SSC CHSL Previous Paper 52 (Held On: 25 March 2018 Shift 3) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2018 • 100 questions • 60 minutes • Answer key and solutions

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

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ENGLISH LANGUAGE

Q1. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

(a) frothyest
(b) frothiest
(c) frrothiest
(d) frrothyest

Q2. The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

People used to preserve

A-companionship in absentia

B- letters for years as these humble pieces

C- of paper afforded

(a) BAC
(b) BCA
(c) ACB
(d) ABC

Q3. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select 'no improvement'.

The art of movement (has been), in complicated ways, culture-driven.

(a) have been
(b) is been
(c) was been
(d) no improvement

Q4. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select 'no improvement'.

Cyclones (was identified) by the year of their occurrence, and remembered for the devastation they caused.

(a) is identified
(b) were identify
(c) were identified
(d) no improvement

Q5. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

Portray in words

(a) Ensconce
(b) Depict
(c) Veil

(d) Obscure

Q6. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

Extreme self-confidence or audacity

(a) Petrified
(b) Abashed
(c) Skittish
(d) Chutzpah

Q7. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

Never-never land

(a) An imaginary utopian place or situation.
(b) A place that is worse than hell.
(c) A place that you know that you will never be able to visit.
(d) A popular place about which you have heard such stories that you would not like to go there.

Q8. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

Kitty-corner

(a) Favourite place of cats.
(b) A place where ladies meet to party.
(c) A very small place.
(d) Things located diagonally opposite each other.

Directions

In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

Change is more often than _____ the trigger for struggles in the leadership arena. Leaders usher _____ organisational change, which creates a natural tension as the status quo fights back. With various factors in the mix, _____ imbalance is created that impacts leaders and followers in multiple and varying ways. _____, the leader gets the roughest edge as he is seemingly the most '_____' one.

Q9. more often than _____ the trigger for struggles

(a) no
(b) none
(c) not
(d) nor

Q10. Leaders usher _____ organisational change,

(a) onto
(b) inside
(c) in
(d) as

Q11. factors in the mix, _____ imbalance is created

(a) an
(b) a
(c) the
(d) only

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Q12. multiple and varying ways. _____, the leader

(a) Ironically
(b) Irony
(c) Ironical
(d) Ironic

Q13. as he is seemingly the most '_____' one.

(a) power
(b) powerfully
(c) powerful
(d) powering

Q14. In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word.

(a) Auixiliary
(b) Auxiliary
(c) Auxiliarry
(d) Auixliary

Q15. A sentence has been given in Direct/Indirect Speech. Out of the four given alternatives, select the one which best expresses the same sentence in Indirect/Direct Speech.

The lawyer said to them, "Call the witness."

(a) The lawyer asked for the witness.
(b) The witness be called by the lawyer.
(c) The lawyer called the witness.
(d) The lawyer commanded them to call the witness.

Q16. A sentence has been given in Active/Passive Voice. Out of the four given alternatives, select the one which best expresses the same sentence in Passive/Active Voice.

The teacher should check the homework.

(a) The homework should be checked by the teacher.
(b) The homework is checked by the teacher.
(c) The teacher is responsible for checking homework.
(d) The homework will be checked by the teacher.

Q17. Rearrange the parts of the sentence in correct order.

The whole biosphere, like

P : a chemically dynamic state

Q : the individual organisms that

R : live inside it, exists in

(a) RQP
(b) QRP
(c) QPR
(d) PQR

Q18. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.

Objective

(a) Fair
(b) Detached
(c) Straight
(d) Prejudiced

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Q19. In the following question, out of the given four alternatives, select the one which is opposite in meaning to the given word.

Guile

(a) Cleverness
(b) Suspicious
(c) Dishonesty
(d) Honesty

Q20. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Austerity

(a) Strict
(b) Moist
(c) Tolerant
(d) Kindness

Q21. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

Empirical

(a) Practical
(b) Unproved
(c) Hypothetical
(d) Theoretical

Q22. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

Many lost dogs _____ been given back to their owners.

(a) have
(b) is
(c) has
(d) would

Q23. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

She does not agree, and _____ does Anita.

(a) also
(b) even
(c) neither
(d) so

Q24. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

It is easy to fall victim (1)/ not only to those who may hurt or mistreats us, (2)/ but also to our own anger. (3)/ No error (4)

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

Q25. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

Each nation aspire to do well, (1)/ but there are glaring economical (2)/ inequalities among them. (3)/ No error (4)

(a) 1
(b) 2

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(c) 3
(d) 4

GENERAL INTELLIGENCE

Q26. In the following question, select the related word pair from the given alternatives.

Sorrow : Black : : ? : ?

(a) Red : Green
(b) Rank : Star
(c) Danger : Green
(d) Pink : Pencil

Q27. In the following question, select the related number from the given alternatives.

43 : 66 : : 91 : ?

(a) 114
(b) 124
(c) 126
(d) 108

Q28. In the following question, select the related letter/letters from the given alternatives.

MPQ : JMN : : KSV : ?

(a) HPT
(b) GQT
(c) GQS
(d) HPS

Q29. In the following question, select the odd word from the given alternatives.

(a) Brain
(b) Liver
(c) Eyes
(d) Lungs

Q30. In the following question, four number pairs are given. The number on left side of (–) is related to the number on the right side of (–) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

(a) 61 – 66
(b) 41 – 46
(c) 32 – 37
(d) 43 – 46

Q31. In the following question, select the odd letter/letters from the given alternatives.

(a) ZVQM
(b) XTPL
(c) NJFB
(d) TPLH

Q32. Arrange the given words in the sequence in which they occur in the dictionary.

1. Draining 2. Drainer 3. Draught 4. Dramatic 5. Drank

(a) 5, 2, 3, 1, 4
(b) 3, 2, 5, 1, 4
(c) 1, 4, 5, 2, 3
(d) 2, 1, 4, 5, 3

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Q33. In the following question, select the missing number from the given series.

56, 70, 98, 140, 196, ?

(a) 236
(b) 256
(c) 266
(d) 206

Q34. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

GM, KJ, OG, SD, ?

(a) WA
(b) XB
(c) VC
(d) WZ

Q35. Pointing to a man in the photograph Manisha said, “He is the father of the only daughter of my mother”. How is Manisha related to that man?

(a) Mother
(b) Daughter
(c) Aunt
(d) Niece

Q36. From the given alternatives, select the word which CANNOT be formed using the letters of the given word.

UNIVERSITY

(a) Tune
(b) Until
(c) Very
(d) Try

Q37. In a certain code language, “FILMY” is written as “BNORU”. How is “RISKY” written in that code language?

(a) BPHRI
(b) CRHLI
(c) RHCHY
(d) YBPHR

Q38. In a certain code language, '-' represents '×', '÷' represents '+', '+' represents '÷' and '×' represents '-'. Find out the answer to the following question.

15 - 12 + 5 × 9 ÷ 12 = ?

(a) 25
(b) 7
(c) 39
(d) 5

Q39. The following equation is incorrect. Which two signs should be interchanged to correct the equation?

5 - 16 × 30 ÷ 10 + 4 = 49

(a) • and +
(b) ÷ and ×
(c) × and –
(d) ÷ and –

Q40. If 13&8 = 10, 11&6 = 10 and 17&4 = 26, then find the value of 15&1 = ?

(a) 4
(b) 6
(c) 28

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(d) 18

Q41. Which of the following terms follows the trend of the given list?

CABABABAB, ACBABABAB, ABCABABAB, ABACBABAB, ABABCABAB, _____.

(a) ABABABCAB
(b) ABABACBAB
(c) CABABABAB
(d) ACBABABAB

Q42. A villager walks 3 km East, then turns South and walks 1.5 km, then turns East and walks 2 km, then turns to his left and walks 1.5 km. Where is he now with respect to the starting position?

(a) 5 km East
(b) 1 km East
(c) 5 km West
(d) 1 km West

Q43. In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement I: No wires are cables.

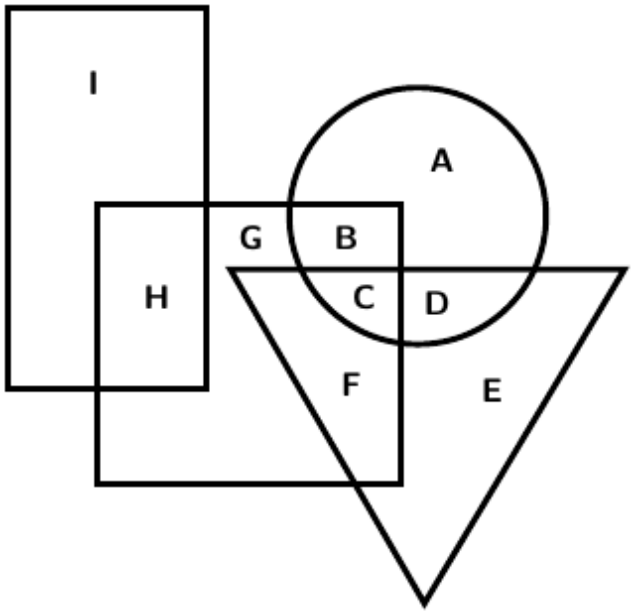
Statement II: No coils are wires.

Conclusion I: No cables are coils.

Conclusion II: Some coils are cables.

