# **STAFF SELECTION COMMISSION COMBINED HIGHER SECONDARY LEVEL (TIER-I)**

## SOLVED PAPER

## (2<sup>nd</sup> June 2022: Shift-3)

Time Allotted-1 hour

Max marks- 200

## **Important Instructions:-**

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

## **English Language**

1. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. I suggested her two dates, both in the coming month

and just a few days \_\_\_\_\_ from each other to start her singing practice.

- 1. alarming, near **3.** alternative, apart
- 2. adverse, different 4. alternating, closely
- 2. 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. People can get in touch with the larger global community by communicating and sharing their views via social media.
  - B. Furthermore, this provides a suitable platform to express their views, conduct business with online transactions, or find new people or jobs.
  - C. Smartphones have become a very important form of communication these days.
  - **D.** It is impossible for a rational person to deny the advantages of smartphones as they are devices suitable for a wide variety of tasks
  - 1. CBDA **2.** CDAB 3. DCBA 4. ABCD
- 3. Select the most appropriate ANTONYM of the given word. Desiderate
- 2. Disregard 3. Acquire 1. Quarrel 4. Mandate 4. Select the INCORRECTLY spelt word.
  - **1.** Inscrutable 2. Banality
  - 4. Giddyap 3. Conscientous
- 5. Select the most appropriate synonym of the highlighted word. The litigant wished that justice would prevail.
- 1. detective 2. culprit 3. abuser 4. petitioner 6. Select the option that expresses the given sentence in active
  - voice The outcome of the interview will be published by next week.
  - 1. The panel will have published the outcome of the interview by the week next.
  - 2. The panel would have published the outcome of the interview by next week.
  - 3. The panel was to publish the outcome of the interview by next week.
  - 4. The panel will publish the outcome of the interview by next week

- 7. Select the most appropriate meaning of the idiom given in bold in the following sentence.
  - She is green-eyed with his success. 1. afraid
  - 2. worried 3. jealous
    - 4. enthusiastic
- 8. Select the most appropriate ANTONYM of the highlighted word.
  - The players seem to be suffering from exertion.
  - 1. inaction 2. suffocation
  - 3. traction 4. reaction
- 9. Select the most appropriate ANTONYM of the highlighted word. The cricketer is in sublime form.
  - 1. superior 2. interior 3. inferior 4. exterior
- 10. Select the most appropriate meaning of the given idiom. Charley horse
  - 3. Cramp 1. Very fast 2. Lucky 4. Cunning
- 11. Select the option that expresses the given sentence in active voice. The national flag was hoisted by the minister.
  - 1. The minister hoist the national flag.
  - 2. The minister was hoisted the national flag.
  - 3. The minister hoisted the national flag.
  - 4. The minister will hoist the national flag.
- 12. Select the most appropriate option to fill in the blank. Prerna is in a great about whether to go for the party or not. 1. pain
  - 2. depression 3. dilemma 4. distress
- 13. Select the most appropriate meaning of the idiom given in bold in the following sentence. For the time being, the liberals seem to have carried the day.
- 1. unpopular **2.** winning **3.** popular 4. despised 14. From among the words given in bold, select the INCORRECTLY spelt word in the following sentence.
  - Tibet was ruled by a theocracy of Buddhist monks under nominal suzeranity of China.
- 2. suzeranity 3. Buddhist 4. theocracy 1. nominal 15. Select the most appropriate option that can substitute the
- underlined words in the given sentence. In order to restore peace, the Czar renounced the throne in favour of his first cousin.
- 2. stepped 3. sacrificed 4. sacrileged 1. abdicated 16. Select the INCORRECTLY spelt word.
- 1. Brusque 2. Boisterous 3. Blizard 4. Blonde
- 17. Select the option that expresses the given sentence in passive voice.

Children like to play games all the time.

- 1. Children like being played to games all the time.
- 2. Games liked playing with children all the time
- 3. Games are liked to be played by children all the time.
- 4. Children are being played games all the time.
- 18. Select the most appropriate synonym of the given word. Boldness
  - 1. Eagerness 2. Hard-heartedness
  - **3.** Wisdom 4. Bravery
- 19. Select the option that will improve the underlined part of the given sentence.
  - One must care as for family members as possible.
  - 1. most for family members
  - 2. as most for family members
  - 3. more for family members
  - 4. as much for family members
- 20. Select the option that can be used as a one-word substitute for the given group of words.
  - A person who leaves his/her own country to live in another country permanently
  - 1. Vagabond 2. Mercenary
  - 3. Emigrant 4. Immigrant

#### **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.

Just before midnight he put on warm clothes and his new shoes and (1)\_\_\_\_\_ across the bridge. He turned (2) the road and along the sound below the church. Ice had formed on the sound and inside the old harbor, but further out he could see a darker belt of (3) water. As he stood there, the lights on the (4) of the church went out, and it was dark all around him. It was (5) cold and stars filled the sky.

