STAFF SELECTION COMMISSION

COMBINED HIGHER SECONDARY LEVEL (TIER-I)

SOLVED PAPER

(14th August 2023: Shift-1)

Time Allotted- 1 hour **Max marks-** 200

Important Instructions:-

⇨ This paper contains 100 questions which are divided into 4 sections and each section contains 25 questions.
- ✓ English Language (Basic Knowledge)
- ✓ General Intelligence
- ✓ Quantitative Aptitude (Basic Arithmetic Skill)
- ✓ General Awareness

⇨ There will be 2 marks for each correct answer and also there will be negative marking of 0.50 marks for each wrong answer.
⇨ Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

English Language

1. Select the most appropriate meaning of the given idiom.
Throw cold water on
1. To show indifference **2.** To rinse thoroughly
3. To encourage **4.** To talk nicely

2. Select the option that can be used as a one-word substitute for the given group of words.
Unpleasantly rough or sharp, especially to the senses, cruel
1. Haslet **2.** Hart **3.** Harsh **4.** Hasp

3. Select the ANTONYM of the word inadvertent to fill in the blank.
Everyone likes to speak in a clear and _____ manner.
1. unintentional **2.** peevish **3.** deliberate **4.** impious

4. Select the most appropriate option that can substitute the underlined segment in the given sentence.
Syamala is <u>more taller</u> than her sister.
1. tall **2.** taller **3.** most taller **4.** tallest

5. The following sentence has been divided into parts. One of them may contain an error.
Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.
Hurray! Here is the toy / what I was looking for / as my birthday gift.
1. Hurray! Here is the toy **2.** No error
3. what I was looking for **4.** as my birthday gift.

6. Parts of the following sentence have been given as options. Select the option that contains an error.
The politician was accused of accepting bribes and lied about it to the public.
1. of accepting bribes **2.** The politician was accused
3. and lied about it **4.** to the public

7. Select the most appropriate synonym of the given word.
Paragon
1. Transient **2.** Epitome **3.** Associate **4.** Grumpy

8. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
A. Through these experiences, Sarah gained a newfound appreciation for the beauty and complexity of the world, and returned home with a renewed sense of purpose and passion.
B. Sarah had always dreamed of travelling the world, but she never had the opportunity to do so until she graduated from college.
C. Along the way, she encountered a diverse array of individuals, each with their own unique stories and perspectives.
D. With her degree in hand, she set off on a backpacking adventure across Europe, eager to explore new cultures and meet new people.
1. BACD **2.** CBAD **3.** DBCA **4.** BDCA

9. Select the most appropriate synonym of the bracketed word in the following sentence to fill in the blank.
The playwright borrowed the _____ (crux) of plot from Shakespeare.
1. peel **2.** subsistence
3. essence **4.** blueprint

10. Select the option that can be used as a one-word substitute for the given group of words.
An imperfection; a blemish, a crack
1. Flaunt **2.** Fleck **3.** Flaw **4.** Flea

11. Select the most appropriate synonym of the underlined word in the given sentence.
He lost the golden opportunity due to his habit of <u>procrastination</u>.
1. indecisiveness **2.** impulsiveness
3. inquisitiveness **4.** submissiveness

12. Select the most appropriate synonym of the underlined word.
Syam does not <u>intervene</u> in others' affairs.
1. Meddle **2.** Speak **3.** Trouble **4.** Help

13. Select the most appropriate synonym of the bracketed word in the following sentence to fill in the blank.
The text _____ (implies) to several themes that need closer examination.
1. alludes **2.** deceives
3. embellishes **4.** apprehends

14. The following sentence has been split into four segments. Identify the segment that contains a spelling error.
According to a report / every day / thousands of animals / are slautered.
1. thousands of animals **2.** are slautered
3. every day **4.** According to a report

15. Select the most appropriate idiom for the underlined words in the given sentence.
Piyush is <u>inexperienced</u> in leather industry.
1. in great hands **2.** a sore thumb
3. hang fire **4.** a greenhorn

16. Parts of a sentence are given below in jumbled order. Arrange the parts in the correct order to form a meaningful sentence.
A. to simplify filling taxes **B.** to a single flat rate
C. the current five rates **D.** by narrowing
E. Forbes wanted
1. EBDCA **2.** ECDAB **3.** EDACB **4.** EADCB

17. Select the option that expresses the given sentence in passive voice.
She killed the cockroach.
1. The cockroach was being killed by her.
2. The cockroach is killed by her.
3. The cockroach was killed by her.
4. The cockroach has been killed by her.

18. Select the most appropriate option that expresses the given sentence in passive voice.
The student asked the teacher a question during class.
1. A question was asked by the student to the teacher during class.
2. A question is being asked by the student to the teacher during class.
3. A question asked by the student to the teacher during class.
4. A question will be asked by the student to the teacher during class.

19. Select the most appropriate option to fill in the blank.
People were _____ to safe places by the rescue team after the earthquake.
1. ebacuated **2.** evacuated **3.** evkuated **4.** evakuated

20. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
A. Electronic waste is a huge challenge to the world today.
B. But the unrequired purchase by consumers cannot be halted.
C. However, an awareness on reduce and reuse can be of great help.
D. Recycling industries are working hard to reduce the burden of waste.
1. DBAC **2.** ABCD **3.** DABC **4.** ADBC

Comprehension:
In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.
All the housewives who went to the Kalpatharu Supermarket in Bengaluru had one great ambition: to be the lucky customer who did not have to pay for her (1)_____ . For this was what that notice just inside the entrance promised. It said: 'Remember, once a week, one of our customers gets free goods. This may be your (2)_____ day!' For several weeks Mrs. Batliwala hoped, like many of her friends, to be the lucky (3)_____. Unlike her friends she never gave up hope. Her kitchen was full of things which she did not need. She dreamed of the day when the manager of the supermarket would approach her and say "Madam, this is your lucky day. (4)_____ in your basket is free." On Saturday morning, Mrs. Batliwala went to the supermarket and bought only tea. She went to the cash desk when the manager of the supermarket come up to her and said. "You are our lucky customer and everything in your basket is (5)_____ !"

21. Select the most appropriate option to fill in blank number 1.
1. cloths **2.** shopping **3.** sugar **4.** jewellery

22. Select the most appropriate option to fill in blank number 2.
1. easy **2.** lucky **3.** smart **4.** happy

23. Select the most appropriate option to fill in blank number 3.
1. seller **2.** day **3.** women **4.** customer

24. Select the most appropriate option to fill in blank number 4.
1. products **2.** sample **3.** everything **4.** packets

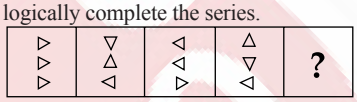
25. Select the most appropriate option to fill in blank number 5.
1. yours **2.** expensive **3.** cheap **4.** free

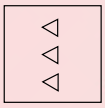
General Intelligence

26. ADEC is related to GJKI in a certain way based on the English alphabetical order. In the same way, HKLJ is related to NQRP. To which of the following is MPQO related to, following the same logic?
1. TVWU **2.** SWXV **3.** TWXU **4.** SVWU

27. The second number in the given number pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) are followed in all the number pairs except one. Find that odd number pair.
(NOTE: Operations should be performed on whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting /multiplying, etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
1. 31 : 215 **2.** 29 : 201 **3.** 21 : 145 **4.** 25 : 177

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



1.  **2.** **3.** **4.**

29. Based on the alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group?
1. QMS **2.** HDC **3.** VRX **4.** DZF

30. In a certain code language,
A + B means 'A is the brother of B',
A – B means 'A is the father of B',
A × B means 'A is the mother of B',
A ÷ B means 'A is the wife of B'.
Based on the above, if 'P × Q – R ÷ S + T', which of the following is true?
1. T is the brother of R. **2.** P is the mother of R.
3. T is the sister of S. **4.** Q is the son of P.

