

STAFF SELECTION COMMISSION
Multi Tasking (Non-Technical) Staff

SOLVED PAPER

(16th September 2017: Shift-1)

Time Allotted- 100 Minutes

Max marks- 100

Important Instructions:-

- ⇒ This paper contains 100 questions which are divided into 4 sections and each section contains 25 questions.
 - ✓ General English
 - ✓ General Intelligence & Reasoning
 - ✓ Numerical Aptitude
 - ✓ General Awareness
- ⇒ There will be 1 mark for each correct answer and also there will be a negative marking of 0.25 for each wrong answer.
- ⇒ Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

General English

1. 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".
Saying this, she (1) storm out of the room, (2) leaving her bogs behind. (3)/ No error (4)
1. 1 2. 2 3. 3 4. 4
2. In the following question, some part of the sentence may have errors, Find out which part of the sentence has an error and selects the appropriate option, If a sentence is free from error, select "No Error".
We recommend that (1)/you keep your (2)/advice to yourself (3)/No Error (4)
1. 1 2. 2 3. 3 4. 4
3. 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.
The CM flew _____ the flooded areas in a helicopter.
1. in 2. over 3. of 4. along
4. 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.
Her mother is anxious _____ her health.
1. about 2. of 3. after 4. for
5. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.
Primitive
1. present 2. new 3. basic 4. modern
6. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.
Definite
1. complete 2. inexact 3. unclear 4. vague
7. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.
Condemn
1. criticize 2. acquit 3. clear 4. pardon
8. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.
Virtual
1. fundamental 2. implied 3. indirect 4. authentic
9. In the following question, out of the given four alternatives select the one which is opposite in meaning of the given word.
Rustic :
1. homely 2. simple 3. urban 4. plain
10. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word.
Barren
1. fertile 2. depleted 3. empty 4. waste
11. In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
Man in the Street
1. man of talent 3. simple man
2. a foolish man 4. a dutiful person
12. In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
Now and again
1. occasionally 3. to be continued
2. always 4. at present time or future
13. Improve the bracketed part of the sentence.
These recipes are delicious (overtly) popular and so, so easy to prepare
1. widely 3. majorly
2. overly 4. no improvement
14. Improve the bracketed part of the sentence.
In the after math, you will have a litmus (effect) for all the people you know.
1. paper 3. test
2. affect 4. no improvement
15. In the following question, out of the four given alternatives, select the alternate which is the best substitute of the phrase.
Right or advantage available to a person
1. accountability 3. annuity
2. power 4. privilege

16. In the following question, out of the four given alternatives, select the alternative which is the best substitute of the phrase. Return the same sort of attack
 1. confiscate 2. subjugate 3. retaliate 4. alleviate
17. In the following question, a word has been written in four different ways out of which only one is correct spelt. Select the correctly spelt word.
 1. definite 2. definate 3. difanate 4. definiate
18. 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.
 1. gazete 2. gazette 3. gazeete 4. gazzete
19. Rearrange the parts of the sentence in correct order.
 Heavy metal
 P : In many applications
 Q : are today being
 R : replaced by polymers
 1. RQP 2. QRP 3. PRQ 4. QPR
20. Rearrange the parts of the sentence in correct order.
 One should
 P : think calmly
 Q : and clearly
 R : learn how to
 1. PQR 2. QRP 3. QPR 4. RPQ
21. 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.
 My father is an _____ person of my life. He is my real _____ and my best friend ever. He always helps me a lot in my any difficulty. He is very intelligent man and always helps other in their problems He is the _____ of my family and gives _____ and instruction to every family member. He takes me to school on every PTM and _____ my performance with my teacher.
 My father is an _____ person
 1. ideal 2. idle 3. idol 4. idiot
22. He is my real _____
 1. actor 2. player 3. hero 4. zero
23. He is the _____ of my _____
 1. boss 2. leader 3. knight 4. fighter
24. _____ and instruction
 1. instructions 2. advice 3. comments 4. jokes
25. PTM and _____ my _____
 1. evaluates 2. calculates 3. comprehends 4. discusses

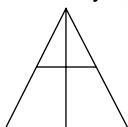
General Intelligence & Reasoning

26. In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

2	5	6
3	1	3
4	2	2
10	7	?

1. 12 2. 16 3. 20 4. 24

27. How many triangles are there in the given figure?



1. 4 2. 6 3. 7 4. 8

28. A word is represented by only one 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 numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented by 23, 59, etc., and 'S' can be represented by 34, 99, etc. Similarly, you have to identify the set for the word "FAINT".

Matrix-I

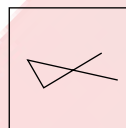
	0	1	2	3	4
0	B	M	U	A	F
1	H	E	O	W	D
2	P	J	G	Q	Y
3	V	R	L	I	S
4	Z	X	T	N	K

Matrix-II

	5	6	7	8	9
5	D	N	X	G	Q
6	L	V	E	O	Y
7	S	T	C	M	W
8	H	R	B	K	U
9	F	P	A	I	S

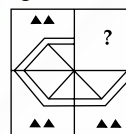
1. 95, 03, 34, 43, 76 2. 95, 97, 33, 40, 42
 3. 04, 97, 99, 56, 34 4. 04, 97, 33, 56, 42

29. From the given answer figures, select the one in which the question figure is hidden/embedded.



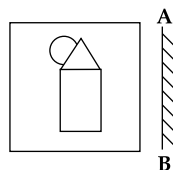
1. 2. 3. 4.

30. Which answer figure will complete the pattern in the question figure?

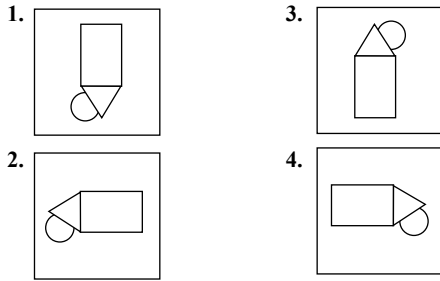


1. 2. 3. 4.

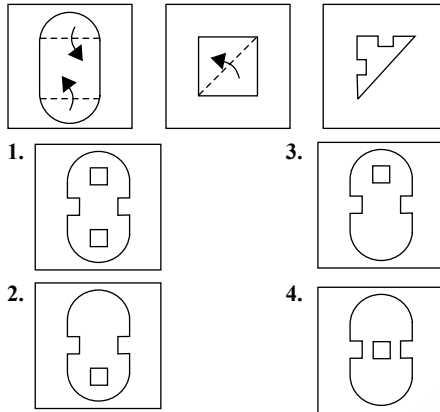
31. If a mirror is placed on the line AB, then which of the answer figures is the right image of the given figure?



