is HAXM related, following the same logic?

(a) NJGI
(b) NIJG
(c) NIGJ
(d) NJIG

Q41. In this question, three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusion(s) logically follows/follow from the statements.

Statements:

All chairs are sofas.

Some chairs are beds.

No sofa is a table.

Conclusions:

I. Some tables are beds.

II. No table is a chair.

III. Some sofas are beds.

(a) Both conclusions I and III follow.
(b) Both conclusions I and II follow.
(c) Both conclusions II and III follow.
(d) All conclusions I, II and III follow.

Q42. 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 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.)

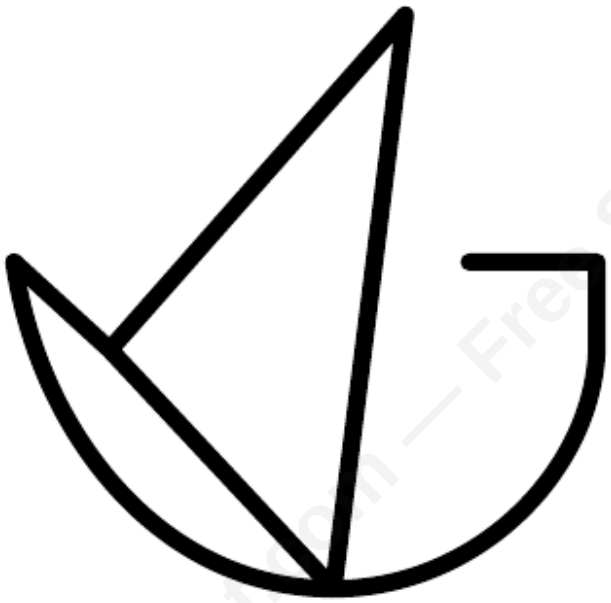
(45, 15, 3)

(120, 40, 8)

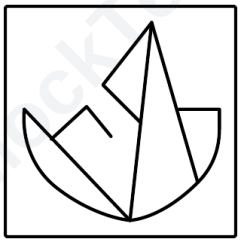
(a) (165, 55, 9)
(b) (165, 55, 11)
(c) (175, 55, 11)
(d) (165, 54, 11)

Q43. Select the option figure in which the given figure is embedded as its part (rotation is NOT allowed).

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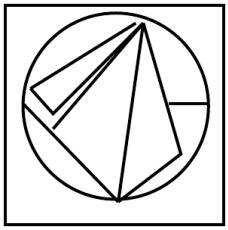
(a)



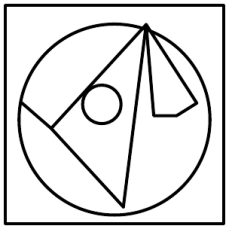
(b)



(c)

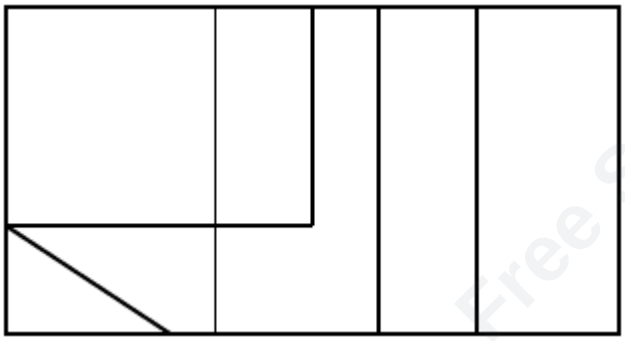


(d)



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Q44. How many rectangles are there in the following figure?



(a) 9
(b) 11
(c) 10
(d) 8

Q45. What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and '×' and '÷' are interchanged?

800 × 16 - 8 ÷ 12 + 18 = ?

(a) 126
(b) 129
(c) 127
(d) 128

Q46. What should come in place of? in the given series based on the English alphabetical order?

QJC ATM KDW UNG?

(a) BAA
(b) EXQ
(c) SBA
(d) CWO

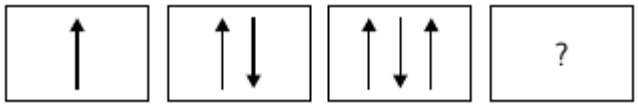
Q47. 765 is related to 876 following a certain logic. Following the same logic, 682 is related to 793.

To which of the following is 587 related, following the same logic?

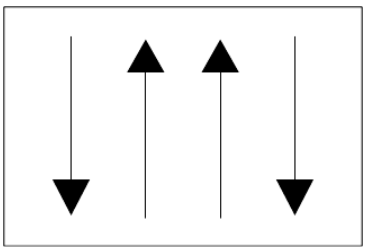
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and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

(a) 675
(b) 698
(c) 543
(d) 798

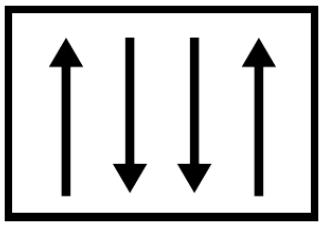
Q48. Identify the figure given in the options which when put in place of? will logically complete the series.



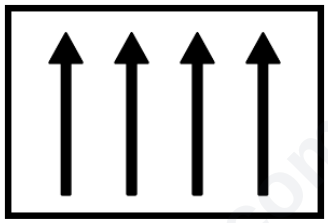
(a)



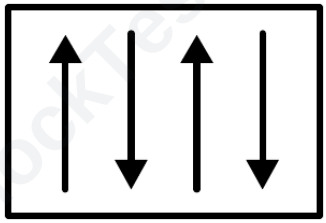
(b)



(c)



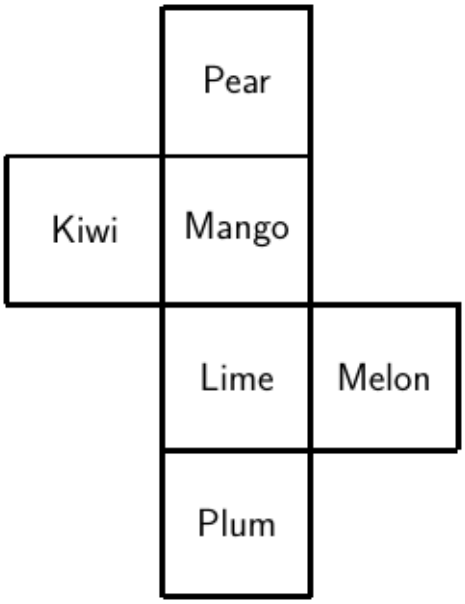
(d)



Q49. 'MANGO' is related to '35' in a certain way based on the English alphabetical order. In the same way, 'CHERRIES' is related to '56'. To which of the following is 'ADMINISTRATION' related, following the same logic?

(a) 98
(b) 102
(c) 96
(d) 112

Q50. What would be the word on the opposite side of 'Pear' if the given sheet is folded to form a cube?

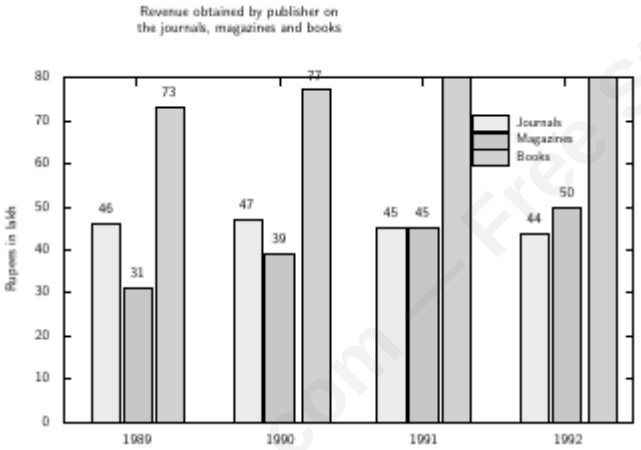


(a) Mango
(b) Lime
(c) Kiwi
(d) Melon

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QUANTITATIVE APTITUDE

Q51. Answer the following question on the basis of the bar graph given.



In 1991, what percentage of the total revenue came from journals? (Correct up to one decimal place)

(a) 26.5%
(b) 24.73%
(c) 22.9%
(d) 25.8%

Q52. If the radius of a sphere is increased by 12 percent, then the volume will be increased by approximately:

(a) 45.49 percent
(b) 40.49 percent
(c) 42.5 percent
(d) 41.49 percent

Q53. Simplify the given expression.

$8 - 5 \div 2^3 \times 3 + (7 \div 7 \times 7) \div 7 + (3 \times 6 \div 1/3) \times 1/(3^3)$

(a) 73/21
(b) 73/9
(c) 73/27
(d) 73/8

Q54. If the height of a right circular cone is 24 cm and radius of its base is 10.5 cm, then the volume of right circular cone (in cm^3) is: Take $л = (22)/(7)$

(a) 2727
(b) 2772
(c) 2237
(d) 2277

Q55. A and B can complete a piece of work in 12 days. B and C can complete the same work in 15 days and C and A in 10 days. How many days will A take to complete the work by himself?

(a) 9 1/8
(b) 16 1/7
(c) 17 1/7
(d) 13 3/7

Q56. AB and AC are two tangents to a circle having centres at the point X. What will be the measure of angle BAC, if angle BXC = 125º?

(a) 55º
(b) 48º
(c) 52º

(d) 50º

Q57. If the perimeter of a square is 64 cm, what would be its area?

(a) 256 cm2
(b) 206 cm2
(c) 216 cm2
(d) 266 cm2

Q58. In an election between two candidates, 10% of the registered voters did not cast their vote. The winning candidate got 60% of the total votes cast and defeated the other candidate by 1242 votes. Find the total number of registered voters.

(a) 9600
(b) 6200
(c) 8640
(d) 6900

Q59. If the average of 50 numbers N1, N2, ___ N50 is M. Then the average of the numbers N1-100, N2-100, ... N50-100 will be:

(a) M − 100
(b) M − 50
(c) 50M
(d) 100M

Q60. If 6,18, x are sides of a triangle and x is an integer, then the number of possible values of x is:

(a) 15
(b) 14
(c) 11
(d) 13

Q61. If the income of P is 40% less than Q, then the combined income of P and Q is how much per cent more than the income of P?

(a) 166 1/3
(b) 164 1/3
(c) 164 2/3
(d) 166 2/3

Q62. A dealer buys an article listed at Rs. 100 and get successive discounts of 10% and 20%. He spends 10% of the cost price on transportation. At what price should he sell the article to earn a profit of 15%?