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

Q44. In the following figure, rectangle represents Teachers, circle represents Illustrators, triangle represents Writers and square represents Asians. Which set of letters represents Asians who are either Illustrators or Writers or both?



(a) FCD
(b) GBA
(c) BCF
(d) FE

Q45. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

UHQ, OBK, IVE, CPY, ?

(a) WJS
(b) XKT
(c) YLU
(d) VIR

Q46. In the following question, select the missing number from the given series.

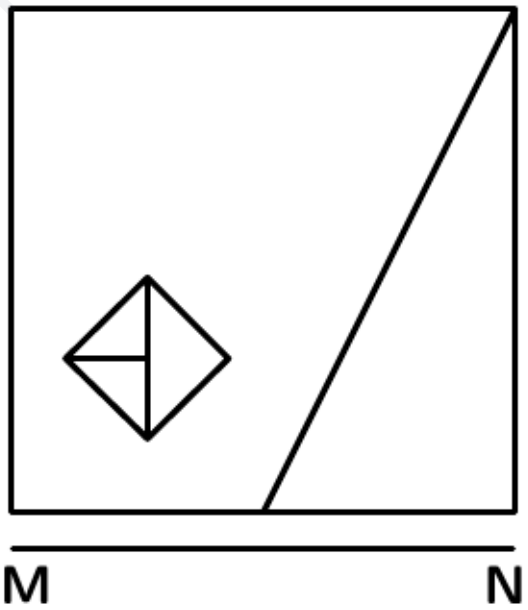
32, 36, 42, 50, 60, ?

(a) 72
(b) 70
(c) 78
(d) 68

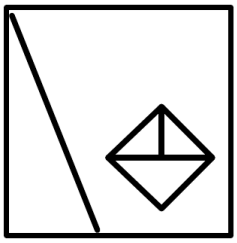
Q47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

(a) (6, 19, 13)
(b) (7, 21, 15)
(c) (18, 55, 37)
(d) (15, 46, 31)

Q48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

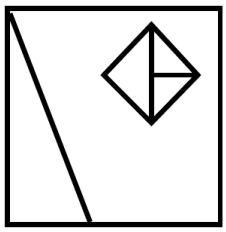


(a)

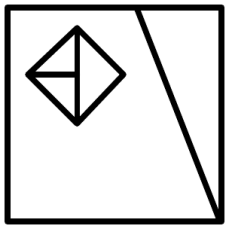


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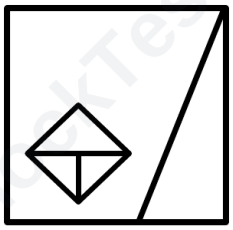
(b)



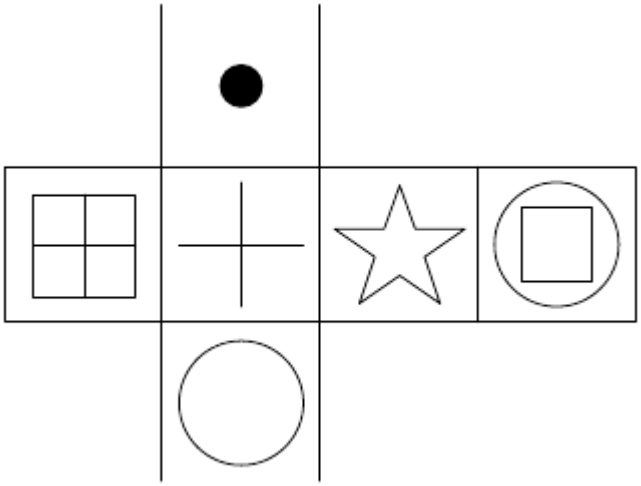
(c)



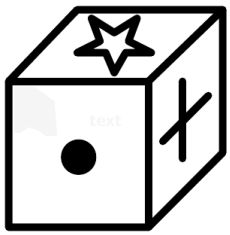
(d)



Q49. Which of the following cubes in the answer figures cannot be made based on the unfolded cube in the question figure?

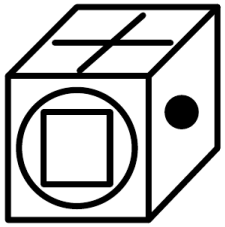


(a)

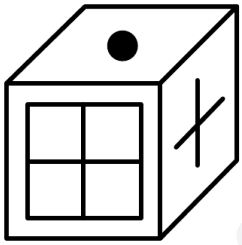


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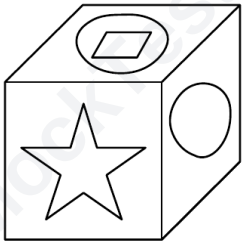
(b)



(c)



(d)



Q50. A word is represented by only set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example ‘J’ can be represented by 32, 41 etc and ‘V’ can be represented by 76, 97 etc. Similarly, you have to identify the set for the word ‘ANTS’.

Matrix-I					
	0	1	2	3	4
0	H	B	C	L	B
1	F	G	M	C	H
2	E	D	G	H	M
3	L	G	J	C	A
4	K	J	E	H	I

Matrix-II					
	5	6	7	8	9
5	P	O	T	R	Q
6	P	Q	N	Q	P
7	R	V	Y	Y	U
8	N	W	N	R	W
9	S	O	V	Y	Z

(a) 23, 89, 43, 78
(b) 31, 66, 42, 95
(c) 34, 67, 57, 95

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(d) 22, 89, 13, 88

QUANTITATIVE APTITUDE

Q51. Find the unit place digit in (82)^(102) + (183)^(103).

(a) 1
(b) 6
(c) 8
(d) 9

Q52. Find the value of √(5√(5√(5√5)))~

(a) 5^(1/16)
(b) 5^(16/32)
(c) 5^(15/16)
(d) 5^(1/32)

Q53. If √y = √4 - √6, then find the value of y^2 - 20y + 12.

(a) 4
(b) 8
(c) 10
(d) 12

Q54. If x and y are different positive integer numbers and 3x/y = 4 then find the minimum value of (3x + 4y).

(a) 6
(b) 1
(c) 24
(d) 8

Q55. How many tangents can be drawn to the two circles, whose radii are equal to 4 cm and 5 cm respectively and the distance between the two centres is 5 cm.

(a) 0
(b) 1
(c) 2
(d) 3

Q56. The distance between the centre of two circles having radii 5 cm and 6 cm is √10 cm. find the length (in cm) of direct common tangent.

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

Q57. If X is 60% more than Y, then Y is what percent of X?

(a) 37.5
(b) 62.5
(c) 44.4
(d) 66.66

Q58. Rahul spends some part of his income and saves the remaining part. The ratio of his expenditure and saving is 6 : 1. If Rahul's income is Rs 42000, then what will be his expenditure (in Rs)?

(a) 34000
(b) 30000
(c) 32000
(d) 36000

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Q59. Aman, Kamal and Ratan start a business. The ratio of their investments is 12 : 4 : 3. If at the end the ratio of their profits is 3 : 16 : 9, then what is the ratio of time period of their investment?

(a) 9 : 64 : 81
(b) 4 : 36 : 9
(c) 1 : 16 : 12
(d) 3 : 64 : 9

Q60. Out of the five subjects, the average marks of Suman in first 3 subjects was 81 and the average marks in the last 3 subjects was 74. If her marks in the third subject was 65, then what was her average marks in all the subjects?

(a) 75
(b) 76
(c) 79
(d) 80

Q61. A certain sum of money becomes double of itself in 5 years at a rate of simple interest. In how many years will it become 16 times of itself at the same rate of simple interest?

(a) 20
(b) 60
(c) 75
(d) No option is correct.

Q62. Pankaj sells a trouser at a loss of 10%. If he buys it for 20% less price and sells it for Rs. 9 more, then he gains 15%. What is the cost price (in Rs) of the trouser?

(a) 450
(b) 400
(c) 350
(d) 440

Q63. If the ratio of marked price and selling price is 14 : 11, then what is the discount percentage?

(a) 42.58
(b) 21.42
(c) 36.36
(d) 33.33

Q64. Arrange the following in the decreasing order? (√23 – √21), (√19 – √17), (√21 – √19)

(a) (√23 – √21) > (√21 – √19) > (√19 – √17)
(b) (√23 – √21) > (√19 – √17) > (√21 – √19)
(c) (√19 – √17) > (√21 – √19) > (√23 – √21)
(d) (√21 – √19) > (√23 – √21) > (√19 – √17)

Q65. X and Y can complete a work in 5 days. Y and Z can complete the same work in 6 days. Z and X can complete the same work in 15/2 days. In how many days will X, Y and Z together complete the work?