1. 4 2. 6 3. 7 4. 8



32. A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?



33. If '+' means '×', '-' means '÷', '×' means '-' and '÷' means '+' then $26 - 52 + 74 = ?$

1. 39 2. 37 3. 148 4. 42

34. If $6 @ 7 @ 3 = 16$ and $4 @ 5 @ 1 = 10$, then $9 @ 7 @ 6 = ?$

1. 21 2. 22 3. 29 4. 20

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

1. mango 2. mind 3. master 4. minty
5. muted

1. 13425 2. 31425 3. 31245 4. 13245

36. In the following question, select the missing number from the given alternatives.

143, 139 134, 128, 121, ?

1. 114 2. 113 3. 115 4. 112

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

AQR, BPS, COT, DNU, ?

1. FOX 2. FMX 3. EMV 4. EOV

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

1. Ganga : River 3. Ostrich : Bird
2. Pen : Write 4. Pepper : Spice

39. In the following question, select the odd number pair from the given alternatives.

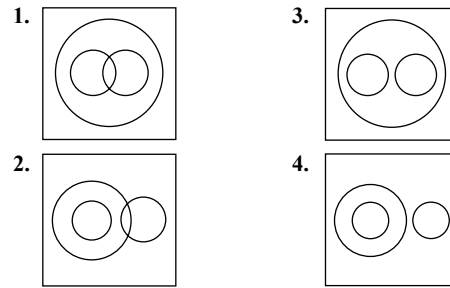
1. 14 : 27 2. 2 : 5 3. 4 : 9 4. 12 : 25

40. In the following question, select the odd letter pair from the given alternatives.

1. AP – EQ 2. IS – OT 3. OC – UB 4. EK – IL

41. Identify the diagram that best represents the relationship among the given classes.

Computer, Monitor, Keyboard



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

Iron : Metal :: Oxygen : ?

1. respiration 2. gas 3. odourless 4. living

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

13 : 27 : 31 : ?

1. 63 2. 58 3. 69 4. 74

44. In the following question, select the related letters from the given alternatives.

AG : ZT :: JD : ?

1. UV 2. PX 3. QW 4. OY

45. In the following question, select the word which cannot be formed using the letters of the given word.

Noteworthy

1. worth 2. torn 3. hate 4. rent

46. Raman is 19th from top and 25th from bottom. How many people are there in the row?

1. 42 2. 44 3. 43 4. 45

47. Kamal remembers his birthday is before 24th April. His mother remembers that his birthday is after 22nd April. On which date of April, is Kamal's birthday?

1. 25 2. 24 3. 22 4. 23

48. In the following question below are given some statements following by some conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:

- I.** Some tables are chairs.
II. All chairs are cups.

Conclusions:

- I.** All tables are cups.
II. Some tables are cups.
1. Only conclusion (I) follows.
2. Only conclusion (II) follows.
3. Both conclusion follow.
4. Neither conclusion (I) nor conclusion (II) follows.

49. In a certain code language, "PALM" is written as "QCOQ". How is "STEM" written in that code language?

1. TVHQ 2. TVHP 3. TVIQ 4. TUHQ

50. In a certain code language, "SUN" is written as "108" and "MOON" is written as "114". How is "STAR" written in that code language?

1. 112 2. 116 3. 126 4. 108

Numerical Aptitude

51. What is the value of $1^2 + 2^2 + 3^2 + \dots + 14^2$?

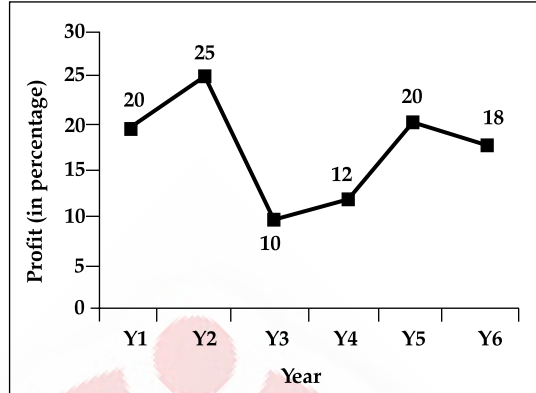
1. 1050 2. 1015 3. 1105 4. 1225

52. How many times the digit 7 appears in the number from 1 to 90?
1. 19 2. 18 3. 20 4. 10
53. What is the value of $\sqrt{1500} + \sqrt{441}$?
1. 37 2. 39 3. 49 4. 47
54. If 373P is divisible by 4, then what is the value of P?
1. 2 2. 6 3. 2 or 6 4. 4
55. What is the value of $12\frac{1}{2} + 12\frac{1}{3} + 12\frac{1}{6}$?
1. 36 2. 37 3. 39 4. 38
56. Which of the following is not a perfect square?
1. 1024 2. 1521 3. 1444 4. 876
57. A, B and C together can complete a work in 15 days. B and C can complete the same work in 20 days. In how many days a alone can complete the same work?
1. 40 2. 45 3. 60 4. 75
58. P, Q and R together can complete a work in 20 days. P alone can complete the work in 40 days, Q alone in 60 days then in how many days R alone can complete the work?
1. 60 2. 80 3. 40 4. 120
59. What is the area of a rhombus having one side as 30 cm and one diagonal as 36 cm?
1. 432 2. 864 3. 1080 4. 540
60. Selling and cost price of an article are Rs 5400 and Rs 5200 respectively. If 10% discount was given, then what is the percentage mark up?
1. 12.5 2. 14.12 3. 17.25 4. 15.38
61. Cost price of an article is Rs. 3600. It was sold at a profit of 15%. If the article was sold at a discount of 8%, then what is the marked price (in Rs) of the article.
1. 4000 2. 4250 3. 4500 4. 4750
62. 200 litres of alcohol solution has 30% alcohol in it. How much alcohol should be added to make it 50% in the solution?
1. 40 2. 60 3. 80 4. 50
63. In a college, the ratio of boys and girls is 5:3 and the ratio of girls and teachers is 7 : 1. What is the ratio of students and teachers?
1. 57 : 3 2. 54 : 1 3. 26 : 1 4. 56 : 3
64. What is the average of first 9 odd numbers?
1. 9 2. 7 3. 10 4. 8
65. A man buys 8 oranges for a rupee and sell 6 oranges for a rupee. What is the profit percentage?
1. 25 2. 20 3. 33.33 4. 10
66. A fan costing Rs 1050 is being sold for Rs. 1500. What is the profit percentage?
1. 35.26 2. 42.85 3. 44.23 4. 37.57
67. If 23% of a number is 690, then what is the 72% of the same number?
1. 1475 2. 1450 3. 2160 4. 1380
68. If A is 20% less than B, then B is how much percent more than A?
1. 16.66 2. 20 3. 25 4. 10
69. Govind covers $\frac{3}{11}$ of the total distance by train and the remaining 72 km by bus. What is his total journey (in km)?
1. 108 2. 99 3. 118 4. 126
70. A man can row 10 km/hr in still water. If the speed of the current is 2 km/hr, he takes 3 hours more in upstream than in the downstream. What is the distance (in km)?
1. 36 2. 72 3. 48 4. 24