(a) Rs. 91.08
(b) Rs. 81.07
(c) Rs. 76.07
(d) Rs. 89.08

Q63. PQ is parallel to SR in a trapezium PQRS. It is given that PQ > SR and the diagonals PR and QS intersect at O. If PO = 3 x - 15, OQ = x + 9, OR = x - 5 and OS = 5 and x has two values x1 and x2, then the value of $(x1^2 - x2^2)$ is:

(a) 11
(b) 13
(c) 15
(d) 19

Q64. A seven-digit number 489y5z6 is divisible by 72. Which of the options gives the highest possible product of y and z?

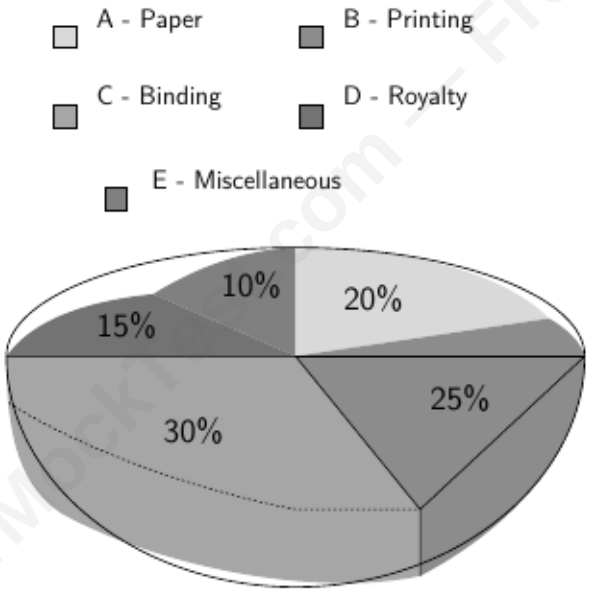
(a) 42
(b) 3
(c) 21
(d) 30

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Q65. In an 800 m race, the ratio of the speeds of two contestants Ankur and Neha is 5 : 6. If Ankur has a head-start of 200 m, then Ankur will win by _____.

(a) 80 m
(b) 89 m
(c) 69 m
(d) 76 m

Q66. The given pie-diagram shows the expenditure incurred on the preparation of a book by a publisher, under various heads. Study the pie-diagram and answer the question that follows.



Various Expenditures (in percentage) incurred in Publishing a Book

What is the angle of the pie-diagram showing the expenditure incurred on paying royalty?

(a) 15°
(b) 24°
(c) 54°
(d) 48°

Q67. By selling 30 metres of cloth a shopkeeper makes a profit equivalent to the selling price of 10 metres of cloth. Find the selling price of 1 metre of cloth when the cost price of 1 metre of cloth is Rs. 480.

(a) Rs. 960
(b) Rs. 520
(c) Rs. 720
(d) Rs. 820

Q68. For a given circle of radius 4 cm, the angle of its sector is 45º. Find the area (in cm^2) of the sector. (Use $\pi = 3.14$.)

(a) 6.18
(b) 6.28
(c) 7.18
(d) 7.28

Q69. $(3\cos^3\theta - 2\cos\theta)/(\sin\theta - 3\sin^3\theta)$ is equal to:

(a) $\tan2\theta$
(b) $\tan\theta$
(c) $\cot2\theta$
(d) $\cot\theta$

Q70. Solve the following system of linear equations: x + y + z = 15, 2x - y + z = 12 and x - y - z = -1

(a) x = 7, y = 5, z = 3
(b) x = 7, y = 5, z = 1
(c) x = 2, y = 5, z = 3
(d) x = 7, y = 2, z = 3

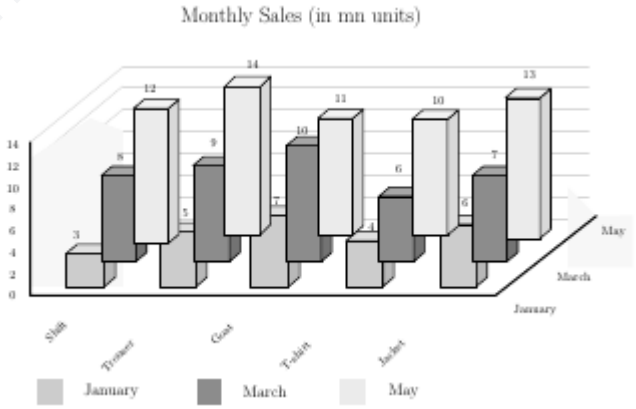
Q71. The following table represents the number of computers (in thousands) manufactured by four companies during the period 2010 to 2014:

Years	A	B	C	D
2010	240	120	270	280
2011	300	530	490	650
2012	1250	650	430	710
2013	470	320	1180	890
2014	320	1070	550	480

Which company has the minimum average (in thousands) of manufacturing the computers from 2010 to 2014?

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

Q72. The following graph shows the sale of few items of a garment company for three months.



What is the percentage of the sale of the least selling item in the three months over the total sale of the company?

(a) 20%
(b) 16%
(c) 25%
(d) 28%

Q73. 12.75% is equivalent to _____.

(a) 17/200
(b) 41/400
(c) 51/400
(d) 37/400

Q74. An amount of Rs. 50,000 becomes Rs. 72,000 in 4 years on a simple rate of interest. The rate of interest is _____ per annum.

(a) 10%
(b) 11%
(c) 12%
(d) 9%

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Q75. Which is the greatest ratio among the following?

8/11, 4/5, 1/2 and 1/11

(a) 8/11
(b) 4/5
(c) 1/2
(d) 1/11

GENERAL AWARENESS

Q76. The term ‘banana kick’ is associated with which sport?

(a) Hockey
(b) Ice Hockey
(c) Football
(d) Boxing

Q77. For which discovery did Henri Becquerel receive the Nobel Prize in Physics in 1903?

(a) Spontaneous Radioactivity
(b) Radium Emanation
(c) Diagnostic Radiography
(d) Radioactive Elements

Q78. Where did the indigenous sport ‘Kalaripayattu’ originate from?

(a) Tamil Nadu
(b) Goa
(c) Karnataka
(d) Kerala

Q79. The Maritime Anti-Piracy Act, 2022, received the assent of the President on _____.

(a) 31 December 2022
(b) 31 March 2023
(c) 30 April 2023
(d) 31 January 2023

Q80. Which of the following statements about the Pala Dynasty of eastern India is INCORRECT?

(a) Devapala was the grandson of Gopala.
(b) Dharmapala founded the Valabhi university.
(c) The Pala kings were the followers of Buddhism.
(d) The Pala dynasty was founded by Gopala.

Q81. Which of the following folk music of Chhattisgarh is based on the epic Mahabharata?

(a) Paani Haari
(b) Pandavani
(c) Ghumar
(d) Maand

Q82. Good Friday is related to:

(a) Christianity
(b) Sikhism
(c) Jainism
(d) Hinduism

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Q83. _____ is a form of Sikh festival.

(a) Kalyan
(b) Khamaj
(c) Hola Mohalla
(d) Bhairav

Q84. Who developed the technique of preserving the quality of food by raising its temperature to prevent microbial growth in the food?

(a) Antonie van Leeuwenhoek
(b) Robert Koch
(c) Louis Pasteur
(d) Joseph Lister

Q85. Which of the following is issued by commercial banks at a discount on face value?

(a) Promissory notes
(b) Commercial papers
(c) Treasury bills
(d) Certificates of deposits

Q86. The Green Revolution led to an increase in the agricultural output primarily due to the use of HYV seeds. Here, HYV refers to:

(a) Heat Yielding Variant
(b) High Yield Variant
(c) High Yielding Variety
(d) High Yielding Variance

Q87. Which of the following is the default alignment of text in a Microsoft Word document?

(a) Justified
(b) Right
(c) Left
(d) Center

Q88. The government of which state started the Tansen Samman?

(a) Uttar Pradesh
(b) Arunachal Pradesh
(c) Madhya Pradesh
(d) Himachal Pradesh

Q89. Where was India's first hockey club founded?

(a) Calcutta
(b) Delhi
(c) Madras
(d) Shimla

Q90. In which state is the Raika tribe found?

(a) Kerala
(b) West Bengal
(c) Rajasthan
(d) Manipur

Q91. The proclamation of which Act by the King of England in 1773 paved the way for the establishment of the Supreme Court at Calcutta?

(a) Regulating Act
(b) Pitt's India Act
(c) Indian Councils Act

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(d) Charter Act

Q92. In January 2022, which evacuation mission did the government of India launch to evacuate the Indians stranded in Ukraine?

(a) Operation Safe Homecoming
(b) Operation Raahat
(c) Operation Vande Bharat
(d) Operation Ganga

Q93. Ursa Major is a/an:

(a) stellite
(b) comet
(c) asteroid
(d) constellation

Q94. As per the Census-2011, the population growth during the decade remained _____.

(a) 18.30%
(b) 15.30%
(c) 17.64%
(d) 14.25%

Q95. Which Section of the Representation of People's Act (RPA), 1951 deprives the prisoners of their right to vote?

(a) Section 72 (5)
(b) Section 10 (4)
(c) Section 15 (3)
(d) Section 62 (5)

Q96. Which city is referred to as the 'Manchester of India'?

(a) Mumbai
(b) Kolkata
(c) Kanpur
(d) Ahmedabad

Q97. Which Article of the Constitution mentions about establishing and maintaining institutions for religious and charitable purposes?

(a) Article 29
(b) Article 30
(c) Article 28
(d) Article 26

Q98. Which of the following is an example of application software?

(a) A programming language
(b) A word processor
(c) An operating system
(d) Printer Drivers

Q99. The Deccan Plateau is a _____landmass that lies to the south of the river Narmada.

(a) triangular
(b) hexagonal
(c) quadrilateral
(d) rectangular

Q100. In a situation wherein A (female) and B (male) are working in same office, same designation, same nature of work but unequal payment, which of the following Articles of the Constitution will be applicable?

(a) Article 21
(b) Article 48A

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(c) Article 18
(d) Article 39(d)

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (d) raining heavy

The correct answer is Option 4)

Key Points

• The primary issue in the sentence is the incorrect use of the adjective "heavy" instead of the adverb "heavily".
• Adjectives describe nouns, while adverbs describe verbs, adjectives, or other adverbs.
• The correct phrase should be "raining heavily," ensuring grammatical correctness and clarity.
• Thus, the error is located in Option 4 of the sentence.

Correct Sentence: "Don’t go outside because it is raining heavily."