31. FAP is related to PAF in a certain way based on the English alphabetical order. In the same way, JFM is related to MFJ. To which of the following is NKT related following the same logic?
1. TKN **2.** OLU **3.** KTN **4.** LIR

32. Each of the letters in the word NETWORK are arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter which is fourth from the left and the one which is second from the right?
1. 3 **2.** 6 **3.** 5 **4.** 4

33. 31 is related to 94 in a certain way. Following the same logic, 37 is related to 112. To which of the following is 63 related, following the same logic?
1. 192 **2.** 189 **3.** 190 **4.** 194

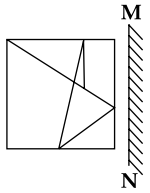
34. Select the number from among the given options that can replace the question mark (?) in the following series.
141, 152, 143, 155, 145, 158, ?
1. 147 **2.** 162 **3.** 148 **4.** 161

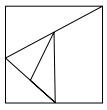
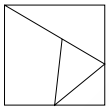
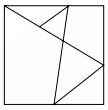
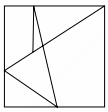
35. Find out the correct alternative that when filled in the blanks in the same sequence will make the series logically complete.
CN_F F_ZE ILC_ _KFC OJI_
1. VNDLA **2.** XNDKB **3.** XMCLA **4.** WMDLB

36. L is the daughter of H. H is married to K. K is the mother of I. I is the father of J. J is married to M. M is the sister of N. How is J related to H?
1. Brother's son **2.** Daughter's son
3. Son's son **4.** Son

37. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.
Statements:
Some buses are motorbikes.
All motorbikes are vans.
All buses are cars.
Conclusions:
(I) Some cars are vans.
(II) Some vans are buses.
(III) Some vans are motorbikes.
1. Only conclusion II follows
2. All conclusions I, II and III follow
3. Only conclusion I follows
4. Both conclusions I and II follow

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



1.  **2.**  **3.**  **4.** 

39. What should come in place of X in the given series?
16 19 25 34 46 X
1. 60 **2.** 58 **3.** 59 **4.** 61

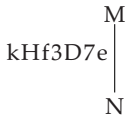
40. What will come in the place of '?' in the following equation, if '+' and '–' are interchanged and '×' and '÷' are interchanged?
53 ÷ 4 – 21 × 7 + 14 = ?
1. 203 **2.** 201 **3.** 202 **4.** 200

41. In a certain code language, 'DOG' is coded as '26' and 'BIN' is coded as '25'. What will be the code for 'JAM' in the given code language?
1. 25 **2.** 23 **3.** 24 **4.** 27

42. Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the one that is different.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/ subtracting/ multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
216 : 40 72 : 22
112 : 32 312 : 82
1. 216 :40 **2.** 112 : 32 **3.** 312 : 82 **4.** 72 : 22

43. If 'V' stands for '÷', 'Z' stands for '×', 'M' stands for '+' and 'P' stands for '–', then what will be come in place of the question mark (?) in the following equation?
81 M 46 P 72 V 12 Z 12 = ?
1. 10 **2.** 35 **3.** 15 **4.** 55

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



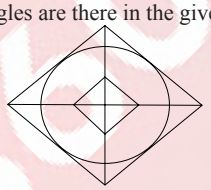
1. **2.**
3. **4.**

45. Select the set in which the numbers are related in the same way as are the numbers of the given sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g., 13 – Operations on 13 such as adding/ deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
12 : 92 : 8
16 : 92 : 6
1. 9 : 122 : 14 **2.** 13 : 60 : 5
3. 15 : 184 : 12 **4.** 8 :109 : 14

46. If 12th April 2004 is Monday, then what will be the day of the week on 24th May 2012?
1. Sunday **2.** Friday **3.** Thursday **4.** Monday

47. In a certain code language, 'HALF' is coded as '8041' and 'FLAG' coded as '4980'. What is the code for 'G' in the given code language?
1. 4 **2.** 9 **3.** 0 **4.** 8

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



1. 16 **2.** 18 **3.** 15 **4.** 17

49. Find the correct alternative that when filled in the blanks in the same sequence will make the series logically complete.
R _ R _ D _ _ D R _ R _ D _
1. DRDDDRRD **2.** RDRRDRDD
3. DRRRRDRR **4.** RDDRDDRD

50. Select the pair of letter-clusters which follows the same pattern as that followed by the two sets of pair of letter-clusters given below. Both pairs of letter-clusters follow the same pattern.
BFG : LPQ
HKM : RUW
1. MPO : WZY **2.** GKN : TPM
3. ABC : FGH **4.** JRS : IQR

Quantitative Aptitude

51. In Δ XYZ, L and M are the middle points of the sides XY and XZ, respectively. N is a point on the segment LM such that LN : NM = 1 : 2. If LN = 5 cm, then YZ is equal to:
1. 30 cm **2.** 24 cm **3.** 28 cm **4.** 26 cm

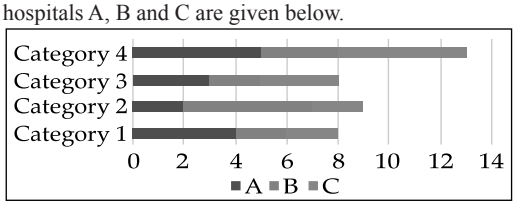
52. If θ be an acute angle and tan θ + cot θ = 2, then the value of $2\tan^2\theta + \cot^2\theta + \tan^4\theta\cot^4\theta$ is:
1. 4 **2.** 2 **3.** 3 **4.** 6

53. If cosec A + cot A = 7, then cosec A is equal to:
1. $\frac{11}{7}$ **2.** $\frac{16}{7}$
3. $\frac{25}{7}$ **4.** $\frac{19}{7}$

54. In right angled triangle ABC, if ∠A = 30°, find the value of $3\sin A - 4\sin^3 A$.
1. 2 **2.** –1 **3.** –2 **4.** 1

55. A money leader lent ₹30,000 in two parts, one at the rate of 8% and the other at 9%. If the total annual simple interest on the amount is ₹2,650, then what is the amount of money lent at the rate of 8%?
1. ₹6,000 **2.** ₹5,000 **3.** ₹4,500 **4.** ₹5,500

56. The number of patients in four different categories in three hospitals A, B and C are given below.



The total number of patients in three hospitals A, B and C, respectively, are:
1. 12, 14, 12 **2.** 12, 12, 14
3. 14, 12, 12 **4.** 14, 13, 12

57. A can complete a piece of work in 9 days. B and C can complete the same work in 12 days and 18 days respectively. If A, B, C work together, then in how many days will they complete the work?
1. 10 **2.** 8 **3.** 4 **4.** 15

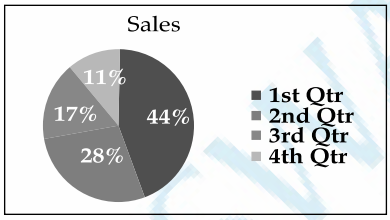
58. Arun brought 50 kg of rice at a discount of 15% on the marked price. For purchasing bulk quantity, he was given 5 kg of wheat (the marked price of which was 60% the marked price of rice) free of cost. Had the retailer sold both items at their marked price to his other customers, then approximately what would be the profit percentage that the shopkeeper could earn?
1. 24.7% **2.** 25.2% **3.** 22.8% **4.** 23.5%

59. Roma spends 25% of her income on food, 15% on children's books and 75% of the remaining income on uniforms. What is the percentage of income she is left with?
1. 35% **2.** 20% **3.** 15% **4.** 19%

60. The marked price of a book is ₹250 and it was sold at a discount of 12%. The selling price of the book is:
1. ₹230 **2.** ₹234 **3.** ₹220 **4.** ₹225

61. In a show room, the ratio of TVs and rice cookers is 2 : 3. Find the percentage of rice cookers in the show room
1. 40% **2.** 30% **3.** 60% **4.** 50%

62. The sales of an item of a company in 4-quarters are given below.



If the difference in sales of item in 3rd quarter and 4th quarter is 36. then the total sale of the 1st quarter is _____.
1. 250 **2.** 256 **3.** 264 **4.** 260

63. If $x + 3y = 6$, what is the value of $x^3 + 27y^3 + 54xy$?
1. 264 **2.** 258 **3.** 216 **4.** 220

64. Simplify the given expression.

$$\frac{(381+119)^2+(381-119)^2}{(381)^2+(119)^2}$$

1. –1 **2.** –2 **3.** 1 **4.** 2

65. Raju and Sohan started a car race from the same point, in the same direction and at the same circular track of length 1725 m with speeds of 72 km/h. and 90 km/h, respectively. After how much time (in seconds) will they meet again for the first time?
1. 345 seconds **2.** 335 seconds
3. 340 seconds **4.** 350 seconds