71. A certain sum becomes k times in 6 years at compound interest. In 24 years it will become how many times?
1. 4k 2. K4 3. K3 4. 3k

72. The line chart given below shows profit of a shopkeeper in 6 consecutive years.

$$\text{Profit \%} = (\text{Revenue}/\text{Expenditure}) \times 100$$

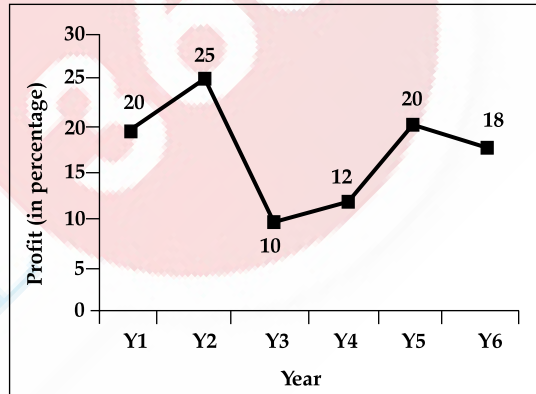


If the expenditure in year Y2 is Rs 40000, then what is the revenue (in Rs) in that year?

1. 50000 2. 35000 3. 30000 4. 46000

73. The line chart given below shows profit of a shopkeeper in 6 consecutive years.

$$\text{Profit \%} = (\text{Revenue}/\text{Expenditure}) \times 100$$

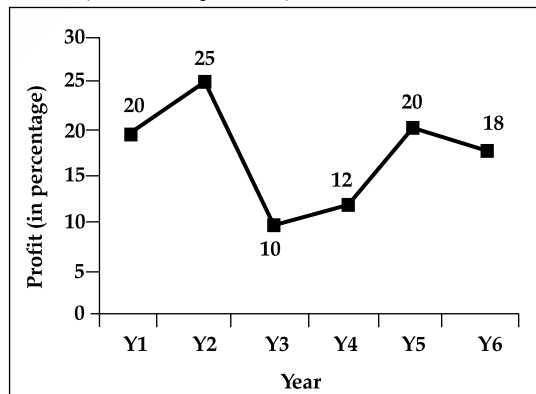


If the revenue in year Y5 is Rs. 96000, then what is the expenditure (in Rs) in that year?

1. 66000 3. 84000
2. 80000 4. 74000

74. The line chart given below shows profit of a shopkeeper in 6 consecutive years.

$$\text{Profit \%} = (\text{Revenue}/\text{Expenditure}) \times 100$$

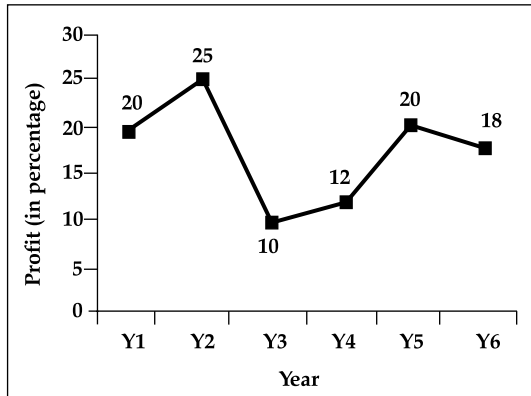


The expenditure of Y1 and Y4 are Rs. 40000 and Rs 60000 respectively. What is the total profit (in Rs) of Y1 and Y4?

1. 16800 2. 13400 3. 15200 4. 19500

75. The line chart given below shows profit of a shopkeeper in 6 consecutive years.

Profit % = (Revenue/Expenditure) × 100



The expenditure of Y3 and Y6 are Rs 100000 and Rs 200000 respectively. What is the average revenue (in Rs) for these 2 years?

1. 148000 2. 156000 3. 152000 4. 173000

General Awareness

76. What is National Income ?
1. It is the money value of all goods and services produced in a country in a year
 2. It is the money value of all goods and services produced in a country in two year
 3. It is the money value of all goods and services produced in a country in five year
 4. It is the money value of all goods and services produced outside the country in a year.
77. How is the Net National Product calculated ?
1. NNP = GNP - Depreciation
 2. NNP = GDP - Taxes
 3. NNP = GNP + Taxes
 4. NNP = GNP + Depreciation
78. From which date Indian Constitution came into commencement completely ?
1. 15th Aug 1950 3. 15th Aug 1947
 2. 26th Jan 1947 4. 26th Jan 1950
79. How many houses are there in Indian Parliament ?
1. 2 2. 3 3. 4 4. 5
80. Stone tools were first found in which period ?
1. Neolithic 3. Microlith
 2. Palaeolithic 4. Mesolithic
81. What were cotton textiles generally named in Europe which were taken by Portuguese from calicut ?
1. Calco 3. Cottex
 2. Calico 4. None of these
82. What is the position of Mercury from the Sun among the eight planets ?
1. first 2. second 3. third 4. fourth
83. What is the zone between the Tropic of cancer and Tropic of Capricorn called?
1. temperate zone 3. torrid zone
 2. frigid zone 4. none of these
84. Which of the following roots are not eaten ?
1. Carrot 2. Tapioca 3. Raddish 4. Wheat
85. In deficiency of which vitamin blood does not clot?
1. Vitamin A 3. Vitamin E
 2. Vitamin K 4. Vitamin D
86. In man ribs are attached to _____.
1. Clavicle 2. Ileum 3. Sternum 4. Scapula
87. The reciprocal of resistance is conductance. If the unit of resistance is ohm, the unit of conductance will be _____.
1. ohm⁻¹ 2. ohmmeter 3. rho 4. ampere
88. Minimum work is done when the body is _____.
1. pushed down an inclined plane
 2. raised vertically upwards
 3. pushed over smooth rollers
 4. pulled on a plane horizontal surface
89. What is the first page of Website called?
1. home page 3. design page
 2. main page 4. none of these
90. When sodium reacts with fluorine _____.
1. Each fluorine atom loses one electron
 2. Each sodium atom gains one electron
 3. Fluorine neither gains nor loses electron
 4. The compound formed is a good conductor of electricity in the molten state
91. Essential component of an amalgam is _____.
1. an acid 3. a base
 2. mercury 4. a non-metal
92. What is the effect of greenhouse gases on the average temperature of the Earth's atmosphere?
1. increases 3. remains same
 2. decreases 4. first increases and then decreases
93. Which is a scheme for providing physical aids and Assisted-living Devices for senior citizens belonging to BPL category?
1. Rashtriya Vayoshri Yojana
 2. Vayoshreshtha Yojana
 3. Pradhan Mantri Vayoushri Yojana
 4. None of these
94. Who invented Barometer?
1. E. Torricelli 3. William Herschel
 2. Walter Reed 4. William Stanley
95. Which country will host the 2019 ICC Cricket World Cup?
1. England 3. India
 2. South Africa 4. West Indies
96. Which art is also known as Greco-Buddhist art?
1. Gandhara Art 3. Sunga Art
 2. Mathura Art 4. Madhubani Art
97. Who was/were the last person/persons to be awarded with 'Bharat Ratna'?
1. Pranab Mukherjee 3. Nanaji Deshmukh
 2. Bhupen Hazarika 4. All of the above
98. Who is the author of book named 'A Bend in the River'?
1. V.S Naipaul 3. Bill Gates
 2. Mark Twain 4. G.B Shaw
99. The African Nuclear weapon free zone treaty is also called as _____.
1. Pelindaba Treaty 3. Tropex Treaty
 2. Petrotech Treaty 4. None of these
100. Which neighbouring country of India is also known by the name Burma?
1. Myanmar 3. Bhutan
 2. Bangladesh 4. China