Additional Information

• Option 1: "Don’t go" – This part of the sentence is grammatically correct and does not require any changes.
• Option 2: "because it is" – This part of the sentence is grammatically correct and does not require any changes.
• Option 3: "outside" – 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 Option 4.

Q2. Answer: (d) a leg.

The correct answer is Option 4)

Key Points

• The primary issue in the sentence is the use of the article "a" before the term "leg."
• When referring to a specific part of the body, the definite article "the" is typically used.
• The correct phrase should be "wounded in the leg," ensuring grammatical correctness and clarity.
• Thus, the error is located in part D of the sentence..

Correct Sentence: "The class teacher was wounded in the leg."

Additional Information

• A: "The class" – This part of the sentence is grammatically correct and does not require any changes.
• B: "teacher was" – This part of the sentence is grammatically correct and does not require any changes.
• C: "wounded in" – 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.

Q3. Answer: (a) I have met ever”.

The correct answer is Option 1)

Key Points

• The primary issue in the sentence is the placement of the word "ever".

• In English, the correct placement would be "I have ever met" instead of "I have met ever".
• The correct phrase should be "I have ever met", ensuring grammatical correctness and clarity.
• Therefore, the correct answer is Option 1.

Correct Sentence: "Today she said to her friend, "You're the sweetest person I have ever met."

Additional Information

• Option 2: "the sweetest person," – This part of the sentence is grammatically correct and does not require any changes.
• Option 3: "Today she said to," – This part of the sentence is grammatically correct and does not require any changes.
• Option 4: "her friend, "You're," – 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 Option 1.

Q4. Answer: (c) upon the bulletin board

The correct answer is Option 3)

Key Points

• The primary issue in the sentence is the use of the preposition "upon" in place of "on."
• The preposition "on" is more commonly used and appropriate when referring to something being displayed on a surface like a bulletin board.
• The correct phrase should be "on the bulletin board," ensuring grammatical correctness and clarity.
• Thus, the error is located in part 3 of the sentence.

Correct Sentence: "Please remember to take your notice to the reception area if you want it to be displayed on the bulletin board."

Additional Information

• 1: "Please remember to take" – This part of the sentence is grammatically correct and does not require any changes.
• 2: "your notice to the reception area" – This part of the sentence is grammatically correct and does not require any changes.
• 4: "if you want it to be displayed" – 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 3.

Q5. Answer: (a) living

The correct answer is Option 1)

Key Points

• The context of the sentence refers to a "living" reptile, emphasizing that it is still existent today, despite its ancient lineage.
• "Living" is the appropriate adjective that makes sense in describing the tuatara in this context.

Therefore, the correct answer is Option 1.

Additional Information

• Option 2: Life – Incorrect, as "life" is a noun and does not fit the structure of the sentence.
• Option 3: Entity – Incorrect, as "entity" does not properly convey the context provided by the passage.
• Option 4: Being – Incorrect, as "being" would imply a type of existence rather than the state of still being alive.

Q6. Answer: (a) develops

The correct answer is Option 1)

Key Points

• The context of the sentence is describing the physical growth of the tuatara.
• "Develops" is the appropriate verb, indicating the natural growth process of reaching a certain length.

Therefore, the correct answer is Option 1.

Additional Information

• Option 2: Nourishes – Incorrect, as "nourishes" implies providing sustenance or nutrition, which does not fit the context of physical growth in length.
• Option 3: Links – Incorrect, as "links" is unrelated to growth or development.
• Option 4: Creates – Incorrect, as "creates" implies making something new, which does not fit the context of describing the tuatara's growth.

Q7. Answer: (c) intriguing

The correct answer is Option 3)

Key Points

• The context of the sentence is describing the unique feature of the tuatara, particularly its third eye.
• "Intriguing" is the appropriate adjective that captures the curiosity and interest in such a rare feature.

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Therefore, the correct answer is Option 3.

Additional Information

• Option 1: Absorbing – Incorrect, as "absorbing" implies something that fully engages one's attention, which doesn't fit as well as "intriguing" in this context.

• Option 2: Escalating – Incorrect, as "escalating" refers to something increasing rapidly, which is not relevant to describing a feature.

• Option 4: Diverting – Incorrect, as "diverting" implies shifting attention away from something, which does not accurately describe the unique characteristic of the tuatara.

Q8. Answer: (a) distinct

The correct answer is Option 1)

Key Points

• The context of the sentence is describing how the tuatara's teeth differ from those of other reptiles.

• "Distinct" is the appropriate adjective that conveys how the teeth are notably different.

Therefore, the correct answer is Option 1.

Additional Information

• Option 2: Sharp – Incorrect, as "sharp" describes the quality of being pointed and does not adequately capture the idea of being different in kind or form.

• Option 3: Discrete – Incorrect, as "discrete" means individually separate and distinct, which is a very specific usage and not as fitting in this context.

• Option 4: Separate – Incorrect, as "separate" does not precisely describe the quality of being noticeably different in nature or kind.

Q9. Answer: (c) fertilised

The correct answer is Option 3)

Key Points

• The context of the sentence is describing the development of the tuatara's eggs during summer.

• "Fertilized" is the most appropriate term that fits the biological process relevant to eggs and reproduction.

Therefore, the correct answer is 'Option 3.'

Additional Information

• Option 1: Germinated – Incorrect, as "germinated" is a term used for seeds beginning to grow and not applicable to reptile eggs.

• Option 2: Pollinated – Incorrect, as "pollinated" is a term relevant to the fertilization of plants and flowers.

• Option 4: Fructified – Incorrect, as "fructified" is a term used to describe the process of producing fruit, which is not applicable in this context.

Q10. Answer: (a) Something that goes on day and night

The solution is in Hindi. Read it online.

Q11. Answer: (b) no room

The solution is in Hindi. Read it online.

Q12. Answer: (a) booming

The solution is in Hindi. Read it online.

Q13. Answer: (d) Clement

The solution is in Hindi. Read it online.

Q14. Answer: (b) amongst

The solution is in Hindi. Read it online.

Q15. Answer: (b) Vague

The solution is in Hindi. Read it online.

Q16. Answer: (c) Dead

The solution is in Hindi. Read it online.

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Q17. Answer: (d) Refusal

The solution is in Hindi. Read it online.

Q18. Answer: (a) The little

The solution is in Hindi. Read it online.

Q19. Answer: (b) Burning

The solution is in Hindi. Read it online.

Q20. Answer: (c) Profane

The solution is in Hindi. Read it online.

Q21. Answer: (a) Extremely good, interesting

The solution is in Hindi. Read it online.

Q22. Answer: (c) promotes sharing of traditional

The solution is in Hindi. Read it online.

Q23. Answer: (c) Stern

The solution is in Hindi. Read it online.

Q24. Answer: (a) Magnanimos

The solution is in Hindi. Read it online.

Q25. Answer: (c) Jugement

The solution is in Hindi. Read it online.

Q26. Answer: (d) TZD

The logic followed here is:
Option 1) QWD
Option 2) EKR
Option 3) RXE
Option 4) TZD
Thus, out of all the options 'TZD' is the odd one out.
Hence, "Option 4" is the correct answer.

Q27. Answer: (a) [figure]

The correct mirror image of the given figure is:
Hence, the correct answer is "Option 1".

Q28. Answer: (b) 778

The logic followed here is:
Hence, "778" is the correct answer.

Q29. Answer: (d) 4-52-22-34

The logic followed here is:
'GCJL' is coded as '14-6-20-24'

And,
'WTRO' is coded as '46-40-36-30'

Similarly,
'BZKQ' is coded as
Hence, "Option 4" is the correct answer.

Q30. Answer: (d) 94

Given Equation: 93 A 3 C 15 B 5 D 12 = ?
BODMAS Rule:

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Decoding the given information:

Alphabet	A	B	C	D
Meaning	÷	×	•	•

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

=> 93 ÷ 3 + 15 × 5 - 12 = ?

=> 31 + 15 × 5 - 12 = ?

=> 31 + 75 - 12 = ?

=> 106 - 12 = 94.

Hence, the correct option is "Option 4".

Q31. Answer: (c) [figure]

According to the given figure:

The figure will appear when it is opened as follows:

Hence, "Option 3" is the correct answer.

Q32. Answer: (d) tide

According to the given information,

Thus, according to the given codes 'zaa' is the code for the word 'tide'.

Hence, the correct answer is "Option 4".

Q33. Answer: (a) 11

Given : 73 - 27 × 9 + 5 ÷ 13 = ?

According to the question, after replacing the signs :

'+' and '-' are interchanged

'×' and '÷' are interchanged

So,

73 + 27 ÷ 9 - 5 × 13 = ?

73 + 3 - 5 × 13 = ?

73 + 3 - 65 = ?

76 - 65 = ?

11 = ?

Hence, "11" is the correct answer.

Q34. Answer: (c) M – N × O

Decoding the Symbols:

Symbol	•	–	×	÷
Meaning	Brother	Wife	Father	Daughter

Now,

Option 1) M ÷ N + O → M is the daughter of N who is the brother of O.

Here, M is the niece of O.

Option 2) M ÷ N × O → M is the daughter of N who is the father of O.

Here, M is the sister of O.

Option 3) M – N × O → M is the wife of N who is the father of O.

Here, M is the mother of O.

Option 4) M – N + O → M is the wife of N who is the brother of O.

Here, M is the sister-in-law of O.

Hence, "Option 3" is the correct answer.

Q35. Answer: (a) Monday

Given: 29 December 1956 was Saturday.

Now,

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1956 to 1966 = 10 Years (8 Ordinary Years and 2 Leap Years).
And, In 10 Years = 2 Leap years and 8 Ordinary Years.
So, 2 Leap Years have 4 odd days,
And, 8 Ordinary Years have 8 odd days.
Total odd days = 4 + 8 = 12.
12 odd days → 12/7 = 1 week and 5 odd days.
then, 29 December 1966 will be Saturday + 5 = Thursday.
Now, the number of days between 29 December 1966 to 16 January 1967
= 2(December) + 16(January) = 18 days.
= 18 days → 18/7 = 2 weeks and 4 odd days.
So, 16 January 1967 will be Thursday + 4 = Monday.
Hence, the correct answer is "Option 1".

Q36. Answer: (c) 225

The logic followed here is:
Hence, "225" is the correct answer.

Q37. Answer: (c) Pray

The faces opposite to each other are shown below:
=> As the alternate positions become opposite to each other, the remaining two faces become opposite to each other.
So, opposite pairs are:
Fly → Play
Cry → Eat
Pray → Run
Therefore, 'Pray' is the opposite of 'Run'.
Hence, "Pray" is the correct answer.