66. What sum will become ₹9,826 in 18 months if the rate of interest is 2½% per annum and the interest is compound half-yearly?
1. 9,392.00 **2.** 9,444.00 **3.** 9,512.45 **4.** 9,466.55

67. If the slant height and radius of a right circular cone are 28 cm and 21 cm, respectively, then the total surface area of the right circular cone (in cm^2) is:
Take $\pi = \frac{22}{7}$
1. 3234 **2.** 3342 **3.** 3243 **4.** 3324

68. The sides of a triangle are of length 8 cm, 15 cm and 17 cm. Find the area of the triangle.
1. 65 cm^2 **2.** 75 cm^2 **3.** 60 cm^2 **4.** 70 cm^2

69. The average weight of 45 students of a school is 55 kg. If the weight of the teacher be included, the average weight rises by 500 grams. Find the weight (in kg) of the teacher.
1. 78 **2.** 77 **3.** 79 **4.** 80

70. Study the table given below and answer the question that follows.
The table below shows the total number of students studying different subjects in a college and the percentage of boys and girls.

Subject	Number of Students	Percentage of Girls	Percentage of Boys
Hindi	110	60	40
English	70	50	50
Physics	50	30	70
Chemistry	40	80	20
Mathematics	80	20	80
Computers	90	40	60

What is the total number of students in all the subjects?
1. 240 **2.** 200 **3.** 420 **4.** 440

71. Solve $(0.125 \times 0.01) \div (0.5 \times 0.005)$.
1. 0.6 **2.** 0.5 **3.** 0.8 **4.** 0.7

72. Two equal circles of radius 6 cm intersect each other such that each pass through the centre of the other. The length (in cm) of the common chord is:
1. $5\sqrt{3}$ **2.** $6\sqrt{3}$ **3.** $4\sqrt{3}$ **4.** $3\sqrt{3}$

73. The perimeter of two similar triangles GST and FAX are 48 cm and 36 cm, respectively. If FA= 12 cm, then GS is:
1. 18 cm **2.** 16 cm **3.** 24 cm **4.** 12 cm

74. The cost of 4 rings and 2 bangles of gold is ₹40,000. What is the cost of 10 rings and 5 bangles?
1. ₹1,00,000 **2.** ₹80,000 **3.** ₹1,20,000 **4.** ₹90,000

75. A shopkeeper has announced a 25% rebate on the prices of stationery items. If anyone needs to have a rebate of ₹40, then how many stationery items costing ₹32 should be purchased?
1. 5 items **2.** 6 items **3.** 4 items **4.** 3 items

General Awareness

76. Which of these MFIs are NOT regulated by the RBI?
1. Small Finance Bank led MFIS **2.** Bank led MFIS
3. NBFC MFIS **4.** Non-profit MFIS

77. Pandit Birju Maharaj is associated with which form of dance?
1. Kathak **2.** Chhau
3. Kuchipudi **4.** Kathakali

78. Which cell organelles are known as cell's post office?
1. Nucleus **2.** Golgi apparatus
3. Ribosome **4.** Plastid

79. Which element of group 13 has the atomic number 113 and its electronic configuration is [Rn] $5f^{14}$ $6d^{10}$ $7s^2$ $7p^1$?
1. Gallium **2.** Indium **3.** Nihonium **4.** Thallium

80. Which of the following countries hosted the 2023 Asia Cup?
1. Sri Lanka **2.** India
3. Pakistan **4.** Both (1) and (3)

81. Who among the following is the head of the High-Level Committee formed to explore simultaneous elections in India?
1. Narendra Modi **2.** Ram Nath Kovind
3. Droupadi Murmu **4.** Jagdeep Dhankhar

82. Where did the President Droupadi Murmu unveil the 12 feet high statue of Mahatma Gandhi and inaugurat 'Gandhi Vatika'?
1. Chandigarh **2.** Indore
3. New Delhi **4.** Ahmedabad

83. Structural composition of the economy refers to:
1. contribution of various sectors to the GDP
2. male-female distribution of the population
3. private and public sectors classification
4. rural and urban distribution of the population

84. The rulers of which of the following Rajput dynasties patronised Jainism and one of them is reported to have accepted Jainism under the influence of a Jain scholar Hemachandra?
1. Pratihara **2.** Parmara **3.** Chalukya **4.** Chahman

85. Padma Shri awardee of 2022, Nalini-Kamalini Asthana belongs to which of the following art genres?
1. Painting **2.** Sculpture
3. Kathak dance **4.** Architecture

86. Since 2004, which of the following states in India is the permanent venue of International Film Festival of India?
1. Gujarat **2.** New Delhi
3. Goa **4.** Maharashtra

87. Who was awarded the Nobel Peace Prize for founding the Grameen Bank and pioneering the concepts of microcredit and microfinance?
1. Muhammad Yusuf **2.** Muhammad Yunus
3. Muhammad Wasim **4.** Muhammad Asif

88. Exports of mangoes by India is a part of _____ method of measurement of its national income.
1. circular income **2.** value added
3. expenditure **4.** income

89. NCERT has been granted deemed to be university status. When was NCERT established?
1. 1921 **2.** 1961 **3.** 1982 **4.** 1978

90. Which is the biggest tributary of the upper Brahmaputra that originates in the Tibetan Himalayas and winds its way into India through Arunachal Pradesh?
1. Subansiri **2.** Yerla **3.** Musi **4.** Aner

91. Which colour of light from VIBGYOR has minimum energy?
1. Green **2.** Violet **3.** Yellow **4.** Red

92. Tulip Festival is famous in which city?
1. Agra **2.** Allahabad
3. Ludhiana **4.** Srinagar

93. When was the first International Yoga Day observed?
1. 2012 **2.** 2011 **3.** 2015 **4.** 2020

94. In which of the following economic accounts are transfer payments included?
1. Government account **2.** Household account
3. Appropriation account **4.** Production account

95. The National Rural Employment Guarantee Act, now known as Mahatma Gandhi National Rural Employment Guarantee Act, was first enacted in the year _____.
1. 2000 **2.** 2005 **3.** 2009 **4.** 2014

96. The celebration of Christmas, Eid and Holi in school is an example of making children learn fundamental duties as well. Which of the following fundamental duties advocates about this type of ideal?
1. To defend the country and render national service
2. To develop the scientific temper
3. To safeguard public property and to abjure violence
4. To promote harmony and spirit of common brotherhood

97. Which of the following states is NOT a part of the Peninsular Plateau in India?
1. Maharashtra **2.** Madhya Pradesh
3. Punjab **4.** Tamil Nadu

98. Poshan Abhiyaan is a programme to achieve nutritional status of children from 0 to 6 years.
Which of the following Articles of the Indian Constitution provides for raising the nutrition level?
1. Article 47 **2.** Article 44 **3.** Article 46 **4.** Article 45

99. As of August 2023, who among the following has been appointed as the NGT chairperson?
1. G. Kannabiran **2.** R. Madhavan
3. Prakash Shrivastava **4.** R. Doraiswamy

100. Ustad Asad Ali Khan played which of the following instruments?
1. Rudra Veena **2.** Algoza
3. Sitar **4.** Ravanahatha

Answer Key

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

Answers with Explanations

1. Option (1) is correct.
'Throw cold water on' is an idiom meaning to be unenthusiastic about or discourage. Example: The moment the father heard of his daughter's plans of night out with friends, he threw cold water on the proposition. The correct answer is 'to show indifference'.

2. Option (3) is correct.
Haslet is a loaf of cooked minced pig's offal; *hart* is the male of the red deer especially when over five years old; while harsh is unpleasantly rough or sharp, especially to the senses, cruel. Hasp is a clasp for a door, lid, etc.

3. Option (3) is correct.
Everyone likes to speak in a clear and deliberate manner. 'Inadvertent' means unintentional; so the antonym is 'deliberate'. (1) is synonym. Peevish means 'bad-tempered person'; 'impious' implies 'not pious or religious; lacking reverence for God'.