Answer Key

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

Answers with Explanations

1. **Option (2) is correct.**
In the sentence, 'Saying this, she storm out of the room, leaving her bogs behind', the correct verb is 'stormed' because the action refers to a past one- 'leaving her bogs behind' implying that the event is already complete. 'Saying this, she stormed out of the room, leaving her bogs behind'.
2. **Option (4) is correct.**
There is no error in the sentence. We recommend that you keep your advice to yourself.
3. **Option (2) is correct.**
The preposition 'over' is appropriate for the blank because it is used to mean to talk about movement or position at a higher level than something else. In the given sentence, the helicopter is flying. The CM flew over the flooded areas in a helicopter.
4. **Option (1) is correct.**
'Anxious' implies 'worried', and the phrasal verb 'anxious about' means to be worried about someone. 'Her mother is anxious about her health.
5. **Option (3) is correct.**
'Primitive' means 'relating to human society at a very early stage of development'. So 'basic' is a synonym.
6. **Option (1) is correct.**
'Definite' implies clearly stated or decided. So, the word which best expresses the meaning of the given word is 'complete'.
7. **Option (1) is correct.**
'Condemn' means to criticize something or someone strongly, usually for moral reasons.
So, the word which best expresses the meaning of the given word is 'criticize'.
8. **Option (4) is correct.**
'Virtual' implies something that is not real or far from original and authenticity or almost/nearly as described. Authentic implies exactly original. So, the word which is opposite in meaning of the given word is 'authentic'.
9. **Option (3) is correct.**
'Rustic' implies rural; made in a plain and simple fashion. All options, except (3) are synonyms. So, the word which is opposite in meaning of the given word is 'urban'.
10. **Option (1) is correct.**
'Barren' connotes producing little or no vegetation: desolate. So, the word which is opposite in meaning of the given word is 'fertile'.
11. **Option (3) is correct.**
The idiom 'Man in the Street' means 'an average or ordinary person.' So, the correct meaning to the given idiom is 'a simple person'.
12. **Option (1) is correct.**
The idiom 'Now and again' means 'from time to time.' So, the correct meaning to the given idiom is 'occasionally'.
13. **Option (1) is correct.**
These recipes are delicious widely popular and so, so easy to prepare. 'Overtly' means in an obvious way; so, it is incorrect. Since the delicious recipes are popular, they must be famous over widespread areas. So 'widely' will replace 'overtly'.
14. **Option (3) is correct.**
In the after math, you will have a litmus test for all the people you know.
The idiom 'litmus test' is used to make a judgement about whether someone or something is acceptable. 'Aftermath' means as a result, so the correct phrase will be 'litmus test'.
15. **Option (4) is correct.**
The right or advantage available to a person is called 'a privilege'.
16. **Option (3) is correct.**
Return the same sort of attack means to retaliate. Confiscate means to take or seize (someone's property) with authority. Subjugate connotes make someone or something subordinate to. Alleviate implies partial lessening of pain or distress.
17. **Option (1) is correct.**
The correct spelling out of all the options is: Definite, which means certain or sure about something.
18. **Option (2) is correct.**
The correct spelling out of all the options is : Gazette (journal or newspaper).
19. **Option (2) is correct.**
The correct sequence is: QRP. The introductory phrase is the subject of the sentence, so this will be followed by a verb- 'are today being'; this form of 'being' will need a main verb to make sense, therefore 'replaced' will be following next. Heavy metals are today being replaced by polymers in many applications.
20. **Option (4) is correct.**
The correct sequence is: RPQ. The introductory phrase 'One should' is the subject of the sentence, so this will be followed by a verb- 'learn how to'. The conjunction 'and' in Q needs a similar idea (like 'clearly') to make sense. Therefore, PQ form a pair- think calmly and clearly. The correct answer is: One should learn how to think calmly and clearly.

21. Option (1) is correct.

My father is an ideal (perfect, or the best possible) person. Since the paragraph is in praise of the father, it is obvious that he must be the 'ideal' person for the narrator. Idle means something is not in use, while 'idol' is a noun meaning an object that represents a deity.

22. Option (3) is correct.

He is my real hero. The speaker speaks highly of his father, and considers him his ideal person of my life. So 'actor/ player/zero' are inappropriate.

23. Option (2) is correct.

He is the leader of my family. Knight means someone born of the nobility and trained to fight, so this is contextually incorrect. The sentence states that he gives instruction to every family member, so he must like a leader, a front-runner, who direct the house.

24. Option (2) is correct.

He gives advice and instruction to every family member. 'And' is used to join two or more clauses of equal importance or rank. Since the noun 'instruction' is present, a similar noun is 'advice'.

25. Option (4) is correct.

He takes me to school on every PTM and discusses my performance with my teacher. It is to be noted that Parent Teacher Meetings are supposed to be a place for discussion between teachers and parents, so 'discusses' is the appropriate verb.

26. Option (3) is correct.

2	5	6
3	1	3
4	2	2
10	7	?