Q38. Answer: (c) Tuesday

Given: 26 September 2005 was Monday.
Now,
2005 to 2017 = 12 Years (9 Ordinary Years and 3 Leap Years).
And, In 12 Years = 3 Leap years and 9 Ordinary Years.
So, 3 Leap Years have 6 odd days,
And, 9 Ordinary Years have 9 odd days.
Total odd days = 6 + 9 = 15.
15 odd days → 15/7 = 2 weeks and 1 odd day.
then, 26 September 2017 will be Monday + 1 = Tuesday.
Hence, the correct answer is "Option 3".

Q39. Answer: (d) TWF

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

Q40. Answer: (a) NJGI

The logic followed here is:
PCNZ is related to ALWQ

And,
RYLD is related to EHUS

Similarly,
HAXM is related to
Hence, "Option 1" is the correct answer.

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Q41. Answer: (c) Both conclusions II and III follow.

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

Conclusions:

I. Some tables are beds → Does not follow (As some chairs are beds, all chairs are sofas and no sofa is a table. So it is possible but not definite.)

II. No table is a chair → Follow (As all chairs are sofas and no sofa is a table. As whole chairs comes in sofas which cannot be tables, therefore, table cannot be chair is true)

III. Some sofas are beds → Follow (As some chairs are beds and all chairs are sofas. As some parts of beds is common with chairs which whole comes in sofas, therefore, some sofas are beds is true.)

Therefore Here, Both conclusions II and III follow.

Hence, the correct answer is "Both conclusions II and III follow"

Q42. Answer: (b) (165, 55, 11)

The logic followed here is:

Logic: 1st number ÷ 3 = 2nd number; 2nd number ÷ 5 = 1st number;

Explanation:

For (45, 15, 3):

→ 45 ÷ 3 = 15

→ 15 ÷ 5 = 3

For, (120, 40, 8)

→ 120 ÷ 3 = 40

→ 40 ÷ 5 = 8

For (165, 55, 11):

→ 165 ÷ 3 = 55

→ 55 ÷ 5 = 11

Hence, the correct answer is "Option 2".

Q43. Answer: (c) [figure]

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

Therefore Here, the given figure is embedded in option Figure - 3.

Hence, the correct answer is "Option 3".

Q44. Answer: (a) 9

The number of rectangles in the given figure is shown below :

Here, as marked there are a total of 9 rectangles.

Hence, "Option 1" is the correct answer.

Q45. Answer: (d) 128

Given : 800 × 16 - 8 ÷ 12 + 18 = ?

According to the question, after replacing the signs :

‘+’ and ‘-’ are interchanged

‘×’ and ‘÷’ are interchanged

So,

800 ÷ 16 + 8 × 12 - 18 = ?

50 + 8 × 12 - 18 = ?

50 + 96 - 18 = ?

146 - 18 = ?

128 = ?

Hence, "128" is the correct answer.

Q46. Answer: (b) EXQ

The logic followed here is:

Hence, "Option 2" is the correct answer.

Q47. Answer: (b) 698

The logic followed here is:

Logic: 1st number + 111 = 2nd number.

Now,

For, 765 : 876

=> 765 + 111 = 876.

For, 682 : 793

=> 682 + 111 = 793.

Similarly, for 587 : ?

=> 587 + 111 = 698.

Hence, the correct answer is "Option 2".

Q48. Answer: (d) [figure]

The logic followed here is :

1) The number of arrows are increasing subsequently/

2) The new arrow is flipped vertically to its adjacent arrow respectively.

Thus, the final series is :

Hence, "Option 4" is the correct answer.

Q49. Answer: (a) 98

The logic follows here is:

Logic: (Number of alphabets in the word) × 7 = Code

'MANGO' is related to '35

→ 5 × 7 = 35

'CHERRIES' is related to '56'

→ 8 × 7 = 56

Similarly, for ADMINISTRATION

→ 14 × 7 = 98

So, "CHERRIES' will be related to '98'

Hence, the correct answer is "Option 1".

Q50. Answer: (b) Lime

The faces opposite to each other are shown below:

=> As the alternate positions become opposite to each other, the remaining two faces become opposite to each other.

So, opposite pairs are:

Pear → Lime

Mango → Plum

Kiwi → Melon

Therefore, 'Lime' is the opposite of 'Pear'.

Hence, "Lime" is the correct answer.

Q51. Answer: (a) 26.5%

Given:

In 1991:

Revenue from Journals = 45 lakh

Revenue from Magazines = 45 lakh

Revenue from Books = 80 lakh

Formula used:

Percentage of revenue from journals = (Revenue from Journals)/(Total Revenue) × 100

Calculations:

Total revenue = 45 + 45 + 80 = 170 lakh

=> Percentage from journals = 45/170 × 100

=> Percentage from journals = 26.47%

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Therefore The percentage of total revenue from journals in 1991 is 26.5% (rounded to one decimal place).

Q52. Answer: (b) 40.49 percent

Given:

Initial radius of the sphere = r

Increased radius of the sphere = r + 12% of r = r + 0.12r = 1.12r

Formula Used:

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

Calculation:

Initial volume, $V1 = 4/3\pi r^3$

New volume, $V2 = 4/3\pi (1.12r)^3$

$\Rightarrow V2 = 4/3\pi (1.12)^3r^3$

$\Rightarrow V2 = 4/3\pi (1.404928)r^3$

Percentage increase in volume = ((V2 - V1)/V1) × 100

Percentage increase in volume = $((4/3\pi (1.404928)r^3 - 4/3\pi r^3)/(4/3\pi r^3)) \times 100$

Percentage increase in volume = ((1.404928 - 1)/1) × 100

Percentage increase in volume = 0.404928 × 100

Percentage increase in volume ≈ 40.49%

The volume will be increased by approximately 40.49 percent

Q53. Answer: (d) 73/8

Simplify the given expression:

$8 - 5 \div 2^3 \times 3 + (7 \div 7 \times 7) \div 7 + (3 \times 6 \div 1/3) \times 1/3^3$

Solution:

1. Evaluate the exponents and fractions:

$2^3 = 8$

$1/3^3 = 1/27$

2. Simplify each part of the expression:

First part: 5 ÷ 8 × 3

5 ÷ 8 = 5/8

5/8 × 3 = 15/8

Second part: (7 ÷ 7 × 7) ÷ 7

7 ÷ 7 = 1

1 × 7 = 7

7 ÷ 7 = 1

Third part: (3 × 6 ÷ 1/3) × 1/27

3 × 6 = 18

18 ÷ 1/3 = 18 × 3 = 54

54 × 1/27 = 2

3. Combine all parts:

8 - 15/8 + 1 + 2

Convert 8 to a fraction: 8 = 64/8

Combine fractions: (64/8 - 15/8) + 1 + 2

49/8 + 1 + 2

Convert 1 and 2 to fractions: 1 = 8/8, 2 = 16/8

Combine: (49/8 + 8/8 + 16/8) = 73/8

Final Answer: The simplified value of the expression is 73/8.

Q54. Answer: (b) 2772

Shortcut Trick

The Volume of a cone is given by $V = (1/3) \times \pi \times r^2 \times h$.

Since the volume includes π (22/7), the answer must be a multiple of 11.

Checking options: 2772 → (2 + 7) − (7 + 2) = 0. This is divisible by 11.

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Calculation: V = (1/3) × (22/7) × 10.5 × 10.5 × 24 = 22 × 0.5 × 10.5 × 24 = 11 × 252 = 2772.

Therefore The correct answer is 2772 cm^3.

Alternate Method

Given:

Height (h) = 24 cm

Radius (r) = 10.5 cm

Formula Used:

Volume of a Right Circular Cone = (1/3) × π × r^2 × h

Calculations:

=> Volume = (1/3) × (22/7) × $(10.5)^2$ × 24

=> Volume = (1/3) × (22/7) × 10.5 × 10.5 × 24

=> Volume = (22/7) × 10.5 × 10.5 × 8

=> Volume = 22 × (10.5/7) × 10.5 × 8

=> Volume = 22 × 1.5 × 10.5 × 8

=> Volume = 33 × 84

=> Volume = 2772 cm^3

Therefore The correct answer is 2772 cm^3.

Additional Information

Slant Height of Cone

The distance from the apex to any point on the base circumference, l = √(r^2 + h^2).

Curved Surface Area (CSA)

The area of the side surface of the cone is given by π × r × l.

Total Surface Area (TSA)

The sum of the curved surface area and the area of the circular base, TSA = πr(l + r).

Volume Relation

The volume of a cone is exactly 1/3 of the volume of a cylinder with the same radius and height.

Q55. Answer: (c) 17 1/7

Given:

A and B can complete a piece of work in 12 days.

B and C can complete the same work in 15 days.

C and A can complete the same work in 10 days.

Formula Used:

Work done by A, B, and C together = Work done by (A + B) + Work done by (B + C) + Work done by (C + A) - 2 × (Work done by A + Work done by B + Work done by C)

Calculation:

Let the work done by A in one day be a.

Let the work done by B in one day be b.

Let the work done by C in one day be c.

From the given information:

a + b = 1/12

b + c = 1/15

c + a = 1/10

Adding all three equations:

(a + b) + (b + c) + (c + a) = 1/12 + 1/15 + 1/10

=> 2(a + b + c) = 1/12 + 1/15 + 1/10

=> 2(a + b + c) = (1)/(12) + (1)/(15) + (1)/(10)

Finding the common denominator (LCM of 12, 15, and 10 is 60):

=> 2(a + b + c) = (5)/(60) + (4)/(60) + (6)/(60)

=> 2(a + b + c) = (15)/(60)

=> 2(a + b + c) = 1/4

=> a + b + c = 1/8

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Now, substituting a + b + c = 1/8 in one of the earlier equations:
a + b = 1/12
=> (a + b + c) - c = 1/12
=> 1/8 - c = 1/12
=> c = 1/8 - 1/12
Finding the common denominator (LCM of 8 and 12 is 24):
=> c = (3)/(24) - (2)/(24)
=> c = 1/24
Similarly, find a:
c + a = 1/10
=> a = 1/10 - 1/24
Finding the common denominator (LCM of 10 and 24 is 120):
=> a = (12)/(120) - (5)/(120)
=> a = 7/120
Therefore, A can complete the work in:
=> 1/a = 120/7
=> 17 (1/7) days
The correct answer is option 3.