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

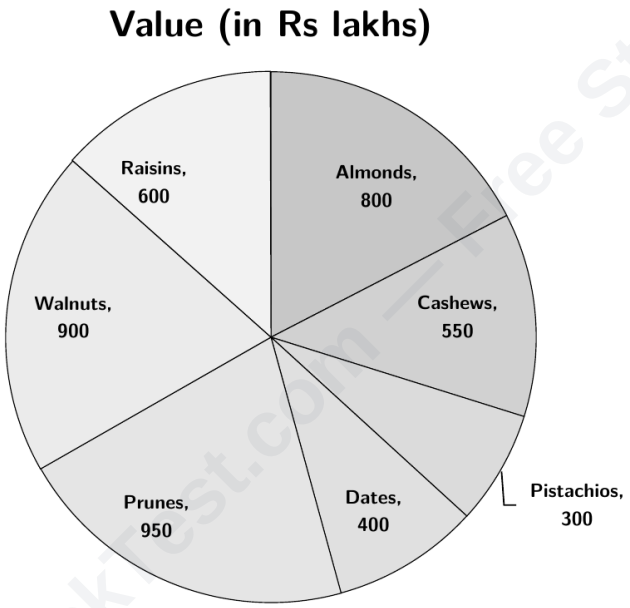
Q66. Two stations L and M are 180 km apart from each other. A train leaves from L to M and simultaneously another train leaves from M to L. Both trains meet after 9 hours. If the speed of the first train is 10 km/hr more than the second train, then what is the speed (in km/hr) of the slower train?

(a) 9
(b) 5
(c) 12
(d) 15

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Directions

Direction: The pie chart shows the value of the total annual production of dry fruits of a country. Study the diagram and answer the following questions.



Q67. The value of annual production of which dry fruit item is the most?

(a) Walnuts
(b) Raisins
(c) Prunes
(d) Almonds

Q68. What is the total value (in Rs lakhs) of the annual dry fruit production of the country?

(a) 4000
(b) 4500
(c) 3600
(d) 3000

Q69. The measure of the central angle of the sector representing the annual production of dates is _____ degrees.

(a) 36
(b) 28
(c) 32
(d) 24

Q70. If the average value of almonds produced is Rs 800 per kg then how many kgs of almonds were produced?

(a) 10000
(b) 1000
(c) 100000
(d) 1000000

Q71. The length of one side and the diagonal of a rectangle are 10 cm and 26 cm respectively. Find the length of its other side (in cm).

(a) 48
(b) 29
(c) 24
(d) 58

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Q72. If the perimeter of a semi-circle is 144 cm, then find its radius (in cm).

(a) 56
(b) 29
(c) 28
(d) 58

Q73. Find the curved surface area (in cm²) of a right circular cylinder of diameter 21 cm and height 10 cm.

(a) 594
(b) 530
(c) 472
(d) 660

Q74. What is the value of (1/2 - sec30^o)?

(a) (√3 - 1)/2
(b) (2 - √3)/√3
(c) (1 - √6)/√2
(d) (√3 - 4)/2√3

Q75. In ΔABC measure of angle B is 90^o. If secA = 25/7, and AB = 14 cm, then what is the length (in cm) of side BC?

(a) 50
(b) 48
(c) 20
(d) 26

GENERAL AWARENESS

Q76. Who has written the book "The Theory of Wages"?

(a) David Hume
(b) Thomas Robert Malthus
(c) Irving Fisher
(d) J.R.Hicks

Q77. At present how many stock exchanges are listed in Securities and Exchange Board of India (SEBI)?

(a) 20
(b) 10
(c) 9
(d) 15

Q78. Chola State had to face the attack of which of the following Rashtrakuta's rulers?

(a) Dhruv
(b) Govind III
(c) Krishna III
(d) Amoghvarsha

Q79. Which of the following decisive battles had established the dominion of the British in India?

(a) Battle of Plassey
(b) Battle of Buxar
(c) Battle of Wandiwash
(d) Third Battle of Panipat

Q80. Soo Canal connects to which of the following?

(a) Superior to Michigan
(b) Superior to Huron
(c) Michigan to Huron
(d) Erie to Huron

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Q81. Idukki hydroelectric power project is situated in which state?

(a) Kerala
(b) Himachal Pradesh
(c) Arunachal Pradesh
(d) Karnataka

Q82. Maharishi Gautam is associated to which Indian philosophy (Darshana)?

(a) Samkhya
(b) Yog
(c) Nyaya
(d) Vaisheshika

Q83. Bangladesh on October 4, 2017, signed a $ 4.5 billion loan deal with which country for developing its infrastructure, health and education?

(a) Pakistan
(b) China
(c) India
(d) Iran

Q84. Which novel had been got the DSC Prize for South Asian Literature for 2017 held in Dhaka, Bangladesh?

(a) The story of a Brief Marriage
(b) The Living
(c) Selection Day
(d) The Association of Small Bombs

Q85. The devastating earthquake of 7.8 magnitudes came in Nepal in _____.

(a) February 2014
(b) September 2014
(c) April 2015
(d) July 2015

Q86. Which of the following is a major component of German silver?

(a) Tin
(b) Copper
(c) Silver
(d) Chlorine

Q87. In nuclear reactors, which of the following is used as a moderator?

(a) Uranium
(b) Iron
(c) Graphite
(d) Platinum

Q88. Which organ of the government consists of elected representatives of People?

(a) Media
(b) Legislature
(c) Judiciary
(d) All options are correct.

Q89. Who gave the concept of ‘Separation of Powers’ related to different forms of governments?

(a) Montesquieu
(b) Aristotle
(c) Plato
(d) Hobbes

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Q90. Which among the following forms a common passage for both the sperms and urine in human males?

(a) Ureter
(b) Seminal vesicle
(c) Vas deferens
(d) Urethra

Q91. Which of the following is not a constituent of phloem?

(a) Sieve tubes
(b) Companion cells
(c) Tracheids
(d) Phloem parenchyma

Q92. In November 2017, under the Credit-Linked Subsidy Scheme (CLSS), increase in the carpet area for Middle Income Group II (MIG- II) has been approved. The carpet area for MIG-II will be increased to _____.

(a) 150 square meter
(b) 200 square metre
(c) 250 square metre
(d) 175 square metre

Q93. Scientists have created world's shortest _____laser pulse with duration of just 43 attoseconds.

(a) Gamma ray
(b) Alpha ray
(c) Beta ray
(d) X-ray

Q94. In August 2017, the 12^(th)Five Year Plan was reviewed by NITI Aayog. The centre has now adopted a _____ year vision document.

(a) 20
(b) 10
(c) 15
(d) 25

Q95. Which edition of Rashtriya Sanskriti Mahotsava was held in Bengaluru under the 'Ek Bharat Shreshtha Bharat Programme' from 14 January to 20 January 2018?

(a) First
(b) Third
(c) Fifth
(d) Seventh

Q96. Find the acceleration (in m/s^2) produced in a body of mass 3 kg when a force of 6N is applied do it.

(a) 18
(b) 4
(c) 2
(d) 36

Q97. In a _____ wave particles of the medium vibrate in a direction parallel to the direction of wave propagation.

(a) Transverse
(b) Longitudinal
(c) Surface
(d) Field

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Q98. The underground water and the water in rivers, lakes and ponds is also _____.

(a) saline
(b) fresh
(c) salt
(d) sour

Q99. Which of the statements given below is/are correct?

A) England won the 2017 Women's Cricket World Cup.
B) Canada hosted the 2017 AIBA World Boxing Championships.
C) In 2017, Rohit Sharma captained the IPL team Mumbai Indians.

(a) Only A
(b) Only B
(c) Only C
(d) Both A and C

Q100. In HTML, _____ tag is used to specify each item displayed in the list.

(a) <SELECT>
(b) <OPTION>
(c) <TEXTAREA>
(d) <INPUT>

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) frothiest

The correct answer is frothiest

Key Points

• Frothiest - full of or covered with a mass of small bubbles (froth)
• It is the superlative form of the adjective frothy, meaning composed of many small air bubbles (froth)

Additional Information

• Degrees of comparisons of the adjective 'frothy':
• Frothy (Positive), Frothier (Comparative), Frothiest (Superlative)

Thus the correct answer is Option 2

Q2. Answer: (b) BCA

The correct answer is BCA

Key Points

• The paragraph starts with 'people used to preserve'. Hence the next sentence should say what they used to preserve (noun)

• 'A' starts with the noun 'companionship', 'B' starts with the noun 'letters', and 'C' starts with the preposition 'of', it can be either 'A' or 'B'

• Among 'A' and 'B', if we choose 'A', both the options ACB and ABC would render the paragraph grammatically absurd and structurally meaningless. This is because both A-B and A-C in this order are grammatically incompatible phrases

• However, if we choose 'B', while the order BAC gives a grammatically erratic paragraph due to B-A in that order being grammatically incompatible phrases, the order BCA gives a grammatically and semantically coherent paragraph

Thus the correct answer is: People used to preserve letters for years as these humble pieces of paper afforded companionship in absentia

Q3. Answer: (d) no improvement

The correct answer is no improvement

Key Points

• Auxiliary verbs like is, am, are, was, were that state a fact are grammatically incompatible with the past participle of the verb 'to be', i.e., been

• This eliminates Options 2 and 3

• Option 1, 'have been', is used to denote plural subjects and thus violates the subject-verb agreement

• Been, when used with the root verb 'has', makes up the (Singular) Present Perfect Tense indicating something which has occurred as a phenomenon (here, the art of movement being culture-driven)

Thus the correct sentence is: The art of movement has been, in complicated ways, culture-driven.

Q4. Answer: (c) were identified

The correct answer is were identified

Key Points

• Let's look at each option:

• is identified: Since the subject cyclones is plural, the auxiliary verb 'is' which denotes a singular noun, would form a grammatically incorrect sentence

• were identify: This is a grammatically incorrect phrase as with the auxiliary verb 'were', past tense of the root verb 'identify', i.e., 'identified' should be used

• were identified: This forms a grammatically correct Simple Past Tense with plural subject-verb agreement

Thus the correct sentence is: Cyclones were identified by the year of their occurrence, and remembered for the devastation they caused.