Logic:

Column wise:

$$(1^{\text{st}} \text{ number} \times 2^{\text{nd}} \text{ number}) + 3^{\text{rd}} \text{ number} = 4^{\text{th}} \text{ number}$$

Hence,

Column 1:

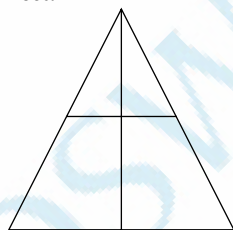
$$(2 \times 3) + 4 = 10$$

Similarly,

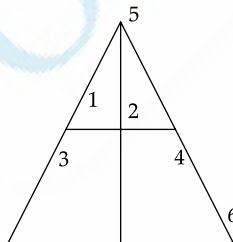
Column 3

$$(6 \times 3) + 2 = 20$$

27. Option (2) is correct.



Total triangles = 6



28. Option (4) is correct.

F-04, 95

A-03, 97

I-33, 98

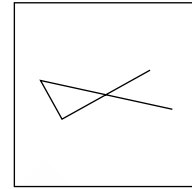
N-43, 56

T-42, 76

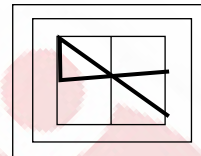
FAINT = 04, 97, 33, 56, 42

29. Option (3) is correct.

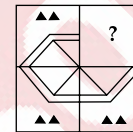
Given image:



The above figure is embedded in option 3 as highlighted below:



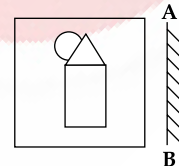
30. Option (1) is correct.



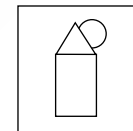
Logic: Follow the pattern and the symmetry.



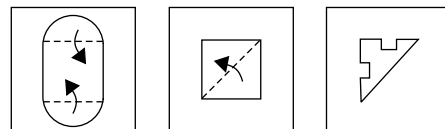
31. Option (3) is correct.



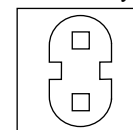
Logic: In the mirror image, left becomes right, and the right becomes left. Hence, the answer figure is:



32. Option (1) is correct.



Logic: Follow the pattern and the symmetry.



33. Option (2) is correct.

'+' means 'x', '-' means '+', 'x' means '-' and '+-' means '+', then $26 - 52 + 74 = ?$

Logic:

After interchanging the signs we get,
 $= 26 \div 52 \times 74$

$$= \left(\frac{1}{2}\right) \times 74 = 37$$

34. **Option (2) is correct.**

$6 @ 7 @ 3 = 16$ and $4 @ 5 @ 1 = 10$, then $9 @ 7 @ 6 = ?$

Logic: $6 @ 7 @ 3 = 16 \Rightarrow$ adding all the terms we get 16

Similarly,

$$9 @ 7 @ 6 \Rightarrow 9+7+6=22$$

35. **Option (4) is correct.**

1. Mango	3. Master	2. Mind	4. Minty	5. Muted
----------	-----------	---------	----------	----------

36. **Option (2) is correct.**

143, 139, 134, 128, 121, ?

Logic:

$$143 - 4 = 139$$

$$139 - 5 = 134$$

$$134 - 6 = 128$$

$$128 - 7 = 121$$

$$121 - 8 = 113$$

37. **Option (3) is correct.**

AQR, BPS, COT, DNU, ?

A	Q	R
+1	-1	+1
B	P	S
+1	-1	+1
C	O	T
+1	-1	+1
D	N	U
+1	-1	+1
E	M	V

38. **Option (2) is correct.**

In all the pairs, the 2nd word is a category while the 1st word is the example of that category i.e.

Ganga - River \rightarrow Ganga is an example of a River.

Pen - Write \rightarrow Here Pen is not an example of Write but Writing is done by a pen.

Ostrich - Bird \rightarrow Ostrich is an example of a Bird.

Pepper - Spice \rightarrow Pepper is an example of a Spice.

39. **Option (1) is correct.**

Logic:

$$14 : 27 \Rightarrow (14 \times 2) - 1 = 27, \text{ odd one out}$$

$$2 : 5 \Rightarrow (2 \times 2) + 1 = 5$$

$$4 : 9 \Rightarrow (4 \times 2) + 1 = 9$$

$$12 : 25 \Rightarrow (12 \times 2) + 1 = 25$$

40. **Option (3) is correct.**

(1) AP - EQ \Rightarrow P + 1 gives Q

(2) IS - OT \Rightarrow S + 1 gives T

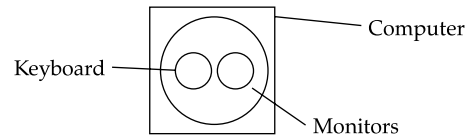
(3) OC - UB \Rightarrow C - 1 gives B, Odd one out.

(4) EK - IL \Rightarrow K + 1 gives L

41. **Option (3) is correct.**

Computer, Monitor, Keyboard

The best suited venn diagram is:



42. **Option (2) is correct.**

Iron: Metal:: Oxygen : ?

Iron is an example of Metal. Similarly, oxygen an example of Gas.

43. **Option (1) is correct.**

13 : 27 :: 31 : ?

Logic:

$$13:27 \Rightarrow (13 \times 2) + 1 = 27$$

$$31:? \Rightarrow (31 \times 2) + 1 = 63$$

44. **Option (3) is correct.**

AG: ZT :: JD : ?

Logic: See the above table:

A	G	J	D
Z	T	Q	W

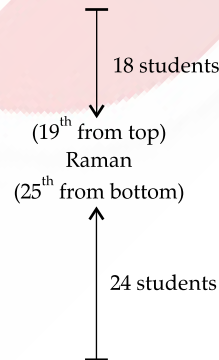
Hence, QW is the correct answer.

45. **Option (3) is correct.**

NOTEWORTHY

The word 'HATE' cannot be formed using the above word.

46. **Option (3) is correct.**



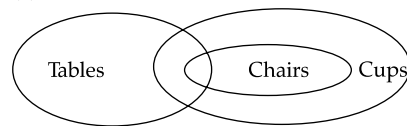
Hence, the total number of people in the row = $18 + 24 + 1 = 43$

47. **Option (4) is correct.**

Kamal remembers his birthday is before 24th April (i.e. on 23rd, 22nd, 21st, etc.) while his mother remembers that his birthday is after 22nd April (i.e. On 23rd, 24th, 25th etc).

Combining both the statements we get only one possible date which is 23rd April.

48. **Option (2) is correct.**



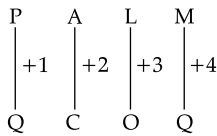
(1) From diagram some tables are cup but cannot say definitely about all tables.