Q56. Answer: (a) 55º

Given:
angle BXC = 125º
Formula Used:
In a circle, the angle between the tangents (angle BAC) is equal to the difference between 180º and the angle subtended at the center (angle BXC).
angle BAC = (180º - angle BXC)
Calculation:
angle BXC = 125º
So, angle BAC = 180º - 125º = 55º
Therefore The correct measure of angle BAC is 55º.

Q57. Answer: (a) 256 cm2

Given:
Perimeter of the square = 64 cm
Formula Used:
Perimeter of a square = 4 × side
Area of a square = side²
Calculation:
Perimeter = 4 × side
=> 64 = 4 × side
=> side = 64 / 4
=> side = 16 cm
Area = side²
=> Area = 16²
=> Area = 256 cm²
The area of the square is 256 cm².

Q58. Answer: (d) 6900

Shortcut Trick
Let the total number of registered voters be 100 parts.
Votes cast = 90 parts (since 10% did not vote).
Winner's votes = 60% of 90 = 54 parts, and Loser's votes = 40% of 90 = 36 parts.
Winning margin = 54 parts − 36 parts = 18 parts.

Total registered voters = (1242 ÷ 18) × 100 = 69 × 100 = 6900.

Therefore The correct answer is 6900 voters.

Alternate Method

Given:

=> Percentage of registered voters who did not vote = 10%

=> Votes obtained by the winner = 60% of total votes cast

=> Winning margin = 1242 votes

Registered Voters (100x)

Did Not Vote (10x)

Votes Cast (90x)

Winner (54x)

Loser (36x)

Margin = 54x − 36x = 18x = 1242

Calculations:

Let the total number of registered voters be 100x.

=> Number of voters who cast their votes = 100x − 10x = 90x

=> Votes secured by the winning candidate = 60% of 90x = 54x

=> Votes secured by the losing candidate = 40% of 90x = 36x

=> Winning margin = Votes of winner − Votes of loser

=> 54x − 36x = 1242

=> 18x = 1242

=> x = 1242 ÷ 18 = 69

=> Total registered voters = 100x = 100 × 69 = 6900

Therefore The correct answer is 6900 voters.

Additional Information

Percentage Base Changes

When working with percentages on a changing base, always calculate the successive percentage on the new base (e.g., finding winner's votes as a percentage of the total votes cast, rather than the total registered voters).

Valid and Invalid Votes

In many election problems, a certain percentage of cast votes are declared invalid. The winning or losing percentage is then calculated based on the valid votes only: Valid Votes = Total Cast Votes − Invalid Votes.

Winning Margin Rule

The majority or winning margin in a two-candidate election is strictly the difference between the percentage of votes secured by the winner and the loser, multiplied by the total valid vote count.

Q59. Answer: (a) M − 100

Given :-

The average of 50 numbers N1, N2, ..., N50 is M.

2. Calculate the Sum of the 50 Numbers:

Since the average of the numbers is M, the sum of these 50 numbers can be expressed as:

Sum = Average × Number of Values

Sum = M × 50

3. Adjust Each Number by Subtracting 100:

We need to find the average of the new numbers N1-100, N2-100, ..., N50-100.

The sum of the new numbers is:

Sum of new numbers = (Sum of original numbers) - (100 × Number of Values)

Sum of new numbers = (M × 50) - (100 × 50)

Sum of new numbers = M × 50 - 5000

4. Calculate the Average of the New Numbers:

Average of new numbers = (Sum of new numbers) / Number of Values

Average of new numbers = (M × 50 - 5000) / 50

Average of new numbers = M - 100

Final Answer: The average of the numbers N1-100, N2-100, ..., N50-100 is M - 100.

Q60. Answer: (c) 11

Given:
Sides of the triangle: 6, 18, x
Formula Used:
For any triangle with sides a, b, and c: a + b > c, a + c > b, b + c > a
Calculation:
Given sides: 6, 18, x
1. 6 + 18 > x
=> 24 > x
=> x < 24
2. 6 + x > 18
=> x > 12
3. 18 + x > 6 (This condition is always true since x is a positive integer)
Combining the inequalities:
12 < x < 24
Possible integer values of x are: 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23
Number of possible values of x = 11
The number of possible values of x is 11.

Q61. Answer: (d) 166 2/3

Given:
Income of P is 40% less than Q.
Formula Used:
Combined Income = Income of P + Income of Q
Percentage Increase = (Combined Income - Income of P)/(Income of P) × 100
Calculation:
Let the income of Q be 100 units.
Income of P = 100 - 40% of 100
Income of P = 100 - 40
Income of P = 60 units
Combined Income = 60 + 100
Combined Income = 160 units
Percentage Increase = (160 - 60)/(60) × 100
Percentage Increase = (100)/(60) × 100
Percentage Increase = (100 × 100)/(60)
Percentage Increase = (10000)/(60)
Percentage Increase = 166.66%
166 ²/3%
The combined income of P and Q is 166 ²/3% more than the income of P.

Q62. Answer: (a) Rs. 91.08

Given:
Listed Price of the article = Rs. 100
Successive discounts = 10% and 20%
Transportation cost = 10% of the cost price
Desired profit = 15%
Formula Used:
Successive Discount Formula: (1 - discount1) × (1 - discount2) × Listed Price
Cost Price including transportation = Cost Price + 10% of Cost Price
Selling Price = Cost Price × (1 + Profit Percentage)
Calculation:

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Applying the successive discounts:
Cost Price after 10% discount = 100 × (1 - 0.10)
=> 100 × 0.90 = 90
Cost Price after additional 20% discount = 90 × (1 - 0.20)
=> 90 × 0.80 = 72
Transportation cost = 10% of 72
=> 0.10 × 72 = 7.2
Total Cost Price = 72 + 7.2
=> 79.2
Desired Selling Price for 15% profit = 79.2 × (1 + 0.15)
=> 79.2 × 1.15
=> 91.08
The price at which the dealer should sell the article to earn a profit of 15% is Rs. 91.08.

Q63. Answer: (a) 11

Given:
PQ is parallel to SR in a trapezium PQRS.
PQ > SR
Diagonals PR and QS intersect at O.
PO = 3x - 15
OQ = x + 9
OR = x - 5
OS = 5
Formula Used:
In a trapezium with diagonals intersecting at O, the ratio of the segments of the diagonals is equal.
PO/OR = OQ/OS
Calculation:
(3x - 15)/(x - 5) = (x + 9)/5
Cross-multiplying:
5(3x - 15) = (x + 9)(x - 5)
15x - 75 = x^2 - 5x + 9x - 45
15x - 75 = x^2 + 4x - 45
Rearranging the equation:
x^2 + 4x - 15x - 45 + 75 = 0
x^2 - 11x + 30 = 0
Solving the quadratic equation:
x = (-b ± √(b^2 - 4ac))/2a
Here, a = 1, b = -11, c = 30
x = (11 ± √(121 - 120))/2
x = (11 ± 1)/2
So, x1 = 12/2 = 6
And x2 = 10/2 = 5
Now, $x1^2$ - $x2^2$ = 6^2 - 5^2
$x1^2$ - $x2^2$ = 36 - 25
$x1^2$ - $x2^2$ = 11
The value of ($x1^2$ - $x2^2$) is 11.

Q64. Answer: (a) 42

Given:
The seven-digit number is 489y5z6, and it is divisible by 72.
For divisibility by 72, the number must be divisible by both 8 and 9.
Formula used:

Divisibility by 8: The last three digits (5z6) must be divisible by 8.
Divisibility by 9: The sum of all digits must be divisible by 9.
Calculations:
Step 1: Divisibility by 8
For divisibility by 8, the last three digits (5z6) must be divisible by 8.
=> If z = 3, 536 ÷ 8 = 67 (divisible)
=> If z = 7, 576 ÷ 8 = 72 (divisible)
Therefore, z can be 3 or 7.
Step 2: Divisibility by 9
The sum of digits (4 + 8 + 9 + y + 5 + z + 6) must be divisible by 9.
=> Sum = 32 + y + z
If z = 3:
32 + y + 3 = 35 + y. For divisibility by 9, 35 + y must be divisible by 9.
=> y = 2 (since 35 + 2 = 37, and 37 + 2 = 39, divisible by 9).
If z = 7:
32 + y + 7 = 39 + y. For divisibility by 9, 39 + y must be divisible by 9.
=> y = 6 (since 39 + 6 = 45, divisible by 9).
Step 3: Maximize the product of y and z
If z = 3 and y = 2, the product is 2 × 3 = 6.
If z = 7 and y = 6, the product is 7 × 6 = 42.
Therefore The highest possible product of y and z is 42, which matches option 1.

Q65. Answer: (a) 80 m

Given:
Ratio of speeds of Ankur and Neha = 5 : 6
Head-start for Ankur = 200 m
Total distance of race = 800 m
Formula Used:
Distance = Speed × Time
Calculation:
Let the speed of Ankur be 5 units and the speed of Neha be 6 units
Time taken by Ankur to complete 600 m race as head start given to him,
600 = 5 × Time
=> Time taken by Ankur = 120 units
Distance cover by Neha in 120 units of time,
=> 120 × 6
=> 720 m
Neha loses race by,
=> 800 m - 720 m = 80 m
Ankur will win by 80 m.

Q66. Answer: (c) 54°

Given:
Expenditure on royalty = 15%
Formula used:
Angle for a section of the pie chart = Percentage/100 × 360
Calculations:
=> Angle for royalty = 15/100 × 360
=> Angle for royalty = 0.15 × 360 = 54°
Therefore The angle of the pie-diagram showing the expenditure incurred on paying royalty is 54°.

Q67. Answer: (c) Rs. 720

Given:

Cost price of 1 metre of cloth = Rs. 480

Profit from selling 30 metres of cloth = Selling price of 10 metres of cloth

Formula Used:

Profit = Selling price - Cost price

Total profit from selling 30 metres = Selling price of 30 metres - Cost price of 30 metres

Selling price of 10 metres = 10 × Selling price of 1 metre

Calculation:

Let the selling price of 1 metre of cloth be Rs. x.

Profit from selling 30 metres = 30x - 30 × 480

Given that,

30x - 30 × 480 = 10x

=> 30x - 14400 = 10x

=> 30x - 10x = 14400

=> 20x = 14400

=> x = 14400 / 20

=> x = 720

The selling price of 1 metre of cloth is Rs. 720.

Q68. Answer: (b) 6.28

Shortcut Trick

An angle of 45° represents exactly 1/8 of the total 360° circle area.

Total Area of Circle = πr^2 = 3.14 × 4^2 = 3.14 × 16 = 50.24 cm^2.