Q5. Answer: (b) Depict

The correct answer is Depict

Key Points

• Let's look at the meaning of each of the options given:

Ensconce	**establish or settle someone in a comfortable, safe place**
Depict	represent by a drawing, painting, words, or other art forms
Veil	a piece of fine material worn by women to protect or conceal the face; a cover
Obscure	not discovered or known about; uncertain

Thus the correct answer is Option 2

Q6. Answer: (d) Chutzpah

The correct answer is Chutzpah

Key Points

• Let's examine the meaning of each of the words given:

Petrified	**so frightened that one is unable to move; terrified; afraid**
Abashed	to make someone feel embarrassed, disconcerted, or ashamed
Skittish	an animal, especially a horse that is nervous or excitable; easily scared
Chutzpah	extreme self-confidence or audacity

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Thus the correct answer is Option 4

Q7. Answer: (a) An imaginary utopian place or situation.

The correct answer is An imaginary utopian place or situation

Key Points

• An idiom is an expression whose meaning is different from the meanings of the individual words in it

• Let's look at some similar idioms as above and their respective meanings

clean as a whistle	place or person or thing that is immaculate
hive of activity	place where a lot is happening, and everyone present is busy doing something
middle of nowhere	place that is very remote, far from any city or town
a den of iniquity	a place where wrong and dirty things happen

Thus the correct answer is Option 1

Additional Information

The word 'utopian' means modelled on or aiming for a state in which everything is perfect; idealistic.

Q8. Answer: (d) Things located diagonally opposite each other.

The correct answer is Things located diagonally opposite each other.

Key Points

• Kitty-corner - In a diagonal position from, especially outward from the corner of a square. A variant of the more technical term "cater-corner," with "cater" meaning "to set or move diagonally."

• Example- "Thankfully the daycare is kitty-corner to my office, so dropping the kids off in the morning is really easy."

Q9. Answer: (c) not

The correct answer is not

Key Points

• On looking at the above-given passage, we observe that it is based upon how a change in some organisation may create problems or difficulties for presently going activities and impacts both leaders and followers.

• Also, it describes that the most powerful leader gets most of the benefits through such changes.

• Since the starter of the passage has the main verb is, so to make the statement negative, it can only go with not

Thus the complete sentence is: Change is more often than not the trigger for struggles in the leadership arena.

Q10. Answer: (c) in

The correct answer is in

Key Points

• Word 'usher' means you show them where they should go, often by going with them.

• And, changes are made in the organisation.

• Hence, the phrase is 'usher in'

Thus the complete sentence is: Leaders usher in organisational change,

Q11. Answer: (a) an

The correct answer is an

Key Points

• Since, the blank is followed by a vowel sound, hence, article an is appropriate.

Thus the complete sentence is: With various factors in the mix, an imbalance is created that impacts leaders and followers in multiple and varying ways.

• Don't put 'the' because the passage has not mentioned this 'imbalance' earlier or it is not about a particular imbalance.

Q12. Answer: (a) Ironically

The correct answer is ironically

Key Points

• The sentence goes on to assert that the leader gets the roughest edge

• To express in what way or manner he/she gets the roughest edge, we use the adverb 'ironically' which means 'happening in a

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way contrary to what is expected, and typically causing wry amusement because of this'

Thus the correct phrase is: Ironically, the leader gets the roughest edge...

Q13. Answer: (c) powerful

The correct answer is powerful

Key Points

• Since, 'most' is used before the blank to describe the leader, it should be filled with an adjective, which is, powerful.

Thus the correct phrase is: "...as he is seemingly the most powerful one."

Q14. Answer: (b) Auxiliary

The correct answer is Auxiliary

Key Points

• The word auxiliary is correctly spelt. It means providing supplementary or additional help and support.

Q15. Answer: (d) The lawyer commanded them to call the witness.

The correct answer is The lawyer commanded them to call the witness

Key Points

• Since the lawyer is giving a command of calling the witness, we use the word 'commanded' while converting from direct to indirect speech

• The inverted commas and comma is replaced by the word 'commanded' and this verb is connected with the infinitive 'to' to indicate the object of the verb

Q16. Answer: (a) The homework should be checked by the teacher.

The correct answer is The homework should be checked by the teacher

Key Points

• When changing from Active to Passive, the subject (teacher) and object (homework) are interchanged

• The present form of the verb (check) is changed to past participle form (be + checked)

• The relation between the action and the doer is represented by the preposition 'by'

• Thus the structure is: Object(the homework) + modal verb (should) + be + V3(checked) + by + subject (the teacher).

Q17. Answer: (b) QRP

The correct answer is QRP

Key Points

• Clearly, a sentence does not end with a conjunction that or preposition in

• Hence, options 3 and 4 are eliminated

• Since the starting sentence starts with describing the noun 'biosphere' and ends with the preposition like, it should be followed by a similar noun/pronoun

Thus the correctly ordered sentence is: The whole biosphere, like the individual organisms that live inside it, exists in a chemically dynamic state

Q18. Answer: (d) Prejudiced

The correct answer is Prejudiced

Key Points

• The word that is opposite in meaning to "Objective" is: Prejudiced

• "Objective" refers to being unbiased, impartial, or based on facts and evidence rather than personal opinions or prejudices. It indicates a neutral and fair approach to evaluating or assessing something.

• On the other hand, "Prejudiced" means having preconceived opinions or biases that may influence one's judgment or decision-making process. It signifies a lack of objectivity and fairness, as personal biases can cloud one's judgment.

• Therefore, option 4) Prejudiced is the correct choice as it is opposite in meaning to "Objective."

Additional Information

• Fair

• This option is not the opposite of "Objective." While fairness can be a desirable quality associated with objectivity, it does not inherently mean the opposite. One can be fair and objective at the same time.

• Detached

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• This option is not the opposite of "Objective." "Detached" refers to being impartial or not emotionally involved, which can align with objectivity. Both detached and objective suggest a lack of personal bias or attachment to a particular outcome.

• Straight

• This option is not the opposite of "Objective." "Straight" typically refers to something that is direct, honest, or without deviation. It does not inherently represent the opposite of being objective.

Q19. Answer: (d) Honesty

The correct answer is Honesty

Key Points

Let's look at the meaning of the marked and correct option-

• Guile- Insidious cunning in attaining a goal; crafty or artful deception; cunning, ploys

• Honesty- the quality of being truthful or honest; uprightness, honour, integrity

Hence, from the above meanings, we find that both options i.e. Guile and Honesty are opposite in meaning.

Let's look at the meaning of other given options-

• Cleverness- ability to understand and learn quickly and easily

• Suspicious- having or showing a cautious distrust of someone or something

• Dishonesty- deceitfulness shown in someone's character or behaviour

Q20. Answer: (a) Strict

The correct answer is Strict

Key Points

• The meaning of 'Austerity' - sternness or severity of manner or attitude; strict; intolerant

• 'Tolerant' and 'kindness' are the opposites

• 'Moist' means something which has water content

Q21. Answer: (a) Practical

The correct answer is 'Practical'

Key Points

• Let's first find out the meaning of 'empirical':- based on, concerned with, or verifiable by observation or experience rather than theory or pure logic; verified; actual; real; factual; practical.

• Now, find the meaning of 'Hypothetical' - supposed but not necessarily real or true; theoretical; unproved

• Clearly, the word practical is the most similar meaning to the given word.

Q22. Answer: (a) have

The correct answer is have

Key Points

• Since subject 'dogs' is a plural noun, hence according to the sub-verb agreement, the plural verb should be used. Thus, options 2 & 3 are incorrect

• And, modal verb does not come directly with v3 form. Hence, option 4 is also incorrect.

Thus the correct sentence is: Many lost dogs have been given back to their owners.

Q23. Answer: (c) neither

The correct answer is 'neither'

Key Points

• 'Neither' as an adverb, is used to introduce a further negative statement, e.g., "He didn't remember, and neither did I"

• 'Also' means 'in addition to'. Using 'also' here is grammatically incorrect as it is not negative in nature

• 'Even' means 'including...'. Using 'even' here is grammatically incorrect as it is not negative in nature

• 'So' means 'thus, as a result,...'. Using 'so' here is grammatically incorrect as it is not negative in nature and in fact, tends to give contradictory meaning

Complete Sentence: She does not agree, and neither does Anita.

Q24. Answer: (b) 2

The correct answer is '2'

Key Points

• Since modal verb may is used in part 2 and then followed by plural verb hurt and connected with the conjunction or, the modal

verb applies on second verb mistreat also.

• Hence, replace mistreats with mistreat

Correct sentence - It is easy to fall victim not only to those who may hurt or mistreat us, but also to our own anger.

Q25. Answer: (a) 1

The correct answer is '1'

Key Points

• Adjective Each is followed by a singular noun and a singular verb.

• Example- Each book were written with a pen or a brush. (wrong)

Each book was written with a pen or a brush. (right)

• Thus, replace aspire with aspires.

Correct sentence - Each nation aspires to do well, but there are glaring economical inequalities among them.

Q26. Answer: (b) Rank : Star

Here, Pattern is such that first word defines the feelings, position, possession etc. and the second word is a colour which defines the first word i.e.