(2) From diagram it is true.

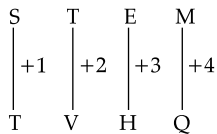
Hence, only conclusion II follows.

49. Option (1) is correct.

“PALM” is written as “QCOQ”.



“STEM” can be coded as:



50. Option (2) is correct.

“SUN” is written as “108”

$$\text{SUN} = 19 + 21 + 14 = 54 \times 2 = 108$$

“MOON” is written as “114”

$$\text{MOON} = 13 + 15 + 15 + 14 = 57 \times 2 = 114$$

“STAR”

$$\text{STAR} = 19 + 20 + 1 + 18 = 58 \times 2 = 116$$

51. Option (2) is correct.

We know that

$$1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$$

$$\begin{aligned} \therefore 1^2 + 2^2 + 3^2 + \dots + 14^2 &= \frac{14(14+1)(28+1)}{6} \\ &= \frac{14 \times 15 \times 29}{6} = 1015. \end{aligned}$$

52. Option (1) is correct.

The numbers in which 7 appears 7 = 7, 17, 27, 37, 47, 57, 67, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 87.

Total number of figures = 19

53. Option (2) is correct.

$$\sqrt{1500} + \sqrt{441} = \sqrt{1500 + 21} = \sqrt{1521} = 39$$

54. Option (3) is correct.

Given that: 373P is divisible by 4, that means 3P is divisible by 4, which implies that 3P is either 32 or 36.

So, the value of P is 2 or 6

55. Option (2) is correct.

$$\begin{aligned} 12 \frac{1}{2} + 12 \frac{1}{3} + 12 \frac{1}{6} &= 12 + 12 + 12 + \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{6} \right) \\ &= 36 + \left(\frac{3+2+1}{6} \right) = 36 + \frac{6}{6} = 36 + 1 = 37 \end{aligned}$$

56. Option (4) is correct.

$$1024 = 32 \times 32 = (32)^2 \rightarrow \text{perfect square}$$

$$1521 = 39 \times 39 = (39)^2 \rightarrow \text{perfect square}$$

$$1444 = 38 \times 38 = (38)^2 \rightarrow \text{perfect square}$$

$$876 = 2 \times 2 \times 3 \times 73 \rightarrow \text{Not a perfect square}$$

57. Option (3) is correct.

∴ A, B and C together can complete a work in 15 days

∴ A, B and C together can do the work in 1 day = $\frac{1}{15}$ parts

$$\text{i.e. } A + B + C = \frac{1}{15} \quad \dots(i)$$

$$\text{Similarly, } B + C = \frac{1}{20} \quad \dots(ii)$$

Subtract (ii) from (i)

$$A + B + C = \frac{1}{15}$$

$$B + C = \frac{1}{20}$$

$$\begin{array}{r} - \quad - \quad - \\ A = \frac{1}{15} - \frac{1}{20} \\ = \frac{4-3}{60} = \frac{1}{60} \end{array}$$

∴ A alone can complete the same work in 60 days.

58. Option (4) is correct.

Since, P, Q and R together can complete a work in 20 days

$$\therefore P + Q + R = \frac{1}{20} \text{ parts of work} \quad \dots(i)$$

$$\text{Similarly, } P = \frac{1}{40} \text{ parts of work} \quad \dots(ii)$$

$$Q = \frac{1}{60} \text{ parts of work} \quad \dots(iii)$$

From (i), (ii) and (iii)

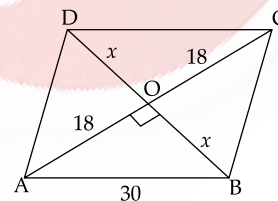
$$R + \frac{1}{40} + \frac{1}{60} = \frac{1}{20}$$

$$\Rightarrow R = \frac{1}{20} - \frac{1}{40} - \frac{1}{60} = \frac{6-3-2}{120} = \frac{1}{120}$$

∴ R alone can complete the work in 120 days.

59. Option (2) is correct.

Since, diagonal of the rhombus bisect each other at a right angle.



$$\therefore OA = OC = \frac{36}{2} = 18$$

$$\Rightarrow OB = OD = x$$

In ΔAOB ,

$$OA^2 + OB^2 = AB^2$$

$$\Rightarrow 18^2 + x^2 = 30^2 \Rightarrow x^2 = 30^2 - 18^2$$

$$\Rightarrow x^2 = (30+18)(30-18) = 48 \times 12$$

$$\Rightarrow x = \sqrt{2 \times 2 \times 12 \times 12} = 2 \times 12 = 24$$

$$\therefore BD = 24 + 24 = 48$$

$$\text{Area of rhombus} = \frac{1}{2} \times AC \times BD$$

$$= \frac{1}{2} \times 36 \times 48 = 864 \text{ cm}^2$$

60. Option (4) is correct.

S.P = ₹ 5400, C.P = 5200 and discount = 10%

$$\therefore \text{List price} = \frac{\text{S.P} \times 100}{100 - \text{discount}\%}$$

$$= \frac{5400 \times 100}{100 - 10} = \frac{5400 \times 100}{90} = 6000$$

$$\begin{aligned} \text{Rise price in C.P} &= 6000 - 5200 \\ &= 800 \\ \text{Rise price \%} &= \frac{800 \times 100}{5200} = 15.38\% \end{aligned}$$

61. **Option (3) is correct.**

C.P = ₹ 3600, profit = 15% and discount = 8%

$$\begin{aligned} \text{S.P} &= \text{C.P} \left(1 + \frac{\text{Profit}\%}{100} \right) \\ &= 3600 \left(1 + \frac{15}{100} \right) = 3600 \left(\frac{115}{100} \right) \\ &= ₹ 4140 \end{aligned}$$

$$\begin{aligned} \therefore \text{List price} &= \frac{\text{S.P} \times 100}{100 - \text{discount}\%} \\ &= \frac{4140 \times 100}{100 - 8} = \frac{4140 \times 100}{92} \\ &= ₹ 4500 \end{aligned}$$

62. **Option (3) is correct.**

$$\text{Quantity of alcohol in 200 lit} = 200 \times \frac{30}{100} = 60 \text{ lit}$$

Let x litres alcohol should be added to make it 50%

$$\begin{aligned} (200 + x) \times \frac{50}{100} &= 60 + x \\ \Rightarrow 200 + x &= 120 + 2x \\ \Rightarrow 200 - 120 &= 2x - x \\ \Rightarrow x &= 80 \text{ litres.} \end{aligned}$$