Area of Sector = Total Area ÷ 8

Area of Sector = 50.24 ÷ 8 = 6.28 cm^2.

Therefore The correct answer is 6.28 cm^2.

Alternate Method

Given:

Radius (r) of the circle = 4 cm

Sector angle (θ) = 45°

π = 3.14

Formula Used:

Area of a Sector = (θ ÷ 360°) × πr^2

Calculations:

=> Area = (45 ÷ 360) × 3.14 × $(4)^2$

=> Area = (1 ÷ 8) × 3.14 × 16

=> Area = (16 ÷ 8) × 3.14

=> Area = 2 × 3.14

=> Area = 6.28 cm^2

Therefore The correct answer is 6.28 cm^2.

Additional Information

Length of an Arc

The distance along the curved boundary of the sector is calculated as L = (θ ÷ 360) × 2πr.

Perimeter of a Sector

The total boundary length of the sector is equal to the arc length plus two radii: P = L + 2r.

Area in terms of Arc Length

If the length of the arc (L) is known, the area of the sector can be written as Area = (1 ÷ 2) × L × r.

Area of a Segment

The area of the segment is the sector area minus the area of the triangle formed by the radii and the chord: Area = Sector Area − (1 ÷ 2)r^2 sin(θ).

Q69. Answer: (d) cotθ

Simplify the expression:

$(3\cos^3\theta - 2\cos\theta) / (\sin\theta - 3\sin^3\theta)$

Solution:

Let us use trigonometric identities to simplify the given expression.

We know the following trigonometric identity:

$\cos^3\theta = \cos\theta(1 - \sin^2\theta)$

$\sin^3\theta = \sin\theta(1 - \cos^2\theta)$

Substitute these identities into the expression:

Numerator:

$3\cos^3\theta - 2\cos\theta$

$= 3\cos\theta(1 - \sin^2\theta) - 2\cos\theta$

$= 3\cos\theta - 3\cos\theta\sin^2\theta - 2\cos\theta$

$= (3\cos\theta - 2\cos\theta) - 3\cos\theta\sin^2\theta$

$= \cos\theta - 3\cos\theta\sin^2\theta$

Denominator:

$\sin\theta - 3\sin^3\theta$

$= \sin\theta - 3\sin\theta(1 - \cos^2\theta)$

$= \sin\theta - 3\sin\theta + 3\sin\theta\cos^2\theta$

$= -2\sin\theta + 3\sin\theta\cos^2\theta$

We notice that:

$\cos\theta = 1 - \sin^2\theta$ and $\sin^2\theta = 1 - \cos^2\theta$.

Combine the simplified numerator and denominator:

Numerator: $\cos\theta - 3\cos\theta\sin^2\theta$

Denominator: $-2\sin\theta + 3\sin\theta\cos^2\theta$

By substituting and simplifying, we find:

The expression simplifies to: $(\cos\theta / \sin\theta) = \cot\theta$

Final Answer: The expression $(3\cos^3\theta - 2\cos\theta) / (\sin\theta - 3\sin^3\theta)$ is equal to $\cot\theta$.

Shortcut Trick Put $\theta = 90$, then $\cot 2\theta = 1/0$, undefined and $\cot\theta = 0$.

And the expression on putting is also 0.

So, answer is $\cot\theta$.

option a and b cannot be answer as given expression is in terms of $\cos\theta / \sin\theta$.

Q70. Answer: (a) x = 7, y = 5, z = 3

Given:

$x + y + z = 15$

$2x - y + z = 12$

$x - y - z = -1$

Formula Used:

Solving the system of linear equations using elimination or substitution method.

Calculation:

From equation 3: $x - y - z = -1$

$\Rightarrow x = y + z - 1$ ... (1)

Substitute equation (1) into equation 1:

$(y + z - 1) + y + z = 15$

$\Rightarrow y + z - 1 + y + z = 15$

$\Rightarrow 2y + 2z - 1 = 15$

$\Rightarrow 2y + 2z = 16$

$\Rightarrow y + z = 8$ ... (2)

Substitute equation (1) into equation 2:

$2(y + z - 1) - y + z = 12$

$\Rightarrow 2y + 2z - 2 - y + z = 12$

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=> y + 3z - 2 = 12
=> y + 3z = 14 ... (3)
From equation (2) and (3):
Subtract equation (2) from equation (3):
(y + 3z) - (y + z) = 14 - 8
=> 2z = 6
=> z = 3
Substitute z = 3 into equation (2):
y + 3 = 8
=> y = 5
Substitute y = 5 and z = 3 into equation (1):
x = y + z - 1
=> x = 5 + 3 - 1
=> x = 7
Solution:
x = 7, y = 5, z = 3

Q71. Answer: (c) A

Formula used:
Average manufacturing = (Sum of computers in 5 years)/5
Calculations:
For Company A:
Total = 240 + 300 + 1250 + 470 + 320 = 2580
Average = 2580/5 = 516
For Company B:
Total = 120 + 530 + 650 + 320 + 1070 = 2690
Average = 2690/5 = 538
For Company C:
Total = 270 + 490 + 430 + 1180 + 550 = 2920
Average = 2920/5 = 584
For Company D:
Total = 280 + 650 + 710 + 890 + 480 = 3010
Average = 3010/5 = 602
Therefore Company A has the minimum average of 516 thousand computers manufactured from 2010 to 2014.

Q72. Answer: (b) 16%

Given:
From the graph, the sales (in million units) for the three months are:
Shirt: 3 (January), 8 (March), 12 (May) = Total: 23
Trouser: 5 (January), 9 (March), 14 (May) = Total: 28
Coat: 7 (January), 10 (March), 11 (May) = Total: 28
T-shirt: 4 (January), 6 (March), 10 (May) = Total: 20 (Least selling)
Jacket: 6 (January), 7 (March), 13 (May) = Total: 26
Formula used:
Percentage of least selling item = (Least selling item)/(Total sales) × 100
Calculations:
Total sales of the company = 23 (Shirt) + 28 (Trouser) + 28 (Coat) + 20 (T-shirt) + 26 (Jacket) = 125 million units
Percentage of least selling item (T-shirt) = 20/125 × 100
=> Percentage = 16%
Therefore The percentage of the sale of the least selling item (T-shirt) over the total sale of the company is 16%.

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Q73. Answer: (c) 51/400

Given:

Percentage = 12.75%

Formula Used:

Fraction = Percentage / 100

Calculation:

12.75% is equivalent to 12.75 / 100

=> 12.75 / 100 = 1275 / 10000

=> 1275 / 10000 = 51 / 400

The correct answer is option 3.

Q74. Answer: (b) 11%

Given:

Principal amount (P) = Rs. 50,000

Amount after 4 years (A) = Rs. 72,000

Time (T) = 4 years

Formula Used:

Simple Interest (SI) = A - P

Rate of Interest (R) = (SI × 100) / (P × T)

Calculation:

Simple Interest (SI) = 72,000 - 50,000

SI = 22,000

Rate of Interest (R) = (22,000 × 100) / (50,000 × 4)

Rate of Interest (R) => (2,200,000) / (200,000)

Rate of Interest (R) => 11%

The rate of interest is 11% per annum.

Q75. Answer: (b) 4/5

Given:-

1. 8/11

2. 4/5

3. 1/2

4. 1/11

Solution:

To determine the greatest ratio, we can compare the fractions by converting them to a common denominator or by comparing their decimal values.

1. Convert each fraction to decimal form:

8/11 ≈ 0.727

4/5 = 0.8

1/2 = 0.5

1/11 ≈ 0.091

2. Compare the decimal values:

0.8 (4/5) > 0.727 (8/11) > 0.5 (1/2) > 0.091 (1/11)

Final Answer: The greatest ratio among the given options is 4/5.

Q76. Answer: (c) Football

The correct answer is Football

Key Points

• The term 'banana kick' is associated with the sport of Football.

• A banana kick is a type of kick that curves or bends in the air, typically used in free kicks and corner kicks.

• This technique is often used to navigate around defensive walls or to place the ball into the goal from a challenging angle.

• Famous footballers known for their banana kicks include legends like David Beckham and Roberto Carlos.

Additional Information

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• The physics behind a banana kick involves imparting spin to the ball, resulting in a curved trajectory due to the Magnus effect.
• Mastering the banana kick requires significant skill, practice, and an understanding of ball dynamics.
• This technique adds a strategic element to the game, allowing players to create scoring opportunities from set pieces.

Q77. Answer: (a) Spontaneous Radioactivity

The correct answer is Spontaneous Radioactivity

Key Points

• Henri Becquerel received the Nobel Prize in Physics in 1903 for his discovery of Spontaneous Radioactivity.
• He shared the prize with Marie Curie and Pierre Curie, who were also recognized for their work in the field of radioactivity.
• Henri Becquerel's discovery was pivotal in the development of atomic physics and the understanding of radioactive phenomena.
• This discovery was made when Becquerel found that uranium salts emitted rays that could expose photographic plates, even without sunlight.

Additional Information

• The Nobel Prize in Physics was established by the will of Alfred Nobel, the inventor of dynamite, and has been awarded annually since 1901.
• Henri Becquerel's work laid the groundwork for future research and applications in nuclear energy and medical diagnostics.
• Radioactivity is the process by which unstable atomic nuclei lose energy by emitting radiation, which can include alpha particles, beta particles, and gamma rays.
• Becquerel's discovery was initially accidental but led to significant advancements in both theoretical and applied physics.

Q78. Answer: (d) Kerala

The correct answer is Kerala

Key Points

• Kalaripayattu is an ancient martial art form that originated in the state of Kerala.
• It is considered one of the oldest fighting systems in existence and includes strikes, kicks, grappling, and weaponry.
• The word 'Kalaripayattu' is derived from the Malayalam words 'Kalari', meaning training ground, and 'Payattu', meaning fight.
• It has a rich history and is not just a martial art but also a way to enhance physical fitness, mental strength, and spiritual growth.

Additional Information

• Kalaripayattu is often referred to as the 'mother of all martial arts' due to its ancient origins.
• There are different styles of Kalaripayattu, primarily the Northern and Southern styles, each with its own unique techniques and training methods.
• It also incorporates elements of traditional Indian medicine and healing practices, including massage and herbal treatments.
• Kalaripayattu is not only practiced in Kerala but has also gained popularity in other parts of India and around the world.
• It has influenced the development of various other martial arts and is often showcased in cultural performances and films.