4. **Option (2) is correct.**
Syamala is taller than her sister. The use of double comparatives (more taller) is to be avoided. So 'taller' will replace 'more taller'.

5. **Option (3) is correct.**
Hurray! Here is the toy that I was looking for as my birthday gift. The part 'that I was looking for' will replace 'what I was looking for'. The correct usage of "that" is when referring to a specific object or thing, while "what" is used when asking for information or clarification.

6. **Option (3) is correct.**
The politician was accused of accepting bribes and lying about it to the public. The part 'and lied about it' will be replaced by 'and lying about it'. The sentence has an error of parallel structure. The verbs will be in gerund form, 'accepting' and 'lying'. Hence, option (3) is correct.

7. **Option (2) is correct.**
Paragon refers to a person or thing that is perfect or has an extremely large amount of a particular good. Transient means temporary. Epitome means a person or thing that is a perfect example of a particular quality or type. Grumpy means bad-tempered.

8. **Option (4) is correct.**
The correct sequence of the sentences is: BDCA. B introduces the subject of the paragraph- Sarah and her dream (traveling the world). The pronoun 'she' refers back to Sarah, in D she is seen to go out to fulfil her dream. Next trails C, as she is already on her way, where she encountered a diverse array of individuals. 'These experiences' in A refers to the ones she had had in C. Therefore, the coherent paragraph is :Sarah had always dreamed of travelling the world, but she never had the opportunity to do so until she graduated from college. With her degree in hand, she set off on a backpacking adventure across Europe, eager to explore new cultures and meet new people. Along the way, she encountered a diverse array of individuals, each with their own unique stories and perspectives. Through these experiences, Sarah gained a new found appreciation for the beauty and complexity of the world, and returned home with a renewed sense of purpose and passion.

9. **Option (3) is correct.**
The playwright borrowed the essence of plot from Shakespeare. The word 'crux' connotes 'the most important or serious part of a matter'. This implies 'essence'.

10. **Option (3) is correct.**
'Flaunt' means to display proudly or show off; 'fleck' means spot/mark; while 'flaw' is an imperfection; a blemish, a crack.

11. **Option (1) is correct.**
He lost the golden opportunity due to his habit of indecisiveness. Procrastination is the act of delaying or putting off tasks until the last minute, or past their deadline. 'Impulsiveness' is acting or done suddenly without any planning or consideration of the results. 'Inquisitiveness' means a desire to find out about what other people are doing, 'submissiveness' is ' allowing yourself to be controlled by other people or animals'. So 'indecisiveness' is appropriate as a synonym.

12. **Option (1) is correct.**
In the sentence 'Syam does not intervene in others' affairs', it is clear that Syam does not interfere/meddle in others' matters.

13. **Option (1) is correct.**
Implies means 'suggests', 'alludes' (refers to); 'deceives' means betrays; 'embellishes' implies elaborates; 'apprehends' means captures. Thus, the correct synonym is 'alludes'.

14. **Option (2) is correct.**
According to a report every day thousands of animals are slaughtered. Here, 'slautered' will be replaced by 'slaughtered', which means thrashed/killed.

15. **Option (4) is correct.**
The idiom 'in great hands' implies 'managed or cared for with great attention'; 'a sore thumb' is to be very noticeable in usually a bad way. 'Hang fire' implies 'making a decision about something.' 'A greenhorn' means 'a person who is new to or inexperienced at a particular activity.'

16. **Option (4) is correct.**
The correct sequence of the sentences is :EADCB. E initiates the subject of the sentence 'Forbes', followed by the verb 'wanted', then an object in A (simplify filling taxes). The verb 'narrowing' refers to 'the current five rates'. Thus, the logical sentence is: Forbes wanted to simplify filling taxes by narrowing the current five rates to a single flat rate.

17. **Option (3) is correct.**
The sentence 'She killed the cockroach' is in active voice. In voice change, the object of the active verb becomes the subject of the passive verb. Sentences in the present perfect tense have the following structure: *Active:* Subject + V2 + object…*Passive:* Object + was/were/+ verb (III form) + by+ subject. Thus, the correct sentence is: The cockroach was killed by her.

18. **Option (1) is correct.**
The sentence 'The student asked the teacher a question during class' is in active voice. In voice change, the object of the active verb becomes the subject of the passive verb. Sentences in the present perfect tense have the following structure: *Active:* Subject + V2 + object…*Passive:* Object + was/were/+ verb (III form) + by+ subject. Thus, the correct sentence is: A question was asked by the student to the teacher during class.

19. **Option (2) is correct.**
People were evacuated to safe places by the rescue team after the earthquake. Evacuated implies 'to remove the contents of : empty'.

20. **Option (4) is correct.**
The correct sequence of the sentences is : ADBC. A introduces the subject of the paragraph- Electronic waste and how it poses as a challenge; D continues the thought by elucidating this challenge- Recycling industries are working hard to reduce the burden of waste. But the unrequired purchase by consumers cannot be halted. Therefore, the coherent paragraph is: Electronic waste is a huge challenge to the world today. Recycling industries are working hard to reduce the burden of waste. But the unrequired purchase by consumers cannot be halted. However, an awareness on reduce and reuse can be of great help.

21. **Option (2) is correct.**
All the housewives who went to the Kalpatharu Supermarket in Bengaluru had one great ambition: to be the lucky customer who did not have to pay for her shopping. Since the statement refers to a Supermarket in Bengaluru, and a lucky customer, so they have to do with shopping.

22. **Option (2) is correct.**
Remember, once a week, one of our customers gets free goods. This may be your lucky day!' Since the statement refers to a Supermarket in Bengaluru, and a lucky customer who did not have to pay for her shopping, so it may be her lucky day.

23. Option (4) is correct.

For several weeks Mrs. Batliwala hoped, like many of her friends, to be the lucky customer. The context talks of the prospect of a lucky customer who did not have to pay for her shopping.

24. Option (3) is correct.

"Madam, this is your lucky day. Everything in your basket is free." Since Mrs. Batliwala hoped, like many of her friends, to be the lucky customer, she never lost hope. She wished that everything in her basket was free.

25. Option (4) is correct.

"You are our lucky customer and everything in your basket is free!" On Saturday morning she bought only tea and in not her best luck became the lucky customer.

26. Option (4) is correct.

As per the pattern followed here,

Given that:

A	D	E	C
+6	+6	+6	+6
G	J	K	I

And,

H	K	L	J
+6	+6	+6	+6
N	Q	R	P

Similarly,

M	P	Q	O
+6	+6	+6	+6
S	V	W	U

27. Option (4) is correct.

The pattern followed here is:

(1^{st} term × 7) – 2 = 2^{nd} term.

Let's check the options

(1) 31 : 215

(31 × 7) – 2 = 215

(2) 29 : 201

(29 × 7) – 2 = 201

(3) 21 : 145

(21 × 7) – 2 = 145

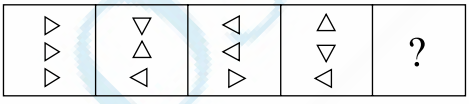
(4) 25 : 177

(25 × 7) – 2 = 173 [which is not equals to 177]

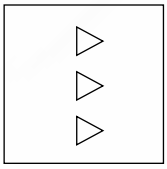
Hence, option (4) is the odd one out.

28. Option (3) is correct.

Given figure:



According to the pattern followed and the symmetry, the required figure is:



29. Option (2) is correct.

The pattern followed here is:

(1) Q $\xrightarrow{-4}$ M $\xrightarrow{+6}$ S

(2) H $\xrightarrow{-4}$ D $\xrightarrow{+1}$ C

(3) V $\xrightarrow{-4}$ R $\xrightarrow{+6}$ X

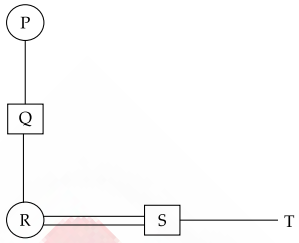
(4) D $\xrightarrow{-4}$ Z $\xrightarrow{+6}$ F

Hence, option (2) is the odd one out.