Sorrow : Black → Sorrow is a feeling or state of mind which is indicates by black colour.

Red : Green → It doesn't follow the pattern as colour is given first.

Rank : Star → Rank is position of any individual which is indicated by stars.

Danger : Green → Danger is a state or situation which is indicated by red colour not green.

Pink : Pencil → It doesn't follow the pattern as colour is given first.

Hence, Rank : Star is the correct alternative.

Q27. Answer: (a) 114

Here the pattern is such that the 2^(nd) number is 23 more than the 1^(st) number i.e.

43 : 66 → 43 + 23 = 66.

Similarly, 91 : ? → 91 + 23 = 114.

Thus, 114 is the correct alternative.

Q28. Answer: (d) HPS

The pattern here is as follows,

Therefore, HPS is the correct answer.

Q29. Answer: (c) Eyes

Brain, Liver and Lungs are the internal body organs which cannot be seen from outside in a human body whereas Eyes are the body part which can be seen from outside in a human body and is an external body organ.

Thus, Eyes is the odd one.

Q30. Answer: (d) 43 – 46

Out of the given options, 43 – 46 is odd one because in all other options 2nd term is 5 more than the 1st term i.e.

61 – 66 → 61 + 5 = 66

41 – 46 → 41 + 5 = 46

32 – 37 → 32 + 5 = 37

But in 43 – 46 → 43 + 5 = 48 which is not equal to 46.

Thus, 43 – 46 is odd one.

Q31. Answer: (a) ZVQM

Here, it follows a pattern of –4 between two consecutive characters as shown below:

Hence, ZVQM is the odd one.

Q32. Answer: (d) 2, 1, 4, 5, 3

The dictionary sequence is :

Drainer → Draining → Dramatic → Drank → Draught.

Thus, 21453 will be the correct sequence.

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Q33. Answer: (c) 266

The relation between the numbers is as follows,

56 + (14 × 1) = 56 + 14 = 70

70 + (14 × 2) = 70 + 28 = 98

98 + (14 × 3) = 98 + 42 = 140

140 + (14 × 4) = 140 + 56 = 196

196 + (14 × 5) = 196 + 70 = 266

Hence, the next number is 266.

Q34. Answer: (a) WA

The pattern is as follows,

Hence, the next term is WA.

Q35. Answer: (b) Daughter

The diagram below depicts the meaning of the symbols used in figure.

According to the text in the diagram,

Hence, Manisha is the daughter of that man.

Q36. Answer: (b) Until

Let's check each option,

1) TUNE → can be formed as UNIVERSITY.

2) UNTIL → cannot be formed as there is no 'L' in UNIVERSITY.

3) VERY → can be formed as UNIVERSITY.

4) TRY → can be formed as UNIVERSITY.

Hence, UNTIL can't be formed from word UNIVERSITY.

Q37. Answer: (a) BPHRI

All the letters of the word are reversed first and then the reversed letters are coded by replacing the letter by its opposite letter in alphabetical order i.e. A is replaced by Z, B by Y, C by X D by W and so on as shown in the figure below:

Thus,

Hence, BPHRI is the correct alternative.

Q38. Answer: (c) 39

The given equation is: 15 – 12 + 5 × 9 ÷ 12 = ?

Here,

'-' → '×',

'÷' → ' + ',

' + ' → '÷'

'×' → '-'.

So let's replace the sign in the above equation.

15 – 12 + 5 × 9 ÷ 12 → 15 × 12 ÷ 5 – 9 + 12 = 36 + 3 = 39

Hence, 39 is the correct alternative.

Q39. Answer: (a) • and +

The given equation is : 5 – 16 × 30 ÷ 10 + 4 = 49

Let's check each option,

1) – and + → 5 + 16 × 30 ÷ 10 – 4 = 49 = 49

2) ÷ and × → 5 – 16 ÷ 30 × 10 + 4 = 3.66 ≠ 49

3) × and – → 5 × 16 – 30 ÷ 10 + 4 = 81 ≠ 49

4) ÷ and – → 5 ÷ 16 × 30 – 10 + 4 = 3.375 ≠ 49

Hence, by interchanging – and + the equation will be correct.

Q40. Answer: (c) 28

The pattern here is as follows, two numbers are given separated by '&'. We get the answer by multiplying the difference of the two numbers by 2.

Let A and B are two numbers such that A&B then

A&B = (A – B) × 2 i.e.

13&8 = (13 – 8) × 2 = 5 × 2 = 10

11&6 = (11 – 6) × 2 = 5 × 2 = 10

17&4 = (17 – 4) × 2 = 13 × 2 = 26

Similarly, 15&1 = (15 – 1) × 2 = 14 × 2 = 28.

Hence, 28 is the correct alternative.

Q41. Answer: (b) ABABACBAB

The pattern here is the letter 'C' is shifting its position one step towards its right in every step i.e.

CABABABAB, ACBABABAB, ABCABABAB, ABACBABAB, ABABCABAB, ABABACBAB

Hence, ABABACBAB is the correct alternative.

Q42. Answer: (a) 5 km East

The diagram below shows the path followed by the villager,

Clearly, we can see that the endpoint is 5 km in the east direction from his starting point.

Q43. Answer: (c) Either conclusions I and II follows

Consider the following least possible Venn diagram,

Conclusions:

I. No cables are coils → False (It is possible but not definite).

II. Some coils are cables → False (It is possible but not definite).

Hence, conclusion I and II forms complementary pair.

Thus, either conclusion I and II follows.

Q44. Answer: (c) BCF

Here, Square represents Asians, Circle represents Illustrators and Triangle represents Writers.

Clearly, Asians who are either Illustrators or Writers or both is the intersection of square and circle, square and triangle and intersection of all three square, triangle and circle i.e. BCF

Q45. Answer: (a) WJS

The pattern is as follows,

Hence, the next term is WJS.

Q46. Answer: (a) 72

The relation between the numbers is as follows,

32 + 4 = 36

36 + (4 + 2) = 36 + 6 = 42

42 + (6 + 2) = 42 + 8 = 50

50 + (8 + 2) = 50 + 10 = 60

60 + (10 + 2) = 60 + 12 = 72

Hence, the next number is 72.

Q47. Answer: (b) (7, 21, 15)

Out of the given options, (7, 21, 15) is odd one because in all other options 2^(nd) number is one more than thrice the 1^(st) number and 3^(rd)number is one more than twice the 1^(st) number i.e.

(6, 19, 13) → 6 × 3 + 1 = 19 and 6 × 2 + 1 = 13

(18, 55, 37) → 18 × 3 + 1 = 55 and 18 × 2 + 1 = 37

(15, 46, 31) → 15 × 3 + 1 = 46 and 15 × 2 + 1 = 31

But in (7, 21, 15) → 7 × 3 + 1 = 22 ≠ 21 and 7 × 2 + 1 = 15.

Thus, (7, 21, 15) is odd one.

Q48. Answer: (c) [figure]

The mirror image of the question will be:

Hence, we can say that option 3 is the correct mirror image of the given question.

Q49. Answer: (b) [figure]

If we consider faces with “
” as centre and fold its surrounding faces inside,
we find that face with “
” and “
” are opposite to each other,
faces with “
” and “
” are opposite to each other
and faces with “
” and “
” are opposite to each other.
Here, the cube in option 2 of the answer figure cannot be made based on the unfolded cube in the question because faces with “
” and “
” are opposite to each other which is shown adjacent in option 2.
Hence, option 2 is the correct alternative.

Q50. Answer: (c) 34, 67, 57, 95

Let’s check all the options,
1) 23, 89, 43, 78 → HWHY
2) 31, 66, 42, 95 → GQES
3) 34, 67, 57, 95 → ANTS
4) 22, 89, 13, 88 → GWCR
Thus, the correct option is 34, 67, 57, 95.

Q51. Answer: (a) 1

Calculation:
(82)^(102) + (183)^(103)
Let’s take unit digit of both the no. with their powers
(2)^(102) + (3)^(103)
The power cycle of 2 and 3 is 4
Now divide their powers by 4 and take their remainder.
102 ÷ 4 then remainder = 2
103 ÷ 4 then remainder = 3
Now use these remainder as their power.
$(2)^2 + (3)^3 = 4 + 27 = 31$
Therefore Unit digit of given equation is = 1

Q52. Answer: (c) 5^(15/16)

Calculation:
=> √(5√(5√(5√5)))~
=> √(5√(5√(5 × 5^(1/2))))
=> √(5√(5√(5^(3/2))))
=>√(5√(5 × 5^(3/2 × 1/2)))
=> √(5√(5^(7/4)))
=> √(5 × 5^(7/4 × 1/2))
=> √(5^(15/8))
=> 5^((15/8) × (1/2)) = 5^(15/16)
Therefore The correct answer is 515/16.