Q79. Answer: (d) 31 January 2023

The correct answer is Tue Jan 31 2023 00:00:00 GMT+0530 (India Standard Time)

Key Points

• The Maritime Anti-Piracy Act, 2022 received the assent of the President on Tue Jan 31 2023 00:00:00 GMT+0530 (India Standard Time).
• The Act aims to provide an effective legal framework to combat piracy and ensure the safety and security of maritime trade routes.
• It defines piracy and prescribes stringent punishments for those involved in such activities.
• The Act aligns with India's commitment to international conventions and treaties on maritime safety and security.

Additional Information

• Piracy is defined under the Act as any illegal act of violence, detention, or depredation committed for private ends by the crew or passengers of a private ship or aircraft, and directed on the high seas against another ship or aircraft, or against persons or property on board such ship or aircraft.
• The Act extends to the Exclusive Economic Zone (EEZ) of India and applies to all persons irrespective of their nationality.
• The legislation also provides for the establishment of designated courts for the speedy trial of piracy-related offenses.

Q80. Answer: (b) Dharmapala founded the Valabhi university.

The correct answer is Dharmapala founded the Valabhi university

Key Points

• Dharmapala founded the Vikramashila University, not the Valabhi university.

• The Pala Dynasty was an important ruling dynasty in eastern India, particularly in the regions of Bengal and Bihar.
• Devapala, the third ruler of the Pala Dynasty, was indeed the grandson of Gopala, the dynasty's founder.
• The Pala kings were notable patrons of Buddhism and played a significant role in the spread of Mahayana Buddhism in Tibet.
• Gopala, who founded the Pala dynasty, came to power around the mid-8th century CE.

Additional Information

• The Pala Dynasty is known for its contributions to the art, culture, and architecture of Bengal and Bihar regions.
• The dynasty's name "Pala" means "protector" and was used as a suffix to the names of all Pala monarchs.
• Dharmapala, one of the most prominent rulers of the Pala Dynasty, was instrumental in establishing the Pala influence over northern India.
• The Pala period is often regarded as a high point in the history of Bengal and Bihar, marked by prosperity and cultural flourishing.
• The Pala rulers were also known for their military prowess and diplomatic relations with other regional powers.

Q81. Answer: (b) Pandavani

The correct answer is Pandavani

Key Points

• Pandavani is a traditional folk music form from Chhattisgarh that is based on the epic Mahabharata.
• It is a narrative singing style where the performer enacts stories from the Mahabharata, often accompanied by musical instruments such as the tambura and harmonium.
• This form of storytelling is characterized by its dramatic and expressive performance, where the singer uses both song and speech to convey the tales of the Pandavas.
• Pandavani is not just a musical performance but also a theatrical one, involving gestures, facial expressions, and sometimes even props.

Additional Information

• Pandavani performers often belong to the Bhajan Mandali tradition, which is a group dedicated to performing devotional songs and stories.
• One of the most renowned Pandavani performers is Teejan Bai, who has received numerous awards for her contribution to this art form, including the Padma Shri and Padma Bhushan.
• The art form has been instrumental in preserving the oral tradition of the Mahabharata in the region, making it accessible to the local populace.
• Pandavani performances are usually held during festivals, special occasions, and in village gatherings, serving as a form of entertainment as well as cultural education.

Q82. Answer: (a) Christianity

The correct answer is Christianity

Key Points

• Good Friday is a significant day in Christianity.
• It commemorates the crucifixion of Jesus Christ and his death at Calvary.
• Good Friday is observed during Holy Week as part of the Paschal Triduum on the Friday preceding Easter Sunday.
• The day is marked by various religious activities, including church services, fasting, and prayers.
• It is a solemn day reflecting on the sacrifices made by Jesus Christ for humanity.

Additional Information

• Good Friday is also known as Holy Friday, Great Friday, Great and Holy Friday, and Black Friday.
• The date of Good Friday varies each year as it is based on the lunisolar calendar used in Christianity.
• In many countries, Good Friday is a public holiday, and various traditions and customs are followed to observe the day.
• The symbolism of the cross is paramount on Good Friday, representing the suffering and sacrifice of Jesus Christ.
• In some Christian denominations, the Stations of the Cross are observed, depicting the final hours of Jesus' life.

Q83. Answer: (c) Hola Mohalla

The correct answer is Hola Mohalla

Key Points

• Hola Mohalla is a significant Sikh festival celebrated with great enthusiasm.
• It was started by the tenth Sikh Guru, Guru Gobind Singh, as a gathering for military exercises and mock battles.
• The festival usually takes place during the month of March, coinciding with the Indian festival of Holi.

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• It is marked by a display of martial arts, poetry, and religious hymns, emphasizing the martial spirit of the Sikh community.

• The event is held at Anandpur Sahib in Punjab, where large processions and community meals (langars) are organized.

Additional Information

• Anandpur Sahib is one of the most important religious sites in Sikhism, established by Guru Tegh Bahadur, the ninth Sikh Guru.

• The festival of Hola Mohalla is a three-day event that includes kirtan, religious lectures, and discussions.

• It is a time for Sikhs to remember their heritage and the sacrifices made by their ancestors.

• Participants also engage in physical activities such as wrestling, sword fighting, and horse riding, showcasing their skills and valor.

• In addition to the martial displays, cultural activities like poetry recitations and music performances are also held.

Q84. Answer: (c) Louis Pasteur

The correct answer is Louis Pasteur

Key Points

• Louis Pasteur developed the technique of preserving the quality of food by raising its temperature to prevent microbial growth in the food.

• This process is known as pasteurization, named after Louis Pasteur.

• Pasteurization involves heating the food to a specific temperature for a set period and then cooling it immediately.

• This technique is widely used in the dairy industry to extend the shelf life of milk and other dairy products.

• Besides dairy, pasteurization is also used for juices, canned foods, and various other consumables to ensure safety and longevity.

Additional Information

• Louis Pasteur was a French biologist, microbiologist, and chemist renowned for his discoveries of the principles of vaccination, microbial fermentation, and pasteurization.

• His work in germ theory also led to significant advancements in the field of microbiology and the development of vaccines for diseases like rabies and anthrax.

• Pasteur's contributions have had a lasting impact on public health, food safety, and the overall understanding of microbiology.

• He is often regarded as one of the founders of modern microbiology.

Q85. Answer: (d) Certificates of deposits

The correct answer is Certificates of deposits

Key Points

• Certificates of deposits are issued by commercial banks at a discount on face value.

• They are a type of time deposit with a fixed maturity date and specified interest rate.

• Certificates of deposits are negotiable instruments, meaning they can be transferred from one party to another.

• They are often used by banks to raise funds from the market.

• The interest rate on certificates of deposits is generally higher than that on regular savings accounts, making them an attractive investment option for large investors.

Additional Information

• Promissory notes are written promises to pay a certain amount of money at a future date but are not issued at a discount.

• Commercial papers are unsecured short-term debt instruments issued by corporations, not commercial banks.

• Treasury bills are short-term government securities issued at a discount but by the government, not commercial banks.

Q86. Answer: (c) High Yielding Variety

The correct answer is High Yielding Variety

Key Points

• The term High Yielding Variety (HYV) refers to seeds that are engineered to produce more crops per area planted compared to traditional varieties.

• The introduction of HYV seeds was a crucial component of the Green Revolution, which significantly boosted agricultural productivity, particularly in developing countries.

• These seeds are often more resistant to pests and diseases and can grow in a variety of climatic conditions, making them highly adaptable.

• The use of HYV seeds typically requires the application of modern agricultural techniques, including the use of fertilizers and irrigation.

• While HYV seeds have contributed to increased food production, they also necessitate careful management to avoid issues such as soil degradation and water resource depletion.

Additional Information

• The Green Revolution began in the 1960s and was marked by the adoption of new agricultural technologies, including HYV seeds, chemical fertilizers, and pesticides.

• It led to a substantial increase in food grain production, particularly in countries like India and Mexico.

• The Green Revolution played a significant role in transforming agriculture from subsistence farming to commercial farming, making many countries self-sufficient in food production.

• However, the Green Revolution also brought challenges such as environmental damage, increased inequality among farmers, and the marginalization of smallholders.

Q87. Answer: (c) Left

The correct answer is Left

Key Points

• Left alignment is the default alignment of text in a Microsoft Word document.

• In left-aligned text, the text is aligned with the left margin, and the right edge of the text is ragged.

• This alignment is commonly used for most documents as it provides a clean and organized look.

• Other alignment options in Microsoft Word include right, center, and justified, which can be selected based on the formatting requirements.

• Left alignment ensures that the text starts at the same point on the left side, making it easier to read and follow.

Additional Information

• Microsoft Word is a widely used word processing software developed by Microsoft.

• It offers various formatting tools to enhance the appearance of documents, including text alignment options.

• Users can change the text alignment by selecting the text and choosing the desired alignment option from the toolbar or the "Paragraph" settings.

• Understanding text alignment is essential for creating professional and well-structured documents.

Q88. Answer: (c) Madhya Pradesh

The correct answer is Madhya Pradesh

Key Points

• The Tansen Samman is an award initiated by the government of Madhya Pradesh.

• This award is given in the field of Hindustani classical music.

• It is named after the legendary musician Tansen, who was one of the nine gems in the court of Mughal Emperor Akbar.

• The award aims to recognize outstanding contributions to the field of music.

• The state of Madhya Pradesh is known for its rich cultural heritage and contributions to classical music.

Additional Information

• Tansen, also known as Ramtanu Pandey, was a prominent figure in Hindustani classical music.

• Madhya Pradesh organizes the annual Tansen Music Festival in Gwalior to honor his legacy.

• The festival attracts musicians and music lovers from across the country and the world.

• The Tansen Samman is one of the prestigious awards in the Indian classical music community.

• The award not only honors the recipient but also promotes the rich musical traditions of India.

Q89. Answer: (a) Calcutta

The correct answer is Calcutta

Key Points

• Calcutta was the location where India's first hockey club was founded.

• The club was established in 1885-86, making it a significant event in the history of Indian hockey.

• Calcutta, now known as Kolkata, has a rich history of sports and was a major center for various sporting activities during the British colonial period.

• The establishment of the hockey club in Calcutta marked the beginning of organized hockey in India.

• This event played a crucial role in popularizing the sport across the country and laid the foundation for India's future successes in international hockey.

Additional Information

• Hockey is a popular sport in India, with a rich history and numerous achievements on the international stage.

• India has won multiple Olympic gold medals in hockey, with the first gold coming in 1928.

• The Indian hockey team is known for its skillful play and has produced many legendary players over the years.

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• Efforts have been made to revive the sport in the country through various leagues and grassroots programs.