30. Option (4) is correct.

Given that: P × Q – R ÷ S + T

After decoding the statement, possible family tree will be:



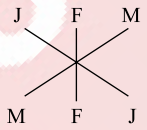
Hence, only option (4) is true.

31. Option (1) is correct.

As per the pattern followed here,

Given that,

And,



Similarly,

So, TKN will be the correct term.

32. Option (4) is correct.

Given word: NETWORK

If we arrange these alphabets in the english alphabetical order, we get EKNORTW.

Now, according to the question, fourth letter from the left will be O

And second letter from the right will be T

So, as per the english alphabetical series, there are 4 letters in between 0 and T which are P,Q,R,S.

Hence, 4 is the correct answer.

33. Option (3) is correct.

The pattern followed here is:

(1^{st} term × 3) + 1 = 2^{nd} term.

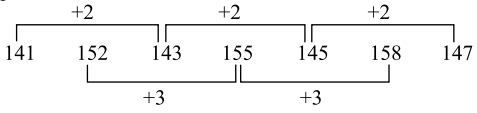
So, (63 × 3) + 1 = 190.

Hence, 63 is related to 190.

34. Option (1) is correct.

Given series: 141, 152, 143, 155, 145, 158, ?

The pattern followed here is as follows:



Hence, 147 is the missing term.

35. Option (4) is correct.

Given that: CN_F F_ZE ILC__KFC OJI_

Upon inserting alphabets from option (4) sequentially, we get

CNWF FMZE ILCD LKFC OJIB

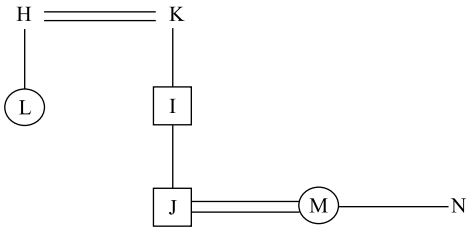
In this series, 1st and 3rd letters of each is increasing by 3,

And, 2nd letter and 4th of each set is decreasing by 1.

Hence, it forms a logical series.

36. Option (3) is correct.

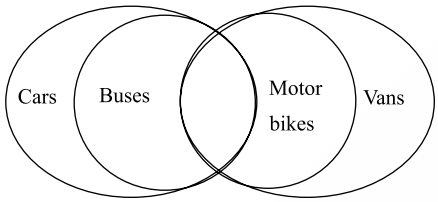
As per the statements given in the question, possible family tree will be:



Hence, J is the son's son of H.

37. Option (2) is correct.

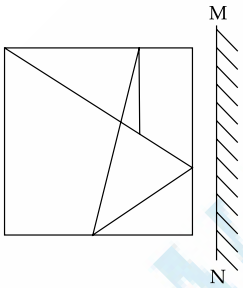
As per the statements given, following venn diagram can be made:



Hence, all conclusions I, II and III follows.

38. Option (4) is correct.

Given figure:



In a mirror image, left becomes right, and right becomes left.

Hence, the required image is:

39. Option (4) is correct.

Given series: 16 19 25 34 46 X

The pattern followed here is:

Here, each term is increasing by a multiple of 3.

16 + 3 = 19

19 + 6 = 25

25 + 9 = 34

34 + 12 = 46

46 + 15 = 61

Hence, 61 is the missing number.

40. Option (2) is correct.

Given that: 53 ÷ 4 – 21 × 7 + 14 = ?

After interchanging the signs, we get

53 × 4 + 21 ÷ 7 – 14

Now, according to the BODMAS rule, = 53 × 4 + 3 – 14

= 212 + 3 – 14 = 215 – 14 = 201

41. Option (3) is correct.

Given that:

DOG ⟶ 26

BIN ⟶ 25

Here, the positional values of the alphabets are added.

Hence, JAM will be coded as 10 + 1 + 13 = 24.

42. Option (1) is correct.

The pattern followed here is:

(1st term ÷ 4) + 4 = 2nd term

Let's check the options as per the pattern:

(1) 216 : 40

(216 ÷ 4) + 4 = 54 + 4 = 58 [which is not equal to 40]

(2) 112 : 32

(112 ÷ 4) + 4 = 28 + 4 = 32

(3) 312 : 82

(312 ÷ 4) + 4 = 78 + 4 = 82

(4) 72 : 22

(72 ÷ 4) + 4 = 18 + 4 = 22

Hence, option (1) is the odd one out.

43. Option (4) is correct.

Given series: 81 M 46 P 72 V 12 Z 12 = ?

After putting the signs, we get

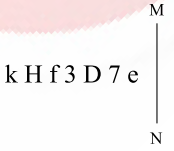
81 + 46 – 72 ÷ 12 × 12

Now, according to the BODMAS rule,

= 81+ 46 – 6 × 12 = 81 + 46 – 72 = 55

44. Option (1) is correct.

Given figure:



In the mirror image, left becomes right and right becomes left.

Hence, the required image is:

e 7 D 3 f H k

45. Option (1) is correct.

Given sets:

12 : 92 : 8

16 : 92 : 6

The pattern followed here is:

(1st term × 3rd term) – 4 = 2nd term

On checking option (1), 9 : 122 : 14 = (9 × 14) – 4 = 122

46. Option (3) is correct.

Given that: It was a Monday on 12th April, 2004

Let's count the number of odd days for each year which needs to be added in Monday

2004 = + 2 (Leap year)

2005 = +1

2006 = +1

2007 = +1

2008 = +2 (Leap year)

2009 = +1

2010 = +1

2011 = +1

Total no. of odd days = 10 days

So, 10 days ahead of Monday will be a Thursday (On 12th April 2012)

And, the number of days between 12th April 2022 and 24th May 2022 are 42 = 6 weeks

Hence, it will be a Thursday on 24th May 2022.

47. Option (2) is correct.

Given that:

HALF $\rightarrow$ 8041

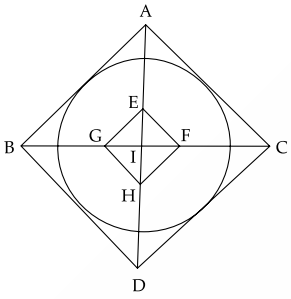
FLAG $\rightarrow$ 4980

If we compare both of the words we get,

The codes for the alphabets H, A, L, F are 8, 0, 4, 1 (In random order), indicating that the only different letter remaining is 'G.'

Therefore, there is only 1 digit left for 'G' which is 9.

48. Option (1) is correct.



Triangles which can be formed are ABC, ABD, ADC, ABI, AIC, BID, DIC, BCD, EGI, EIF, EGF, GHF, GIH, IHF, EGH, EHF. Hence, there are total 16 triangles in the given figure.

49. Option (3) is correct.

Given series: R_R_D__DR_R_D_

Upon inserting alphabets from option (3), we get

RDRRDRRDRRDRRDR

Hence, it forms a logical series.

50. Option (1) is correct.

Given that:

B	F	G
+10	+10	+10
L	P	Q

And,

H	K	M
+10	+10	+10
R	U	W

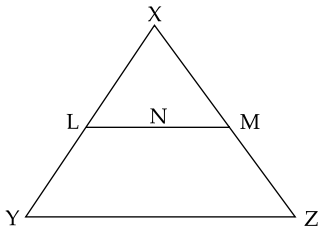
Similarly, upon checking option (1),

M	P	O
+10	+10	+10
W	Z	Y

Hence, MPO : WZY follows the same pattern.