Q53. Answer: (b) 8

Given:
√y = √4 - √6

Formula used:

$(a - b)^2 = a^2 + b^2 - 2ab$

Calculation:

According to the question:

$\Rightarrow \sqrt{y} = \sqrt{4} - \sqrt{6}$

Squaring both side of the equation:

$\Rightarrow (\sqrt{y})^2 = (\sqrt{4} - \sqrt{6})^2$

$\Rightarrow y = (\sqrt{4})^2 + (\sqrt{6})^2 – 2 \times \sqrt{4} \times \sqrt{6} = 4 + 6 – 4\sqrt{6}$

$\Rightarrow y = 10 - 4\sqrt{6}$

Squaring both side of the equation again:

$\Rightarrow y^2 = (10 - 4\sqrt{6})^2$

$\Rightarrow y2 = (10)^2 + (4\sqrt{6})^2 – 2 \times 10 \times 4\sqrt{6}$

$\Rightarrow y2 = 100 + 96 – 80\sqrt{6}$

$\Rightarrow y^2 = 196 - 80\sqrt{6}$

We have to find value of $y^2 - 20y + 12$ so put the value of y and y^2 in this eq.

$\Rightarrow y2 - 20y + 12$

$\Rightarrow 196 – 80\sqrt{6} – 20 (10 – 4\sqrt{6}) + 12$

$\Rightarrow 196 - 80\sqrt{6} – 200 + 80\sqrt{6} + 12$

$\Rightarrow 208 - 200 = 8$

Therefore The correct answer is 8.

Q54. Answer: (c) 24

Given:

$3x/y = 4$

Calculation:

From the question:

$\Rightarrow 3x/y = 4$

$\Rightarrow 3x = 4y$ -------(1)

Minimum value of 3x + 4y,

$\Rightarrow 3x + 3x = 6x$ (From eq. 1)

Since x is a positive integer,

So the minimum value of x can be 1, but this make the value of y 0.75

If x is 2, y will be 1.5

If x is 3, y will be 2.25

If x is 4, y will be 3, This satisfies the given condition

Therefore Minimum value of 3x + 4y = 24

Q55. Answer: (c) 2

Given:

Radius of 1st circle = 4 cm

Radius of 2nd circle = 5 cm

Distance between the two centres = 5 cm.

Calculation:

Sum of radius of both circles = 4 + 5 = 9 cm

Distance between the centres = 5 cm

If the Distance between the centres < Sum of radius then no. of tangents = 2

If the Distance between the centres = Sum of radius then no. of tangents = 3

If the Distance between the centres > Sum of radius then no. of tangents = 4

In this case:

Distance between the centres = 5 cm

Sum of radius of both circles = 9 cm

The Distance between the centres < Sum of radius

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So, number of tangents = 2

Therefore The correct answer is 2.

Q56. Answer: (c) 3

Given:

Distance between the centre of two circles = √10 cm

Radii of two circles is 5 cm and 6 cm

Formula used:

Length of direct common tangent = √((Distance between the centers)2 – (Difference of radius)2)

Calculation:

Length of direct common tangent = √((Distance between the centers)² – (Difference of radius)²)

Length of tangent = √((√10)² - (6 - 5)²)= √(10 – 1) = √9 = 3 cm

Therefore Length of direct common tangent is 3 cm

Additional Information

Direct Tangent/Transverse Tangent

In a given pair of circles, there are two types of tangents.

The direct tangents and the cross (or transverse) tangents.

In the figure,

AB and CD are the direct tangents and EH and GF are the transverse tangents.

When two circles of radii r1 and r2 have their centres at a distance d.

Length of direct common tangent is % MathType!MTEF!2!1!+- % feaahqart1ev3aaatCvAUfeBSjuyZL2yd9gzLbvyNv2CaerbuLwBLn % hiov2DGi1BTfMBaeXatLxBI9gBaerbd9wDYLwzYbItLDharqqtubsr % 4rNCHbGeaGqiFGI8qiVeYlb91rFfpec8Eeeu0xXdbba9frFj0-OqFf % ea0dXdd9vqaq-JfrVkFHe9pgea0dXdar-Jb9hs0dXdbPYxe9vr0-vr % 0-vqpWqaaeaabiGaciaacaqabeaadaqaaqaaaOqaamaakaaabaqefe % KCPfgBaGqbaiaa-rgadaahaaWcbeqaaiaa-jdaaaGccaWFTaWaaeWa % aeaacaWFYbWaaSbaaSqaaiaa-fdaaeqaaOGaa8xlaiaa-jhadaWgaa % WcbaGaa8NmaaqabaaakiaawIcacaGLPaaadaahaaWcbeqaaiaa-jda % aaaabeaaaaa!42DB! √(d² - (r1 - r2)²)

Length of transverse tangent is % MathType!MTEF!2!1!+- % feaahqart1ev3aaatCvAUfeBSjuyZL2yd9gzLbvyNv2CaerbuLwBLn % hiov2DGi1BTfMBaeXatLxBI9gBaerbd9wDYLwzYbItLDharqqtubsr % 4rNCHbGeaGqiFGI8qiVeYlb91rFfpec8Eeeu0xXdbba9frFj0-OqFf % ea0dXdd9vqaq-JfrVkFHe9pgea0dXdar-Jb9hs0dXdbPYxe9vr0-vr % 0-vqpWqaaeaabiGaciaacaqabeaadaqaaqaaaOqaamaakaaabaqefe % KCPfgBaGqbaiaa-rgadaahaaWcbeqaaiaa-jdaaaGccaWFTaWaaeWa % aeaacaWFYbWaaSbaaSqaaiaa-fdaaeqaaOGaa83kaiaa-jhadaWgaa % WcbaGaa8NmaaqabaaakiaawIcacaGLPaaadaahaaWcbeqaaiaa-jda % aaaabeaaaaa!42D9! √(d² - (r1 + r2)²)

Q57. Answer: (b) 62.5

Given:

X is 60% more than Y

Calculation:

Let y = 100

=> x = 160% of y

=> 160/100 × 100

=> 160

Required % = y/x × 100

=> 100/160 × 100

=> 62.5%

Therefore The answer is 62.5%.

Q58. Answer: (d) 36000

Given:

Expenditure : Saving = 6 : 1

Rahul’s income = Rs.42000

Concept used:
Income = expenditure + saving
Calculation:
Income = Expenditure + savings
=> 6 + 1 = 7 units = 42000
=> 1 unit = 6000
Expenditure = 6 units = 6 × 6000 = Rs.36000
Therefore The correct answer is Rs.36000.

Q59. Answer: (c) 1 : 16 : 12

Given:
Investment ratio:
Aman : Kamal : Ratan = 12 : 4 : 3
Profit ratio:
Aman : Kamal : Ratan = 3 : 16 : 9
Concept used:
Ratio of their profit = Ratio of their investments × time
Calculation:
Let Aman, Kamal and Ratan invest their money for time t1, t2 and t3 respectively.
Ratio of their profit = Ratio of their investments × time
=> 3 : 16 : 9 = 12 × t1 : 4 × t2 : 3 × t3
Now we take two ratios to simplify.
=> 3/16 = (12 × t1)/(4 × t2)
=> t1/t2 = 1/16
Now we take two other ratios to simplify.
=> 16/9 = (4 × t2)/(3 × t3)
=> t2/t3 = 4/3
=> t1 : t2 = 1 : 16 ----(1)
=> t2 : t3 = 4 : 3 ----(2)
To make t2equal, we multiply eq. 2 with 4
=> t2 : t3 = (4 : 3) × 4 = 16 : 12
=> t1: t2 : t3 = 1 : 16 : 12
Therefore The correct answer is 1 : 16 : 12.

Q60. Answer: (d) 80

Given:
Average marks of Suman in first 3 subjects = 81
Average marks of Suman in last 3 subjects = 74
Marks in the third subject = 65
Concept used:
Sum of subjects = average of subjects × number of subjects
Calculation:
Let the five subjects are a, b, c, d and e
Average marks in first three subjects = 81
=> (a + b + c)/3 = 81
=> a + b + c = 243
Average marks in last three subjects = 74
=> (c + d + e)/3 = 74
=> c + d + e = 222
=> 65 + d + e = 222
=> d + e = 222 – 65 = 157
Average marks of suman in all sub. = (a + b + c + d + e)/5 = (243 + 157)/5

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Average marks in total subjects = 400/5 = 80

Therefore The correct answer is 80.

Q61. Answer: (c) 75

Given:

A certain sum of money becomes double of itself in 5 years

Calculation:

A amount is doubled when it gets the same amount as interest.

So if we have to make money 16 times then its interest would be 15 times.

Time taken to 1 time interest = 5 years

Time taken to get 15 times interest = 15 × 5 = 75 years

Therefore The correct answer is 75 years.

Formula used:

If a certain sum become n times of itself in t years at rate r% simple interest, then

=> (n - 1) = (r × t)/100

Calculation:

According to the question:

=> (n - 1) = (r × t)/100

=> (2 - 1) = (r × 5)/100

=> r = 20%

Now,

From the question:

=> (n - 1) = (r × t)/100

=> (16 - 1) = (20 × t)/100

=> 15 = t/5

=> t = 75 years.

Therefore The correct answer is 75 years.

Q62. Answer: (a) 450

Given:

Pankaj's Loss% = 10%

Calculation:

Let the C.P of the trouser = 100 units

According to the question:

S.P of trouser = 90% of 100

=> 90/100 × 100 = 90 units

New C.P of trouser = 20% less price of old C.P

=> 80% of old 100 = 80 units

New S.P = 115% of new C.P.

=> 115/100 × 80 = 92 units

=> New S.P – Old S.P = Rs. 9

=> 92 – 90 = 2 units = Rs. 9

=> 1 unit = Rs. 4.5

=> 100 units = Rs. 4.5 × 100 = Rs. 450

Therefore The correct answer is Rs. 450.