- **21.** Select the most appropriate option to fill in blank number 1. 2. stalked 3. slept 4. walked 1. danced
- 22. Select the most appropriate option to fill in blank number 2. 2. inside 3. off 4. over 1. under
- 23. Select the most appropriate option to fill in blank number 3. 1. wet 2. closed 3. dried 4. open
- 24. Select the most appropriate option to fill in blank number 4. **1.** architecture **2.** tunnel 3. vent 4. facade
- 25. Select the most appropriate option to fill in blank number 5. 1. some 2. abundantly

4. icy

3. sparingly

## **General Intelligence**

26. Select the box that can be formed by folding the given sheet along the lines.



- 27. Which of the following numbers will replace the question mark (?) in the given series? 641, 647, 659, 673, 683, ?
  - **1.** 711
    - 2. 715 **3** 701 4. 705
- **28.** Select the option that represents the correct order of the given words as they would appear in an English dictionary. 1. Prophet 2. Prudent 3. Producer 4. Quest
  - 5. Puberty 6. Profound

- 1. 3,5,6,1,2,4 2. 3,6,2,1,5,4 3. 3,1,6,5,2,4
  - 4. 3,6,1,2,5,4
- 29. Select the option that represents the letters that, when sequentially placed from left to right in the blanks below, will complete the letter series.

- 3. TrurSrT 4. SrurSSS
- 30. 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 numberpairs EXCEPT one. Find that odd number-pair.

**1.** 3 : 14 **2.** 5 : 63 **3.** 7 : 172 4. 9:355

31. Consider the Venn diagram below, and from the given alternatives, choose the number that indicates the total number of girls who are players and dancers.



- **32.** Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must NOT be related to each other based on the number of letters/number of consonants/vowels in the word) Watch : Wrist :: Clock : ? 4. Shop 1. House 2. Wall 3. Room
- 33. Select the correct combination of mathematical signs to sequentially replace the \* signs and to balance the given equation.
  - 25\*5\*10\*2\*4\*7
  - 1. ×, ÷,-,+, = 2. -,+,÷,×,= **3.**  $\div$ , +, -, ×, = 4.  $\div, \times, -, +, =$
- 34. In a certain code language, 'SKATE' is written as '191122010' and 'ROLLER' is written as '183012121018'. How will 'SLIDE' be written in that language?
  - 1. 191218412 2. 191218416
  - 3. 191218414 4. 191218410
- 35. In a certain code language, "ENSURE" is written as "FPVTPB", and "EQUITY" is written as "FSXHRV". How will "FINGER" be written in that language? 1. GJOFCO 2. GKRFCO

- 36. Which of the following numbers will replace the question mark (?) in the given series?
  - 1, 24, 58, 125, 247, 446, ?
  - 1. 774 2. 747 3. 744 4. 777
- **37.** If  $15^{\text{th}}$  October 2008 was a Wednesday, then what was the day of the week on 14th October 2012?
- 1. Sunday 2. Saturday 3. Tuesday 4. Monday
- **38.** In a certain code language, "MATURE" is written as "AMUTER", and "MENTAL" is written as "EMTNLA". How will "MOBILE" be written in that language?
- 1. OMIEBL 2. OMIBEL 3. OIMEBL 4. OIMBEL **39.** Select the option that is related to the fifth number in the same
- way as the second number is related to the first number and the fourth number is related to the third number. 18:55:28:85:36:?
  - 1. 105 2. 115 3. 109 4. 104

**2.** +, =, +, - **3.**  $\div, \times, \times, =$  **4.**  $\times, =, \times, \times$ 

40. Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown.



between the following classes. Peaches, Lychees, Fruits



- 42. Select the correct combination of mathematical signs to sequentially replace the \* signs and to balance the given equation. 17\*18\*6\*5\*2\*10
  - 1.  $\times, -, \div, +, =$ **2.**  $\times$ , -, +,  $\div$ , =
- **3.**  $+, \div, -, \times, =$ 4.  $+, \times, \div, -, =$ 43. Three Statements are given followed by Three conclusions
- numbered I, II and III.

Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All 'alphas' are 'betas'.

No 'beta' is a 'gamma'.

Some 'thetas' are 'alphas'.