51. Option (1) is correct.

As per the given the figure will be:



$\because$ LN = 5 cm and $\frac{LN}{NM} = \frac{1}{2}$

$\Rightarrow \frac{5}{NM} = \frac{1}{2}$

$\Rightarrow$ NM = 10 cm

$\therefore$ LM = LN + NM = 5 + 10 = 15 cm

$\because$ L & M are mid-point of XY and XZ respectively. By mid point theorem,

YZ = 2LM = 2 × 15 = 30 cm

52. Option (1) is correct.

$\because \tan\theta . \cot\theta = 1$

Now $2\tan^2\theta + \cot^2\theta + \tan^4\theta . \cot^4\theta$

$= 2\tan^2 45° + \cot^2 45° + 1$

$\left[\because \tan\theta + \cot\theta = 2 \Rightarrow \tan 45° + \cot 45° = 1 + 1 = 2\right]$

$= 2 \times 1^2 + 1^2 + 1 = 4$

53. Option (3) is correct.

$\text{cosec A} + \cot A = 7$

$\Rightarrow \cot A = 7 - \text{cosec A}$

Squaring both sides,

$\Rightarrow \cot^2 A = (7 - \text{cosec A})^2$

$\Rightarrow \cot^2 A = 49 + \text{cosec}^2 A - 14 \text{ cosec A}$

$\Rightarrow \cot^2 A = 49 + 1 + \cot^2 A - 14 \text{ cosec A}$

$\Rightarrow$ 14 cosec A = 50

$\Rightarrow \text{cosec A} = \frac{50}{14} = \frac{25}{7}$

54. Option (4) is correct.

$3 \sin A - 4 \sin^3 A = 3 \sin 30° - 4 \sin^3 30°$ [$\because \angle A = 30°$]

$= 3 \times \frac{1}{2} - 4 \times \left(\frac{1}{2}\right)^3$

$= \frac{3}{2} - \frac{1}{2} = 1$

55. Option (2) is correct.

Simple interest = $\frac{P \times R \times T}{100}$

Where, P : Principal, R : Rate of interest, T : Time

Let money lender lent Rs x at 8%.

$\therefore$ He lent (30000 – x) at 9%,

According to question,

$\frac{x \times 8 \times 1}{100} + \frac{(30000 - x) \times 9 \times 1}{100} = 2650$

$8x + 270000 - 9x = 265000$

$\Rightarrow$ $x = 270000 - 265000$

$= 5000$

He lent ₹5000 at 8% rate of simple interest.

56. Option (3) is correct.

Total number of patients in the hospital A

$= 5 + 3 + 2 + 4 = 14$

Total number of patients in the hospital B

$= 3 + 2 + 5 + 2 = 12$

Total number of patients in the hospital C

$= 5+3+2+2 = 12$

57. Option (3) is correct.

A can complete work in 9 days.

B can complete work in 12 days.

C can complete work in 18 days.

Together they can complete work in

$$\frac{1}{\frac{1}{9}+\frac{1}{12}+\frac{1}{18}} \text{ days} = \frac{1}{\frac{4+3+2}{36}} = \frac{36}{9} = 4$$

58. Option (1) is correct.

Let market price of 1 kg rice = ₹100

$\therefore$ Market price of 1 kg wheat = ₹60

Total selling price of 50 kg rice and 5 kg wheat

$= 50 \times 85 + 0 = ₹4250$

If he does not provide discount and free the wheat then the total selling price of 50kg rice and 5kg wheat

$= 50 \times 100 + 5 \times 60 = ₹5300$

$\therefore$ Profit percentage $= \frac{5300 - 4250}{4250} \times 100$

$= 24.7\%$

59. Option (3) is correct.

Let her income = ₹100

Expenditure on food = ₹25

Expenditure on children's book = ₹15

Expenditure on uniform = $\frac{75}{100}$ [100 – 40] = ₹45

$\therefore$ Remaining amount = ₹15

$\Rightarrow$ Remaining percentage of income = 15%

60. Option (3) is correct.

Marked rice = ₹250

Discount percentage = 12%

$\therefore$ Selling price = $\frac{100 - 12}{100} \times 250 = ₹220$

61. Option (3) is correct.

Ratio of TVs and rice cookers = 2: 3

Percentage of rice cookers = $\frac{3}{2+3} \times 100 = 60\%$

62. Option (3) is correct.

Let total sales of item = x

Difference in sales of 3rd quarter and 4th quarter = 36

According to the question,

$\Rightarrow$ $\frac{17 - 11}{100} \times x = 36$

$\Rightarrow$ $x = 600$

$\therefore$ Total sale of the 1st quarter $= \frac{44}{100} \times 600$

$= 264$

63. Option (3) is correct.

$x + 3y = 6$ …(i)

Cube both sides

$\Rightarrow$ $(x + 3y)^3 = 6^3$

$\Rightarrow$ $x^3 + 27y^3 + 3 \times x \times 3y\,(x + 3y) = 216$

$\Rightarrow$ $x^3 + 27y^3 + 9xy \times 6 = 216$

Using Equation (i)

$\Rightarrow$ $x^3 + 27y^3 + 54xy = 216$

64. Option (4) is correct.

$$\frac{(381+119)^2 + (381-119)^2}{(381)^2 + (119)^2}$$

$$= \frac{(381)^2 + (119)^2 + 2 \times 381 \times 119 + (381)^2 + (119)^2 - 2 \times 381 \times 119}{(381)^2 + (119)^2}$$

$$= \frac{2\left[(381)^2 + (119)^2\right]}{(381)^2 + (119)^2} = 2$$

65. Option (1) is correct.

Relative speed of Raju and Sohan

$=(90 - 72)$ km/h

$=18$ km/h $= 18 \times \frac{5}{18}$ m/s

$=5$ m/s

They will meet again for the first time = $\frac{1725}{5}$ sec

$= 345$ sec

66. Option (4) is correct.

Principal amount, P = x (Assume)

Amount, A = ₹9826

Time, t = 18 months = 3 (half years)

Rate of interest, $r = \frac{2\frac{1}{2}}{2}$ %

half yearly $= \frac{5}{4}$ % half yearly

$\Rightarrow$ $A = P\left[1 + \frac{r}{100}\right]^t$

$\Rightarrow$ $9826 = P\left[1 + \frac{5}{4 \times 100}\right]^3$

$= P\left[\frac{405}{400}\right]^3$

$\Rightarrow$ $P = \frac{9826 \times 400 \times 400 \times 400}{405 \times 405 \times 405}$

$= ₹9466.55$

67. Option (1) is correct.

Slant height of cone, $l = 28$ cm

Radius of cone, $r = 21$ cm

Total surface area of cone $= \pi r(r+l) = \frac{22}{7} \times 21(21+28)$

$= 22 \times 3 \times 49 = 3234\ \text{cm}^2$

68. Option (3) is correct.

Sides of triangle are 8 cm, 15 cm and 17 cm

$\because 8^2 + 15^2 = 64 + 225 = 289 = 17^2$

$\Rightarrow$ Triangle is right triangle.

Area of triangle $= \frac{1}{2} \times 8 \times 15 = 60\ \text{cm}^2$

69. Option (1) is correct.

Sum of weight of 45 students

=Average weight × Number of students

$=55 \times 45 = 2475$ kg

Sum of weight of 45 students and teachers

$=55.5 \times 46 = 2553$ kg

$\therefore$ Weight of teacher $= 2553 - 2475 = 78$ kg

70. Option (4) is correct.

From the table, total number of students

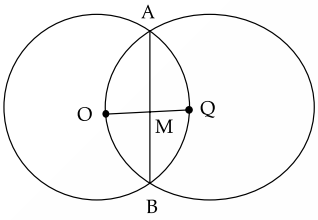
$= 110 + 70 + 50 + 40 + 80 + 90 = 440$

71. Option (2) is correct.

$\frac{0.125 \times 0.01}{0.5 \times 0.005} = 0.5$

72. Option (2) is correct.

As per the given the figure will be



Here, $OA = OB = QA = QB = 6$ cm

Also, $OQ = 6$ cm

$AB = 2 \times AM = 2 \times \sqrt{OA^2 - OM^2}$

$= 2 \times \sqrt{6^2 - 3^2} = 2\sqrt{27}$

$= 6\sqrt{3}$ cm

73. Option (2) is correct.

$\because \Delta GST \sim \Delta FAX$

$\Rightarrow \frac{\text{Perimeter of } \Delta GST}{\text{Perimeter of } \Delta FAX} = \frac{GS}{FA}$ [C.P. S.T]

$\Rightarrow \frac{48}{36} = \frac{GS}{12}$

$\Rightarrow GS = \frac{48 \times 12}{36}$

$GS = 16$ cm

74. Option (1) is correct.

Cost of 4 rings + cost of 2 bangles = 40000

Multiply equation by 2.5,

Cost of 4 × 2.5 rings + cost of 2 × 2.5 bangles

=40000 × 2.5

Cost of 10 rings + cost of 5 bangles = 100000

75. Option (1) is correct.

Let stationary item required = x

$\therefore$ Total marked price of x items $= 32x$

Rebate on x items $= \frac{25}{100} \times 32x$

$\Rightarrow 40 = \frac{25}{100} \times 32x$

$\Rightarrow \frac{40 \times 100}{25 \times 32} = x$

$\Rightarrow x = 5$

We required 5 stationary items for rebate of ₹40.