63. **Option (4) is correct.**

Given; B : G = 5 : 3 and G : T = 7 : 1

$$\frac{B}{G} = \frac{5 \times 7}{3 \times 7} = \frac{35}{21} \text{ and } \frac{G}{T} = \frac{7 \times 3}{1 \times 3} = \frac{21}{3}$$

$$\therefore B : G : T = 35 : 21 : 3$$

Hence, the ratio of students and teachers

$$= \frac{35 + 21}{3} = \frac{56}{3} = 56 : 3$$

64. **Option (1) is correct.**

\therefore Sum of the first 9 odd numbers = $n^2 = 9^2$

$$\text{Average of 9 odd numbers} = \frac{9^2}{9} = 9$$

65. **Option (3) is correct.**

\therefore A man buys 8 oranges for a rupee.

$$\therefore \text{C.P. of 1 orange} = ₹ \frac{1}{8}$$

And sell 6 oranges for a rupee

$$\therefore \text{S.P. of 1 orange} = ₹ \frac{1}{6}$$

$$\text{Profit} = \frac{1}{6} - \frac{1}{8} = \frac{4 - 3}{24} = \frac{1}{24}$$

$$\text{Profit \%} = \frac{\frac{1}{24} \times 100}{\frac{1}{8}}$$

$$= \frac{1}{24} \times 100 \times 8 = \frac{100}{3} = 33.33\%$$

66. **Option (2) is correct.**

Given that, C.P. = ₹ 1050 and S.P. = ₹ 1500

$$\text{Profit} = 1500 - 1050 = ₹ 450$$

$$\text{Profit \%} = \frac{450 \times 100}{1050} = \frac{300}{7} = 42.85\%$$

67. **Option (3) is correct.**

Let number be x .

According to questions

$$x \times \frac{23}{100} = 690 \Rightarrow x = \frac{690 \times 100}{23} = 3000$$

$$\text{Now, } 3000 \times \frac{72}{100} = 2160$$

68. **Option (3) is correct.**

Let the values of B be x

$$\therefore A = x \left(1 - \frac{20}{100} \right) = \frac{4x}{5}$$

$$\text{Less value} = \text{more value} = x - \frac{4x}{5} = \frac{x}{5}$$

More value of B than A

$$\begin{aligned} &= \frac{\frac{x}{5} \times 100}{\frac{4x}{5}} = 25\% \end{aligned}$$

69. **Option (2) is correct.**

Let the total distance be x km

According to question.

$$\begin{aligned} x \times \frac{3}{11} + 72 &= x \\ \Rightarrow \frac{3x}{11} + 72 &= x \Rightarrow x - \frac{3x}{11} = 72 \\ \Rightarrow \frac{11x - 3x}{11} &= 72 \Rightarrow \frac{8x}{11} = 72 \\ \Rightarrow x &= \frac{72 \times 11}{8} = 99 \text{ km.} \end{aligned}$$

70. **Option (2) is correct.**

Given that the speed of man in still water = 10 km/h.

and speed of the current = 2 km/h.

\therefore Upstream = $10 - 2 = 8$ km/h.

Downstream = $10 + 2 = 12$ km/h.

Let the distance be x km.

According to question

$$\begin{aligned} \frac{x}{8} - \frac{x}{12} &= 3 \\ \Rightarrow \frac{3x - 2x}{24} &= 3 \Rightarrow \frac{x}{24} = 3 \end{aligned}$$

$$\Rightarrow x = 3 \times 24 = 72 \text{ km.}$$

71. **Option (2) is correct.**

Let the principal be ₹ x then amount = Kx

$$\therefore Kx = x \left(1 + \frac{r}{100} \right)^6 \Rightarrow K = \left(1 + \frac{r}{100} \right)^6$$

$$\Rightarrow \left(1 + \frac{r}{100} \right)^6 = K \frac{1}{6}$$

$$\text{Now, } A = x \left(1 + \frac{r}{100} \right)^{24} = x \left[\left(1 + \frac{r}{100} \right)^6 \right]^4$$

$$= x K^4$$

\therefore After 24 years money becomes K^4 times

72. **Option (1) is correct.**

For Y_2 year

$$\text{Profit \%} = \frac{\text{Revenue} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

$$25 = \frac{\text{Revenue} - 40000}{40000} \times 100$$

$$\Rightarrow 10000 = \text{Revenue} - 40000$$

$$\Rightarrow \text{Revenue} = 10000 + 40000 = 50000$$

73. Option (2) is correct.For Y_5 year

$$\text{Profit \%} = \frac{\text{Revenue} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

$$\Rightarrow 20 = \frac{96000 - \text{Expenditure}}{\text{Expenditure}} \times 100$$

$$\Rightarrow \frac{20}{100} \text{Expenditure} = 96000 - \text{Expenditure}$$

$$\Rightarrow \left(\frac{1}{5} + 1\right) \text{Expenditure} = 96000$$

$$\begin{aligned} \Rightarrow \frac{6}{5} \times \text{Expenditure} &= \frac{96000 \times 5}{6} \\ &= 16000 \times 5 \\ &= 80000 \end{aligned}$$

74. Option (3) is correct.Total profit for Y_1 and Y_4

$$\begin{aligned} &= 40000 \times \frac{20}{100} + 60000 \times \frac{12}{100} \\ &= 8000 + 7200 = 15200 \end{aligned}$$

75. Option (4) is correct.For year Y_3 and Y_6

Total revenue

$$= 100000 \left(1 + \frac{10}{100}\right) + 200000 \left(1 + \frac{18}{100}\right)$$

$$= 100000 \times \frac{11}{10} + 200000 \times \frac{118}{100}$$

$$= 110000 + 236000 = 346000$$

Average revenue

$$= \frac{346000}{2} = 173000$$

76. Option (1) is correct.

National Income is the monetary value of all finished goods and services produced within a country in a set time period.

77. Option (1) is correct.

Net national product (NNP) is a term that is often used to represent the difference between gross national product and depreciation.

$$\text{NNP} = \text{GNP} - \text{Depreciation}$$

78. Option (4) is correct.The Constitution of India was adopted by the Constituent Assembly on 26th November, 1949 and came into force on 26th January, 1950.**79. Option (1) is correct.**

The Parliament of India is a bicameral legislature composed of the president of India and two houses: the Rajya Sabha and the Lok Sabha. Rajya Sabha is also known as Council of States while, Lok Sabha as House of the People.

80. Option (2) is correct.

The Paleolithic or Palaeolithic is also called the Old Stone Age as stone tools were first found in the Paleolithic Age. It was during the Palaeolithic Age that humans began using stone tools for hunting animals and gathering food.