Q63. Answer: (b) 21.42

Given:

M.P : S.P = 14 : 11

Calculation:

Discount % = (M.P – S.P)/(M.P) × 100

Discount % = (14 – 11)/14 × 100 = 3/14 × 100

Discount % = 21.42%

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Therefore The correct answer is 21.42%.

Q64. Answer: (c) (√19 – √17) > (√21 – √19) > (√23 – √21)

Calculation:

=> (√23 – √21), (√19 – √17), (√21 – √19)

=> (√23 -√21) × ((√23 + √21))/((√23 + √21)) = ((√23)² - (√21)²)/((√23 + √21)) = (2)/((√23 + √21))

=> (√19 -√17) × ((√19 + √17))/((√19 + √17)) = ((√19)² - (√17)²)/((√19 + √17)) = (2)/((√19 + √17))

=> (√21 -√19) × ((√21 + √19))/((√21 + √19)) = ((√21)² - (√19)²)/((√21 + √19)) = (2)/((√21 + √19))

If the numerator is same then the no. divided by smallest denominator is largest

So, the decreasing order is (√19 – √17) > (√21 – √19) > (√23 – √21)

Therefore The correct option is 3.

Q65. Answer: (b) 4

Given:

X and Y can complete a work = 5 days

Y and Z can complete the work = 6 days

Z and X can complete the work = 15/2 days

Calculation:

Time taken by X + Y to complete a work = 5 days

Time taken by Y + Z to complete a work = 6 days

Time taken by Z + X to complete a work = 15/2 days

Total work = LCM of (5, 6 and 15/2) = 30 units

Efficiency of X + Y together = 30/5 = 6 units/day

Efficiency of Y + Z together = 30/6 = 5 units/day

Efficiency of Z + X together = 30/(15/2) = 4 units/day

Efficiency of X + Y + Z together:

=> 2(X + Y + Z) = 6 + 5 + 4 = 15 units/day

X + Y + Z = 15/2 = 7.5 units/day

Total time taken by X + Y + Z together to complete the work = 30/7.5 = 4 days

Therefore The correct answer is 4 days.

Q66. Answer: (b) 5

Given:

Distance between L & M = 180 km

Formula used:

Distance = relative speed × time

Calculation:

Let the speed of slow train is 'S' km/h then speed of fast train is (S + 10) km/h

Relative speed × time = distance

=> (S + S + 10) × 9 = 180

=> S + S + 10 = 180/9

=> 2S + 10 = 20

=> 2S = 20 – 10 = 10

=> S = 10/2 = 5 km/h

Therefore The correct answer is 5 km/h.

Q67. Answer: (c) Prunes

Calculation:

As shown in the pie chart, the value of Prunes is 950 lakhs which is more than all other dry fruits.

Therefore The correct answer is Prunes.

Q68. Answer: (b) 4500

Calculation:

Total value = Value of (Raisins + Almonds + Cashews + Pistachios + Dates + Prunes + Walnuts)

Total value = 600 + 800 + 550 + 300 + 400 + 950 + 900
So, Total value = 4500
Therefore The correct answer is 4500.

Q69. Answer: (c) 32

Calculation:
The central angle of the sector representing the annual production of dates
=> 4500 units = 360°
=> 1 unit = 360° /4500
=> 400 units = (360° /4500) × 400 = 32°
Therefore The correct answer is 32°.

Q70. Answer: (c) 100000

Given:
The average value of almonds = 800 Rs/kg
Number of Almonds = 800 lakh
Calculation:
The average value of almonds = 800 Rs/kg
Therefore Total production of almonds = (Total value of almonds)/(Average value of almonds) = (800 × 100000)/800 = 100000
Therefore Total production of almonds = 100000kg

Q71. Answer: (c) 24

Given:
Length of rectangle = 10 cm
Diagonal of rectangle = 26 cm
Formula used:
(Diagonal)2 = (length)2 + (Breadth)2
Calculation:
L = 10 cm, D = 26 cm
=> $D^2 = L^2 + B^2$
=> $26^2 = 10^2 + B^2$
=> $B^2 = 676 – 100 = 576$
=> $B^2 = 576$
=> B = 24 cm
Therefore The correct answer is 24 cm.

Q72. Answer: (c) 28

Given:
Perimeter of semi-circle = 144 cm
Formula used:
Perimeter of semi-circle = r × (π + 2)
Calculation:
=> r × (π + 2) = Perimeter of semi-circle
=> r × (22/7 + 2) = 144
=> 36/7 × r = 144
=> r = 4 × 7 = 28 cm
Therefore The correct answer is 28 cm.

Q73. Answer: (d) 660

Given:
Diameter = 21 cm
Height = 10 cm
Formula used:
Curved Surface area = 2 × πrh

Calculation:

Curved Surface area = 2 × πrh

Curved Surface area = 2 × 22/7 × 21/2 × 10

Curved Surface area = 22 × 3 × 10 = 660 cm²

Therefore The correct answer is 660 cm2.

Q74. Answer: (d) (√3 - 4)/2√3

Formula used:

sec30o = 2/√3

Calculation:

From the question:

=> 1/2 – sec30^o

=> 1/2 – 2/√3

=> (√3 - 4) /2√3

Therefore The correct answer is (√3 - 4) /2√3.

Q75. Answer: (b) 48

Given:

angle B = 90°

Sec A = 25/7; AB = 14 cm

Calculation:

Sec A = 25/7 = AC/AB

=> 25/7 = AC/14

=> AC = 50 Cm

=> BC² = AC² – AB²

=> BC² = 50² – 14² = 2500 – 196

=> BC² = 2304

=> BC = 48

Therefore The correct answer is 48 cm.

Q76. Answer: (d) J.R.Hicks

The Theory of Wages wrote by J R Hicks, is a classic microeconomics statement of wage determination in competitive markets.

Other books by Hicks are:

• A revision of demand theory

• A theory of economic history

• A market theory of Money

Q77. Answer: (c) 9

At present, there are 9 SEBI listed stock exchanges.

Name of all 9 Stock Exchanges listed with SEBI:

1. Calcutta Stock Exchange Ltd.
2. India International Exchange (India INX)
3. Indian Commodity Exchange Limited
4. Metropolitan Stock Exchange of India Ltd.
5. Multi Commodity Exchange of India Ltd.
6. National Commodity & Derivatives Exchange Ltd.
7. National Stock Exchange of India Ltd.
8. NSE IFSC Ltd.
9. BSE Ltd.

SEBI is the regulator for the security market in India. It was established in 1988 and was given statutory powers in 1992 through SEBI Act, 1992.

SEBI's present chairman is Ajay Tyagi.

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Q78. Answer: (c) Krishna III

Krishna III was the last great ruler of Rashtrakuta's.

• The battle between Chola state and Rashtrakutta was fought in 949 CE between Rajaditya (Chola king) and Krishna III (Rashtrakuta king).

• The battle resulted in the defeat of the Cholas and death of Rajaditya.

Q79. Answer: (b) Battle of Buxar

The Battle of Buxar was fought on 22-23 October 1764

• It was fought between the forces under the command of the British East India Company led by Hector Munro and the combined armies of Mir Qasim, Nawab of Bengal, the Nawabof Awadh, and the Mughal Emperor Shah Alam.

• The combined armies of Mughals, Awadh, and Mir Qasim were defeated by the British army.

• The Treaty of Allahabad was signed after the Battle of Buxar.

Q80. Answer: (b) Superior to Huron

Soo Canals the two ship canals linking Lakes Superior and Huron.

• There is a canal on the Canadian and on the US side of the rapids of the St Mary's River

• Soo Canal or Soo Locks connects Lake Superior to LakeHuron.

Q81. Answer: (a) Kerala

The correct answer is Kerala.

Key Points

• The Idukki Dam is a double curvature arch dam constructed across the Periyar River in a narrow gorge between two granite hills locally known as Kuravan and Kurathi in Kerala, India.

• It is one of the highest arch dams in Asia.

• It is constructed and owned by the Kerala State Electricity Board.

• It supports a 780 MW hydroelectric power station in Moolamattom, which started generating power on 4 October 1975.

• The dam type is concrete, double curvature parabolic, thin arc dam.

Additional Information

Important HEPs	State	River
Srisailam Hydro Electric Power plant	Andhra Pradesh	Krishna
Tehri HEP	Uttarakhand	Bhagirathi
Nathpa Jhakri HEP	Himachal Pradesh	Sutlej
Hirakud HEP	Odisha	Mahanadi
Bhakra Nangal HEP	Himachal Pradesh	Sutlej
Idukki HEP	Kerala	Periyar
Rihand HEP	Uttar Pradesh	Rihand
Uri HEP	Jammu	Jhelum
Sardar Sarovar HEP	Gujarat	Narmada

Q82. Answer: (c) Nyaya

• There are six schools of Hindu philosophy namely

• Sankhya, Yoga, Nyaya, Vaisheshika, Mimamsa and Vedanta.

Sage	Indian Philosophy
Sage Kapila	Samkhya
Maharishi Patanjali	Yog
Sage Gautum	Nyaya
Sage Kanada Rishi	Vaisheshika

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Q83. Answer: (c) India

Bangladesh signed a deal with India in the presence of Finance Minister Arun Jaitley and his counterpart A.M.A. Muhith.