76. Option (4) is correct.

MFI, which stands for Micro Finance Institutions, plays a crucial role in providing financial services to underserved communities. Meanwhile, RBI, short for the Reserve Bank of India, serves as the country's central bank and holds the responsibility of regulating the banking sector under the Banking Regulation Act, 1949. RBI's purview extends to overseeing various financial entities, including commercial banks, Local Area Banks (LABs), Regional Rural Banks, District and State Co-operative Banks, and Urban Co-operative Banks. However, it's important to note that not-for-profit MFIs operate outside the regulatory jurisdiction of the RBI.

77. Option (1) is correct.

Pandit Birju Maharaj, a celebrated artist, composer, and vocalist, dedicated his life to Kathak, a prominent Indian classical dance. He was renowned for his association with the Lucknow 'Kalka-Bindadin' Gharana and his mastery of Hindustani classical music, earning him the prestigious Padma Vibhushan award. Pandit Birju Maharaj's legacy lives on despite his passing at the age of 83.

Kathak, the classical dance form synonymous with Uttar Pradesh, holds a significant place among the eight major forms of Indian classical dance.

Kathakali, originating from Kerala, is a captivating classical dance characterized by elaborate storytelling, vibrant costumes, and intricate traditional makeup.

Kuchipudi, hailing from Andhra Pradesh, represents another enchanting classical dance style with its unique expressions and movements.

Chhau, a semi-classical Indian dance, blends martial and folk traditions, captivating audiences in the states of Odisha, Jharkhand, and West Bengal.

78. Option (2) is correct.

The Golgi apparatus, often referred to as the cell's post office, plays a vital role in packaging, modifying, and transporting proteins to their designated destinations within the cell. Initially, linear proteins are synthesized in the Endoplasmic Reticulum (ER), and then they are enclosed within vesicles for transport to the Golgi apparatus. Inside this organelle, the proteins undergo intricate folding, and additional chemical groups are added to make them fully functional. Subsequently, these modified proteins are dispatched to their specific sites where they are needed to carry out various cellular functions.

79. Option (3) is correct.

Nihonium, represented by the chemical symbol 'Nh' and atomic number 113, is a synthetic element located in group 13 of the periodic table within the 'p' block. This element is artificially created in a laboratory setting.

Gallium, denoted by the symbol 'Ga' and possessing atomic number 31, is another member of group 13. It was first discovered by the French chemist Paul-Émile Lecoq de Boisbaudran. Gallium is widely utilized in semiconductor technology and for producing alloys with low melting points.

Indium, symbolized by 'In' and having an atomic number of 49, is also a group 13 element. It is a silvery metal and was initially identified by Ferdinand Reich and Hieronymous Theodor Richter in 1863. Indium finds extensive applications in semiconductors, the creation of low-melting-point alloys, soft-metal high-vacuum seals, and the production of transparent conductive coatings like indium tin oxide (ITO) for glass.

Thallium, with the chemical symbol 'Tl' and an atomic number of 81, falls under group 13 and period 6 of the periodic table. It is characterized by its silvery-white appearance.

80. Option (4) is correct.

The 2023 Asia Cup was hosted by Pakistan and Sri Lanka. It was the 16th edition of Asia cup and One Day Internationals (ODIs) were played between 30th August to 17th September 2023. Six teams participated in the Asia cup and these were- Pakistan, Sri Lanka, India, Afghanistan, Bangladesh, and Nepal.

81. Option (2) is the correct answer

Ram Nath Kovind, the 14th President of India, currently chairs the High-Level Committee responsible for investigating the possibility of conducting simultaneous elections in the country. His tenure as President spanned from 2017 to 2022. The primary objective of this committee is to assess the practicality of holding concurrent elections for various tiers of government, including the Lok Sabha, state legislative assemblies, municipalities, and panchayats, throughout India. Additionally, the committee is mandated to delve into the legal and logistical intricacies of such an ambitious endeavor, which may necessitate constitutional amendments.

82. Option (3) is correct.

In a noteworthy event, the President of India, Droupadi Murmu, unveiled a towering 12-feet-high statue of Mahatma Gandhi and officially inaugurated 'Gandhi Vatika' at the Gandhi Darshan Museum in New Delhi.

The Gandhi Darshan Museum is a significant institution dedicated to preserving the life, teachings, and legacy of Mahatma Gandhi, the Father of the Nation in India.

'Gandhi Vatika' likely refers to a garden or park area within the museum complex, created in honor of Mahatma Gandhi.

Such initiatives play a crucial role in promoting Gandhian principles of non-violence, peace, and social harmony.

83. Option (1) is correct.

The structural composition of an economy pertains to the distribution of economic activities among various sectors, offering insights into each sector's contribution to the GDP and its relative significance in driving economic output.

The sectors typically considered in the structural composition of an economy include agriculture, industry, and services.

Analyzing this composition is crucial for policymakers, as it helps in understanding the economic development stage of a country and can inform strategies for growth and diversification.

For example, a shift from an agrarian-based economy to an industrial or service-based economy signifies economic development and transformation.

Many countries aim to reduce their dependence on agriculture and promote the growth of the industrial and service sectors to achieve economic stability and prosperity.

84. Option (3) is correct.

Kumarapala, a ruler of the Chalukya dynasty, reigned over the territories encompassing present-day Gujarat and its environs, with his capital at Anahilapataka. His ascension followed the reign of Chaulukya king Bhima I, and during his rule, Kumarapala embraced Jainism under the guidance and influence of the renowned Jain scholar Hemachandra.

Kumarapala's acceptance of Jainism is considered a significant event in the history of the region, as it contributed to the spread and influence of Jain philosophy in Gujarat.

Hemachandra, also known as Acharya Hemachandra, was a prominent Jain scholar, philosopher, and writer who made substantial contributions to Jain literature and philosophy.

The Chalukya dynasty had a significant impact on the history and culture of Gujarat and played a crucial role in shaping the region's political landscape during its rule.

85. Option (3) is correct.

Nalini- Kamalini Asthana are sisters from Agra Uttar Pradesh known for their contribution in the field of Benaras Gharana style of Kathak. They are awarded by the Padma Shri award, the third highest award in the Padma series.

86. Option (3) is correct.

The International Film Festival of India, commonly known as IFFI, takes place in the picturesque state of Goa. This renowned festival is a collaborative effort between the National Film Development Corporation of India, operating under the Ministry of Information and Broadcasting, and the Government of Goa. IFFI serves as a prestigious platform for showcasing a diverse array of international and Indian films.

87. Option (2) is correct.

In 2006, Muhammad Yunus and the Grameen Bank were honored with the Nobel Peace Prize for their amazing work in helping poor people and communities. They believed in starting development and progress from the very bottom, helping those who needed it the most. The Grameen Bank was set up to give small loans to people who didn't have much and made it easy for them to borrow money.

Muhammad Yunus is a famous economist from Bangladesh, and he's the one who had the brilliant idea to create the Grameen Bank. He's like a leader in this kind of work, and his ideas have really helped to reduce poverty and make life better for many people. The Nobel Peace Prize is a very special award given each year, and it's one of five different Nobel Prizes. These prizes are a way to say thank you to people and groups who have done amazing things to make the world a better place, whether it's in science, literature, medicine, or bringing peace and happiness to the world.

88. Option (3) is correct.

National income is the sum total of the value of all the final goods and services produced within a country during a specific financial year. This calculation factors in depreciation, which accounts for the wear and tear of machinery and infrastructure used in production. However, national income does not consider taxes, raw materials (known as non-factor inputs), and depreciation costs.

To measure national income, there are three primary methods:

- Income Method: This approach calculates national income by considering the earnings generated from the fundamental factors of production, including land, capital, labor, and organization. It encompasses income derived from various sources such as wages, rent from land and buildings, interest on capital, and business profits during a given accounting year.