• Hockey continues to be a source of pride and inspiration for many Indians.

Q90. Answer: (c) Rajasthan

The correct answer is Rajasthan

Key Points

• The Raika tribe is predominantly found in the state of Rajasthan, India.

• The Raikas are traditionally pastoralists and are known for their expertise in camel breeding.

• They play a significant role in the rural economy of Rajasthan, particularly in the Thar Desert region.

• The tribe has a rich cultural heritage and unique traditions that are closely linked to their pastoral lifestyle.

Additional Information

• Rajasthan is the largest state in India by area and is known for its rich history, cultural heritage, and natural beauty.

• The state is home to several other tribes, including the Bhils, Minas, and Garasias.

• Rajasthan's economy is primarily agrarian, with agriculture, animal husbandry, and tourism being the main sources of income.

• The Thar Desert, also known as the Great Indian Desert, covers a significant portion of Rajasthan and is the most densely populated desert in the world.

Q91. Answer: (a) Regulating Act

The correct answer is Regulating Act

Key Points

• The Regulating Act of 1773 was the first step taken by the British Government to control and regulate the affairs of the East India Company in India.

• This act marked the beginning of a parliamentary control over the company and introduced significant administrative reforms.

• One of the key provisions of the Regulating Act was the establishment of a Supreme Court at Calcutta, which was set up in 1774.

• The Supreme Court was intended to administer justice to British subjects in Bengal, Bihar, and Orissa.

• This act also laid the foundation for the subsequent acts and reforms in the Indian administrative structure.

Additional Information

• The Regulating Act was passed by the British Parliament in 1773 to address the financial and administrative issues faced by the East India Company.

• It required the company to report its revenue and administrative activities to the British government.

• The act also established the office of the Governor-General of Bengal and created a council to assist the Governor-General.

• The Regulating Act was followed by other significant legislations such as the Pitt's India Act (1784), which further reformed the company's administration and brought it under stricter control of the British government.

Q92. Answer: (d) Operation Ganga

The correct answer is Operation Ganga

Key Points

• Operation Ganga was the mission launched by the Government of India in January 2022 to evacuate Indians stranded in Ukraine.

• This operation was initiated in response to the escalating conflict between Russia and Ukraine, which posed significant risks to Indian nationals in the region.

• The mission involved coordinated efforts by multiple Indian government agencies, including the Ministry of External Affairs, the Indian Air Force, and various airlines, to ensure the safe return of Indian citizens.

• Special flights were arranged to facilitate the evacuation, and Indian embassies and consulates in neighboring countries provided necessary assistance to evacuees.

• The operation underscored India's commitment to the safety and well-being of its citizens abroad.

Additional Information

• Operation Safe Homecoming was the mission launched in 2011 to evacuate Indians from Libya during the civil war.

• Operation Raahat was the mission launched in 2015 to evacuate Indians from Yemen during the conflict.

• Operation Vande Bharat was the mission launched in 2020 to repatriate Indians stranded abroad due to the COVID-19 pandemic.

• The Government of India has a history of conducting such evacuation missions to ensure the safety of its citizens during international crises.

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Q93. Answer: (d) constellation

The correct answer is constellation

Key Points

• Ursa Major is a constellation, which is a group of stars forming a recognizable pattern traditionally named after its apparent form or identified with a mythological figure.

• It is one of the most famous constellations in the night sky and is also known as the Great Bear.

• Ursa Major contains the asterism known as the Big Dipper, which is one of the most easily recognizable patterns in the sky.

• The Big Dipper's "pointer" stars can be used to find the North Star (Polaris), making it an important constellation for navigation.

• It is visible throughout the year in most of the northern hemisphere.

Additional Information

• The name "Ursa Major" is Latin for "Greater Bear," and its mythology can be traced back to several ancient cultures.

• In Greek mythology, Ursa Major is associated with the nymph Callisto, who was transformed into a bear and placed in the sky by Zeus.

• Ursa Major has been recognized and represented in various ways by different cultures, including Native American, Hindu, and Chinese traditions.

• The constellation is part of the family of constellations that includes Ursa Minor, Draco, and Boötes.

• Stars in Ursa Major are relatively close to Earth, and some of them are part of the Ursa Major Moving Group, a cluster of stars that share a common motion through space.

Q94. Answer: (c) 17.64%

The correct answer is 17.64

Key Points

• 17.64 is the population growth rate as per the Census-2011.

• The Census is conducted every ten years to collect data on various demographic parameters in India.

• The growth rate indicates the percentage increase in the population over the decade.

• This data is crucial for planning and development purposes at both the central and state government levels.

Additional Information

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

• The first complete census in India was conducted in the year 1881.

• The Census provides comprehensive data on population size, distribution, and various socio-economic characteristics.

• The data from the Census is used for policy-making, administration, and planning for various sectors such as health, education, and employment.

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

• Population growth rates can vary significantly between different regions and states within India.

Q95. Answer: (d) Section 62 (5)

The correct answer is Section 62 (5)

Key Points

• Section 62 (5) of the Representation of People's Act, 1951, deprives prisoners of their right to vote.

• This section states that no person shall vote at any election if he is confined in a prison, whether under a sentence of imprisonment or transportation or otherwise, or is in the lawful custody of the police.

• The provision applies to all individuals in prison, irrespective of the nature of the crime or the duration of the sentence.

• However, this disqualification does not apply to those under preventive detention.

• The rationale behind this provision is to maintain the sanctity and security of the electoral process.

Additional Information

• The Representation of People's Act, 1951 was enacted to provide for the conduct of elections to the Houses of Parliament and to the House or Houses of the Legislature of each State, the qualifications and disqualifications for membership of those Houses, the corrupt practices and other offenses at or in connection with such elections, and the decision of doubts and disputes arising out of or in connection with such elections.

• This Act is a key piece of legislation that ensures free and fair elections in India.

• It has been amended multiple times to address various electoral issues and to strengthen the electoral process.

• The Act also provides for the appointment of election tribunals for the adjudication of disputes arising out of or in connection with elections.

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• Section 62 is specifically dedicated to the "Right to vote," outlining who is entitled to vote and who is disqualified from voting.

Q96. Answer: (d) Ahmedabad

The correct answer is Ahmedabad

Key Points

• Ahmedabad is referred to as the 'Manchester of India'.

• This nickname was given due to its thriving textile industry, which is similar to the industrial city of Manchester in the United Kingdom.

• Ahmedabad has numerous textile mills and is a major center for the production and export of textiles in India.

• The city has a rich history in the textile sector, contributing significantly to the economy and providing employment to many.

Additional Information

• Ahmedabad is the largest city in the state of Gujarat.

• The city has a population of over 5.5 million people and is known for its rich cultural heritage and historical significance.

• Ahmedabad is also an important economic and industrial hub, with a diverse range of industries including chemicals, pharmaceuticals, and IT.

• The city is home to several prestigious educational institutions and is known for its vibrant culture and festivals.

Q97. Answer: (d) Article 26

The correct answer is Article 26

Key Points

• Article 26 of the Constitution of India mentions the freedom to manage religious affairs.

• It specifically states that every religious denomination or any section thereof shall have the right to establish and maintain institutions for religious and charitable purposes.

• This article ensures that religious groups have the autonomy to manage their own affairs in matters of religion.

• It is part of the fundamental rights guaranteed under the Constitution, ensuring religious freedom and the right to manage religious institutions.

Additional Information

• Article 26 is a crucial part of the Constitution, protecting the rights of religious denominations to maintain their own institutions and manage their own affairs.

• It is one of the fundamental rights provided under Part III of the Constitution, which deals with the fundamental rights of citizens.

• This article helps in preserving the cultural and religious diversity of India by allowing religious groups to operate independently and maintain their traditions and practices.

• It complements other articles in the Constitution that provide for religious freedom and the right to practice and propagate religion.

Q98. Answer: (b) A word processor

The correct answer is A word processor

Key Points

• A word processor is an example of application software.

• Application software is designed to help users perform specific tasks or activities on a computer.

• Examples of application software include word processors, spreadsheets, database management systems, and web browsers.

• Unlike system software, which manages the hardware and basic system operations, application software is focused on helping the user achieve specific goals.

Additional Information

• Programming languages are used to create software applications but are not applications themselves.

• Operating systems are system software that manage computer hardware and software resources.

• Web browsers are indeed application software used to access and navigate the internet.

• Application software can be categorized into various types such as productivity software, educational software, and entertainment software.

Q99. Answer: (a) triangular

The correct answer is triangular

Key Points

• The Deccan Plateau is a triangular landmass that lies to the south of the river Narmada.

• It is one of the largest plateaus in India, covering an area of about 1.9 million square kilometers.

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• The plateau is bounded by the Eastern Ghats and the Western Ghats, which converge at the southern tip of India.

• The Deccan Plateau is known for its rich mineral resources and diverse ecosystems.

• The region is characterized by its elevated terrain, with an average elevation ranging from 100 meters to 1,000 meters above sea level.

Additional Information

• The Deccan Plateau extends over eight Indian states, including Maharashtra, Telangana, Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, and parts of Madhya Pradesh and Chhattisgarh.

• It is rich in volcanic soils, which are beneficial for agriculture, particularly for growing cotton and other crops.

• The region has a significant historical and cultural heritage, with many ancient temples, forts, and monuments.

• The plateau is also home to several major rivers, including the Godavari, Krishna, and Kaveri, which are vital for irrigation and water supply in the region.

• The climate of the Deccan Plateau varies from arid and semi-arid in the northwest to more humid conditions in the southeast.

Q100. Answer: (d) Article 39(d)

The correct answer is Article 39(d)

Key Points

• Article 39(d) of the Constitution of India mandates that the state shall, in particular, direct its policy towards securing that there is equal pay for equal work for both men and women.

• This article falls under the Directive Principles of State Policy (DPSP), which are guidelines for the framing of laws by the government.

• The DPSPs are non-justiciable, meaning they are not enforceable by any court, but they are considered fundamental in the governance of the country.

• Article 39(d) aims to eliminate gender discrimination in terms of wage disparity and ensure economic justice.

Additional Information

• Article 21 of the Constitution of India guarantees the protection of life and personal liberty.

• Article 48A deals with the protection and improvement of the environment and safeguarding of forests and wildlife.

• Article 18 abolishes titles except for military and academic distinctions.

• The Directive Principles of State Policy are enshrined in Part IV of the Indian Constitution, and they aim to create social and economic conditions under which citizens can lead a good life.

• Although not enforceable by courts, these principles are crucial for governance and are considered fundamental in the governance of the country.

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