• 17 development projects had been identified under the deal. Setting up new economic zones for Indians and other investors.

• Bangladesh will use the funds for 17 priority infrastructure projects including electricity, railways, road, shipping, ports, education, health etc.

Q84. Answer: (a) The story of a Brief Marriage

The story of a Brief Marriage written by Anuk Arudpragasam, got the DSC Prize for South Asian Literature for 2017 held in Dhaka, Bangladesh.

• DSC Prize for South Asian Literature is an international literary prize awarded annually to writers of any ethnicity or nationality writing about South Asia, themes such as culture, politics, history or people.

Q85. Answer: (c) April 2015

Devastating earthquake of 7.8 magnitudes came in Nepal in April 2015.

• It was the deadliest earthquake in the seismically active region in 81 years.

• About 100 international search and rescue and medical teams had arrived within 24 hours.

• The Mt. Everest climbing season was cancelled.

Q86. Answer: (b) Copper

The correct answer is Copper.

Key Points

• German Silver

• German Silver is an alloy of Copper, Zinc, and Nickel, sometimes containing lead and tin too.

• It does not contain silver but it is named after its “silver-white” look.

• Although its composition varies as per commercial requirement, it is widely used in this proportion - copper (50%), zinc (20%), and nickel (30%).

Additional Information Some of the important alloys with their compositions are:

Alloys	Composition	Uses
German Silver	Copper, Zinc, Nickel	Used for making Utensils
Rolled Gold	Copper, Aluminium	Cheap ornaments
Gun Metal	Copper, Tin, Zinc, Lead	Gun, barrels, gears
Munz Metal	Copper, Zinc	Coin making
Monel Metal	Copper Nickel	Valves, pumps, shafts
Bell Metal	Copper, Zinc	Casting bells, statues

Q87. Answer: (c) Graphite

The correct answer is Graphite.

• Heavy water and Graphite both can be used as a moderator in a nuclear reactor.

• The role of the moderator is to slow down the neutrons emitted in fission in a small number of collisions.

Extra Facts:

• Uranium : It is the fuel most widely used by nuclear plants for nuclear fission.

Q88. Answer: (b) Legislature

The correct answer is Legislature.

Key Points

• Legislature:

• The legislature is the organ of the government which formulates laws.

• Legislature enjoys a very special and important in every democratic state.

• It is the assembly of the elected representatives of the people and represents the national public opinion and the power of the people.

• In most states, the Legislature consists of the Governor and the Legislative Assembly (Vidhan Sabha). This means that these states have a unicameral Legislature.

• In a few states, there are two houses of the Legislature namely, the Legislative Assembly (Vidhan Sabha) and Legislative council (Vidhan Parishad) besides the Governor. Where there are two Houses, the Legislature, is known as bicameral.

• Legislative Assembly:

• There is a Legislative Assembly (Vidhan Sabha) in every State.

• It represents the people of the State.

• The members of Vidhan Sabha are directly elected by people on the basis of a universal adult franchise.

• They are directly elected by all adult citizens registered as voters in the State.

From the above, it is clear that the 'Legislature' organ of the state refers to the elected representatives of the People.

Q89. Answer: (a) Montesquieu

The correct answer is Montesquieu.

Key Points

• The concept of separation of powers was given by Montesquieu.

• Montesquieu described the separation of political power among a legislature, an executive, and a judiciary.

• He wrote that the government is morally obligated to serve people, namely by protecting their natural rights of life, liberty, and property

Additional Information Aristotle

• Aristotle was a philosopher as well as the pioneer of human knowledge.

• He was famous for his statement that "man is by nature a political animal."

• Aristotle conceived of politics as being like an organism rather than like a machine, and as a collection of parts none of which can exist without the others.

• He was also the propounder of Realism and was entirely opposed to the world of ideas.

• He believed in inculcating the habit of reasoning and critical thinking in students rather than just cramming bookish knowledge.

Plato (429–347 BCE)

• He is one of the most dazzling thinkers in the Western philosophical tradition and one of the most penetrating, wide-ranging, and influential authors in the history of philosophy.

• After the death of Socrates, Plato, the most famous of his pupils, carried on much of his former teacher's work and eventually founded his own school, the Academy, in 385 BCE.

• He wrote dialogues between Socrates and others that would explore philosophical issues. These dialogues would be used in his school as starting points for discussion.

• The Platonic dialogues consist of Socrates asking questions of another and proving, through these questions, that the other person has the wrong idea on the subject.

Hobbes

• Thomas Hobbes was an English philosopher, considered to be one of the founders of modern political philosophy.

• He is best known for his 1651 book Leviathan, in which he expounds on an influential formulation of social contract theory.

Q90. Answer: (d) Urethra

Testicles in human produce sperms and urine are formed in the kidney through filtration of blood.

• The sperm arrives first at the ampulla, where secretions from the seminal vesicle are added.

• From the ampulla, seminal fluid is propelled forward through the ejaculatory ducts toward the urethra.

The urinary tract is a pathway that includes the:

• Kidneys: two bean-shaped organs that filter waste from the blood and produce urine

• Ureters: two thin tubes that take pee from the kidney to the bladder

• Bladder: a sac that holds pee until it's time to go to the bathroom

• Urethra: the tube that carries urine from the bladder out of the body when you pee

Q91. Answer: (c) Tracheids

Tracheids is not a constituent of phloem.

Phloem:-

Difference between Phloem and Xylem:-

Characteristic	Xylem	Phloem
Conduction	Water and minerals from the root to body parts	Prepared Food from leaves to body parts

Strength	Provides mechanical strength	Do not provide mechanical strength
Elements live	Xylem parenchyma only	Sieve tubes, companion cells and phloem parenchyma
Conduction direction	Unidirectional	Bidirectional
Conducting channel	Tracheids	Sieve tubes

Q92. Answer: (a) 150 square meter

Under the Pradhan Mantri Awas Yojana - Urban, these changes were made:

• Under the MIG-I category, the carpet area of the houses has been enhanced from 90 square metre to 120 sq.mts, while under the MIG-II segment; it has been increased to 150 square metre from the current 110 sq.mtr.

• For the MIG-I category, a four-percent interest subsidy is provided to the beneficiaries with an annual income of Rs 6-12 lakh on a loan of up to Rs 9 lakh.

• Under the MIG-II category, the beneficiaries with an annual income of Rs 12-18 lakh get a three-per cent interest subsidy on a loan of up to Rs 12 lakh.

Q93. Answer: (d) X-ray

ETH researchers (Zurich) succeeded in shortening the pulse duration of an X-ray laser to only 43 attoseconds.

• With a time resolution in the range of a few quintillionths of a second, they are now able for the first time to observe the movement of electrons during chemical reactions in slow motion.

Q94. Answer: (c) 15

In August 2017, the 12^(th)Five Year Plan was reviewed by NITI Aayog. The centre has now adopted a 15- year vision document.

• Drawn up by the National Institution for Transforming India (Niti Aayog), the central government's main planning body, the plan includes inputs from both state and central ministries.

• The new plan will be accompanied by shorter sub-plans – a seven-year strategy for 2017-24, and a three-year 'Action Agenda' from 2017-18 to 2019-20. Almost 300 specific action points covering a wide range of sectors have been drawn up as part of the 15-year vision.

Q95. Answer: (d) Seventh

To celebrate the idea of unity in diversity, the Ministry of Culture organized the 7^(th) edition of the RashtriyaSanskritiMahotsav under the Ek Bharat Shreshtha Bharat matrix in Karnataka beginning January 14, 2018.

• The Ek Bharat Shreshtha Bharat programme was launched by the Prime Minister on 31^(st) October 2016 to promote engagement amongst the people of different states/UTs so as to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

Q96. Answer: (c) 2

The correct answer is 2.

Key Points

Force (f) = mass (m)× acceleration (a)

since,

m = 3 kg

F = 6N

Now F = m x a,

6 = 3 × a

a = 2 m/s²

Q97. Answer: (b) Longitudinal

The correct answer is Longitudinal.

CONCEPT:

Longitudinal wave:

• The wave in which the particles in the medium vibrate into and fro motion along the line of propagation of the wave is called a longitudinal wave.

Key Points

In a longitudinal wave, particles of the medium vibrate in a direction parallel to the direction of wave propagation.

Q98. Answer: (b) fresh

The correct answer is fresh.

Key Points

• Water cycle: The whole process in which water evaporates and falls on the land as rain and later flows back into the sea via rivers is known as the water cycle.

• Most of the water on Earth's surface is found in seas and oceans and is saline.

• Freshwater is found frozen in the ice caps at the two poles (North and South) and on snow-covered mountains.

• The underground water and the water in rivers, lakes and ponds, streams, wetlands, and even groundwater are also freshwaters.

• Freshwater is just 3% of all the water on Earth.

• Groundwater waters like Rivers, Ponds, Glaciers, etc. are the major sources of Freshwater.

Q99. Answer: (d) Both A and C

England won the 2017 Women's Cricket World Cup defeating India.

• 2017 AIBA World boxing championship was held at Hamburg.

• Rohit Sharma captained the IPL team Mumbai Indians.

Q100. Answer: (b) <OPTION>

The correct answer is.

Key Points

• element is used to create a drop-down list

• The tags inside the element define the available options in the list.

• A text area can hold an unlimited number of characters, and the text renders in a fixed-width font

• define an input control.

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