81. Option (2) is correct.'Calico' comes from the word 'Calicut' which was a European name for the city of Kozhikode, in Kerala. It refers to the unfinished fabric made from cotton fibers. As the 12th century Cotton textiles which were taken by Portuguese from Calicut are generally named in Europe as Calico and subsequently calico became the general name for all cotton textiles.**82. Option (1) is correct.**

The Solar System is the gravitationally bound system of the Sun and the objects that orbit it. The order of the planets from first to last moving away from the Sun is

Order	1	2	3	4	5	6	7	8
Planets	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune

Mercury is the smallest and innermost planet in the Solar System. Its orbital period around the Sun of 88 days is the shortest of all the planets in the Solar System.

83. Option (3) is correct.

On both sides of the Equator, the zone between the Tropic of Cancer and Tropic of Capricorn is known as the Torrid Zone. Torrid Zone is also referred to as the tropical zone or the tropical region. They are defined in latitude by the Tropic of Cancer in the Northern Hemisphere at 23°26'10.6" N and the Tropic of Capricorn in the Southern Hemisphere at 23°26'10.6" S. The Torrid Zone receives direct sun rays throughout the year and experiences max heat.

84. Option (4) is correct.

Wheat is a grass widely cultivated for its seed, a cereal grain that is a worldwide staple food. It is mainly a rabi (winter) season crop in India. Wheat is a grass that is cultivated for its grains and not the roots. It is one of the oldest and most important cereal crops. Cereals are edible seeds that are used to create many different food products.

85. Option (2) is correct.

Vitamin K plays an important role in normal blood clotting in a human body. Clotting is a process that helps prevent excessive bleeding. Vitamin K deficiency can contribute to significant bleeding, poor bone development, osteoporosis, and increased risk of cardiovascular disease. The bleeding can occur anywhere on the inside or outside of the body.

86. Option (3) is correct.

In the human body, there are 12 pairs of ribs. The ribs are attached to the sternum in the front and 12 thoracic vertebrae at the back thus making up the ribcage. Each ribs attaching at the back to the vertebrae in the middle of human spine, the thoracic vertebrae.

87. Option (1) is correct.Conductance is defined as the ability of a substance to let the electric current pass through the substance with respect to the applied voltage. The reciprocal of resistance is conductance. If the unit of resistance is ohm, the unit of conductance will be per ohm⁻¹.**88. Option (3) is correct.**

The force must be applied for the work-done and it should not be zero when the angle is 90° the work done will be minimum here, force and displacement are perpendicular to each other. Hence, when the body is pushed over smooth rollers, work done by friction and gravity both are zero. Thus, the minimum work done on this situation.

89. Option (1) is correct.

A website is a collection of publicly accessible, interlinked Web pages that share a single domain name. The first page of a website is called homepage. There are the 3 different types of pages on website - Homepages, Landing Pages, and Interior Pages. A home page contains connections to other pages of information on the website that belongs to a person or an organization.

90. Option (4) is correct.

When Sodium (Na) reacts with Flourine (F), it forms an ionic bond and becomes Sodium Flouride (NaF) and they distribute the difference in the charge between them. Sodium fluoride is a good conductor of electricity in the molten state. Sodium fluoride finds its applications in metallurgy and is also used as a cleansing agent.

91. Option (2) is correct.

Amalgams are the alloys of a metal with mercury hence essential component for making amalgam is Hg (Mercury). Amalgam is an alloy of mercury with one or more metals. Sodium along with liquid mercury is known as Sodium Amalgam. Amalgam of mercury with tin, silver and zinc is widely used in dental filling. Dental amalgam is liquid mercury and metal alloy mixture used in dentistry to fill cavities caused by tooth decay.

92. Option (1) is correct.

The greenhouse gases increase the average temperature of the earth's atmosphere. It traps solar radiation because of the presence of certain gases called greenhouse gases. They have far-ranging environmental and health effects. They cause climate change by trapping heat, and also contribute to respiratory disease due to smog and air pollution.

93. Option (1) is correct.

Rashtriya Vayoshri Yojana is a scheme that was launched to aid senior citizens belonging to the Below Poverty Line (BPL) category by providing them with Physical aids and Assisted-living Devices. This is a Central Sector Scheme, fully funded by the Central Government. Under the scheme, free of cost assisted-living devices and physical aids will be distributed to senior citizens of the country belonging to BPL.

94. Option (1) is correct.

Evangelista Torricelli is known for his invention of the barometer in 1643. A barometer is a scientific instrument that is used to measure air pressure in a certain environment. Torricelli was an Italian mathematician and physicist and was a student of Galileo Galilei. Torricelli was the first to make

a mercury barometer and understand that the mercury was supported by the pressure of the air.

95. Option (1) is correct.

The Cricket World Cup is the international championship of One Day International cricket. The 2019 ICC Cricket World Cup was the 12th Cricket World Cup, hosted by England and Wales during 30th May 2019 to 14th July 2019. The first match of ICC Cricket World Cup 2019 was played between hosts England and South Africa on May 30.

96. Option (1) is correct.

Gandhara Art also popularly known as the Greco-Buddhist art is a multi-ethnic style of Buddhist art that developed in the Gandhara region in the north of the Indian subcontinent. Gandhara art is a visual art that developed in northwestern Pakistan and eastern Afghanistan during first century.

97. Option (3) is correct.

The Bharat Ratna is the highest civilian award of the Republic of India which was instituted in the year 1954. Former Indian President Pranab Mukherjee, Social activist Nanaji Deshmukh, and Playback singer and filmmaker Bhupen Hazarika were awarded Bharat Ratna in 2019.

98. Option (1) is correct.

'A Bend in the River' is a 1979 novel by Nobel laureate V. S. Naipaul. It was shortlisted for the Booker Prize in 1979. V.S. Naipaul is a British novelist and travel writer who won the Nobel Prize for literature in 2001. It is a story of an Indian man, Salim, who lives in post-colonial Africa and observes turbulent changes in his country.

99. Option (1) is correct.

The African Nuclear-Weapon-Free Zone Treaty, also known as the 'Pelindaba Treaty', established the nuclear-weapon-free zone in the African continent. It was signed by China, France, the United Kingdom, and the United States in April 1996. The Treaty forbids the manufacture, acquisition, testing, possession or stationing of nuclear explosive devices within the territory of member country.

100. Option (1) is correct.

Myanmar, a country which is bordered by India to its east, is also known as Burma. In 1989, the name of Burma was officially changed to Myanmar by the military government. Myanmar shares its border with the Indian states of Nagaland, Mizoram, Arunachal Pradesh, and Manipur. It is officially known as The Republic of the Union of Myanmar is situated in East Asia.