- Product (Value-Added) Method: This method involves determining the monetary value of all final goods and services produced across different sectors. It focuses on including only the value added at each stage of production, making it a somewhat subjective and less reliable method.
- Expenditure Method: The most commonly used method for measuring national income, the expenditure method accounts for total domestic spending, which includes consumption and investment expenditures. It also considers net exports (exports minus imports) and government expenditures as essential components in its calculation. This method provides a comprehensive overview of how income is used within a country's economy.

89. Option (2) is correct.

NCERT, which stands for the National Council of Educational Research and Training, was founded in 1961 under the Society Registration Act. This esteemed organization serves as the premier authority for providing guidance to both central and state governments on matters pertaining to school education. With its headquarters located in New Delhi, NCERT plays a pivotal role in shaping the educational landscape of India.

As of September 2023, Dr. Dinesh Prasad Saklani holds the esteemed position of Director at NCERT, contributing to the institution's ongoing mission of enhancing the quality and effectiveness of school education across the nation.

90. Option (1) is correct.

Subansiri is the largest tributary of the upper Brahmaputra, originating in the Tibetan Himalayas and contributing 7.92% of the Brahmaputra's total flow. It is also known as the 'Gold River' and spans a length of 442 kilometers with a drainage basin covering 32,640 square kilometers.

The Yerla River is a tributary of the River Krishna, originating in the Mhaskoba hills of Satara district. It plays a significant role in irrigation for the eastern part of Satara district and Sangli district in Maharashtra.

The Musi River is a major tributary of the River Krishna, flowing through Telangana, and the city of Hyderabad is situated on its banks.

The Aner River flows into the Tapti River, originating from the Satpura hills, and it is located near the Hisala hills.

91. Option (4) is correct.

VIBGYOR is an acronym representing the colors of the visible spectrum: Violet, Indigo, Blue, Green, Yellow, Orange, and Red. These colors make up the rainbow we often see in nature. Each color in the spectrum corresponds to a specific range of frequencies, which determines its position in the sequence:

Red: 4.3-4.8 THz

Orange: 4.8-5.4 THz

Yellow: 5.4-5.9 THz

Green: 5.9-6.7 THz

Blue: 6.7-7.5 THz

Indigo: 7.5-8.2 THz

Violet: 8.2-8.7 THz

It's important to note that the higher the frequency, the shorter the wavelength, and the greater the energy of the electromagnetic radiation. As a result, red light has the lowest energy among these visible colors, while violet has the highest energy. This understanding of the visible spectrum is essential in various fields, including optics, astronomy, and photography.

92. Option (4) is correct.

The Tulip Festival is a beautiful yearly flower celebration in Srinagar, Jammu and Kashmir. It happens from March to May when spring arrives. It lasts for fifteen days and has more than 46 types of tulips, with over 15 lakh tulip flowers. Every year, they add new types of tulips, making the garden even more colorful.

The Tulip Garden started in 2007, opened by Gulam Nabi Azad, a former leader. It's surrounded by Dal Lake, Nishat Bagh, and Chashma Shahi Garden, making it a stunning place to visit. People from all around come to see the pretty tulips against the backdrop of the Himalayan mountains.

93. Option (3) is correct.

The International Day of Yoga started in 2015 when the United Nations decided it should be a special day. It's celebrated every year on June 21st. This year, in 2023, it was the 9th time people all around the world got together to do yoga. The theme for this year was "Yoga for 'The World is One Family.'" This day is all about spreading the word about yoga and how it can make us feel more connected to each other. It's a great chance for people who love yoga to join in, do yoga together, and talk about how it helps our bodies and minds.

94. Option (1) is correct.

Transfer payments refer to money exchanges where no goods or services are involved. These payments often take the form of subsidies or benefits. They serve the purpose of redistributing money to those who need it. These funds are typically funneled into government accounts to support various social initiatives, such as healthcare, welfare programs, and subsidies. However, it's important to note that transfer payments are not considered a part of the national income, as they involve one-sided transactions.

95. Option (2) is correct.

The National Rural Employment Guarantee Act, which is now known as the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA), was initially enacted in 2005. This transformative social welfare initiative ensures the 'right to work' for rural communities. Its primary objective is to offer legal assurance for 100 days of wage employment each year, focusing on unskilled manual labor. This not only uplifts the livelihoods of rural households but also contributes to the development of sustainable rural infrastructure.

Funding for the program is a joint effort between the central and state governments, reflecting their commitment to improving the well-being of rural populations. MNREGA is efficiently administered at the grassroots level through gram panchayats, which are village councils responsible for its implementation and management.

96. Option (4) is correct.

The Fundamental Duties are enumerated in Article 51-A of the Indian Constitution, constituting the sole Article in Part-IV-A. Originally, there were ten duties, with the eleventh being added through the 86th Constitutional Amendment Act of 2002. These represent moral obligations for citizens and lack legal enforceability in courts. The fundamental duties encompass:

Abiding by the Constitution and respecting its ideals, institutions, the National Flag, and the National Anthem.

Cherishing and following the noble ideals that inspired the national struggle for freedom.

Upholding and protecting India's sovereignty, unity, and integrity.

Defending the country and providing national service when required.

Promoting harmony and the spirit of common brotherhood among all citizens, transcending religious, linguistic, and regional diversities, and renouncing practices derogatory to women's dignity.

Valuing and preserving the rich heritage of India's composite culture.

Protecting and improving the natural environment, including forests, lakes, rivers, and wildlife, and showing compassion for living creatures.

Developing scientific temper, humanism, and the spirit of inquiry and reform.

Safeguarding public property and renouncing violence.

Striving for excellence in all spheres of individual and collective activities, leading the nation to higher levels of endeavor and achievement.

Providing opportunities for the education of one's child or ward between the ages of six and fourteen years (added by the 86th Constitutional Amendment Act, 2002).

97. Option (3) is correct.

The Peninsular Plateau, also known as the Deccan Plateau, sprawls across southern India, extending from the Narmada River in the north to the southern tip of the subcontinent. Encompassing states from Gujarat in the west to Odisha in the east, it covers central and southern India. This plateau boasts elevated terrain, with an average height ranging from approximately 600 to 900 meters (2,000 to 3,000 feet) above sea level. Within its expanse, you'll find numerous hill ranges and elevated plateaus. The Peninsular Plateau's drainage is facilitated by several significant rivers, including the Godavari, Krishna, Tungabhadra, and Cauvery in the south, along with the Narmada and Tapi in the north. These rivers have sculpted deep valleys and gorges across the plateau's landscape. Much of this plateau is bedecked with basaltic rock formations, a testament to ancient volcanic activity. Among its geological features, the Deccan Traps, an immense volcanic plateau, stand out prominently.

98. Option (1) is correct.

Article 47 of the Indian constitution outlines the State's responsibility to elevate nutrition standards, improve living conditions, and enhance public health. It also emphasizes efforts to prohibit the use of intoxicating substances harmful to health. This article falls under the Directive Principles of State Policy.

Article 44 of the Indian constitution underscores the State's commitment to establish a Uniform Civil Code applicable to all citizens across India.

Article 46 of the Indian constitution mandates the State to give special attention to the educational and economic welfare of marginalized groups, particularly the Scheduled Castes and Scheduled Tribes, while safeguarding them from social injustice and exploitation.

Article 45 aims to provide free and compulsory education for all children up to the age of fourteen within ten years of the Constitution's commencement.

99. Option (3) is correct.

Name	Designation
Ganesan Kannabiran	Director of National Assessment and Accreditation Council (NAAC)
R Madhavan	President of the Film and Television Institute of India (FTII), Pune
Prakash Shrivastava	Chairperson of National Green Tribunal (NGT)
R Doraiswamy	Director of Life Insurance Corporation of India (LIC)

100. Option (1) is correct.

Ustad Asad Ali Khan, a renowned Indian musician, was a master of the rudra veena and performed in the dhrupad style, a genre of Hindustani classical music. In recognition of his contributions, he received the Padma Bhushan award in 2008.

The rudra veena, a significant instrument in Indian classical music, is characterized by its large size and plucked strings.

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