#### **Conclusions:**

I. Some gammas are alphas.

- II. Some thetas are betas.
- III. No alpha is a gamma.
- 1. Only conclusion II follows.
- 2. Only conclusion I follows.
- 3. Both conclusions II and III follow.
- 4. Both conclusions I and II follow.
- 44. Which of the following numbers will replace the question mark (?) in the given series?
  - 1778, 1609, 1465, 1344, 1244, ? 1. 1144

- × + ÷ -

4. 131

45. Select the correct combination of mathematical signs to replace the \* signs and to balance the given equation. 17\*4\*63\*7\*21\*3\*59 **2.** =,-,×,+,-,÷

- 46. Select the option that is related to the fifth term in the same way as the second term is related to the first term and fourth term related to third term.
  - 27:81 :: 18:36 :: 33:? 1. 121

47. Select the correct mirror image of the given combination when the mirror is placed at XY as shown.

## HJK246

1.	9	4	2	К	ſ	Н	2.	К	٢	Н	9	7	2	
3.	9	4	2	К	ι	н	4.	к	L	н	9	4	2	

- 48. Which letter-cluster will replace the question mark (?) to complete the given series? GOWB, MVEK, SCMT, ?, EQCL
  - 1. YKUC **2.** YKCU **3.** YJCU 4. YIUC

- 49. Select the correct combination of mathematical signs to replace the \* signs and to balance the given equation. 25 \* 3 \* 5 \* 15 \* 1
  - 1. = +, +, +, +
- 50. Select the option figure which is embedded in the given insert figure (rotation is NOT applicable).



#### Quantitative Aptitude

51. What is the value of

$$1980 \div 9 + \left[ -77 + \left\{ -1980 + \left( \frac{1}{4} \text{ of } 7920 \right) \right\} \right]?$$

- **3.** 164 1. 1990 2. 1980 4. 143 52. Vinod had ₹ 10,000 with him. He lent a part of it at 8% per annum simple interest and the remaining at 10% per annum. His total annual income was ₹ 880. Find the sum lent at 8%. 1. ₹ 5.500 2. ₹6,000 3. ₹ 5,000 4. ₹ 6,500
- 53. During his entire school life, John's average marks in science was 80% and his average marks in mathematics was 90%. If his combined average marks in science and mathematics was 84%, while the total marks obtained by him in science was 54,000, what was John's total marks obtained in mathematics? 1. 90000 2. 81000 3. 36000 4. 60000
- 54. Namitha gives a 20% discount on all things in her shop and yet makes a profit of 12%. What is the cost price of an item with marked price of ₹ 280?
  - 1. ₹ 215 **2.** ₹210 3. ₹212 4. ₹200
- 55. Aman has taken a loan of ₹ 50,000 from a bank at the rate of 8% to be compounded annually. How much does he have to pay after 3 years? (Nearest to a ₹)
- 1. ₹ 62,517 2. ₹ 62,871 3. ₹ 62,986 4. ₹ 62,000 56. A man runs 200 metres in 24 seconds. His speed is:
- **2.** 32 km/h **3.** 24 km/h **4.** 33 km/h 1 30 km/h
- 57. Study the given bar graph and calculate the average number of girls studying in the 5th, 6th and 8th grades.





1. 72 2. 144 3. 120 4. 162 59. In an election between Ram and Shyamal, one got 30% of the total votes and thus lost by 900 votes. If 90% of the voters voted and no invalid or illegal votes were cast, then what was the numbers of voters in the voting list?

1. 2800 2. 2500 3. 2700 4. 2300 60. As per the data on the basis of which the following bar graph has been constructed, how many students were surveyed?



61. A seller gives 4 toys free of cost on buying 14 toys. What percent does the customer get as a discount?

**1.** 
$$21\frac{2}{9}\%$$
 **2.**  $22\frac{2}{9}\%$  **3.**  $24\frac{2}{9}\%$  **4.**  $23\frac{2}{9}\%$ 

- 62. Which one of the following numbers is divisible by 24? **2.** 478656 **3.** 480128 1 569896 **4.** 543344
- 63. While travelling from Nashik to Daman, Harsh drove for 1 hour at a speed of 50 km/h and for the next three hours at 60 km/h. What was his average speed for the whole trip? 1. 56 km/h 2. 57.5 km/h 3. 55 km/h 4. 58.5 km/h
- 64. 6 men or 2 women or 4 boys can finish a work in 77 days. How many days will 1 man, 1 woman and 1 boy together take to finish the same work? 1.86 2. 80 **3.** 84 4. 82
- 65. Raghuvir purchased some perishable items for sale but 36% of those items could not be sold and went bad. However, Raghuvir managed to sell the rest of the items at a price that helped him earn an overall profit of 28%. At what percentage above the cost price of each item did Raghuvir sell each of the items that did not go bad?
- 2. 92% **3.** 63% 4. 120% 1. 100% 66. After melting three cubes of sides 6 cm, 8 cm and 10 cm, a big cube is made. Find the side of the new cube. **2.** 24 cm **1.** 13 cm 3. 25 cm 4. 12 cm
- 67. Find the volume of a sphere of diameter 21 cm  $\left( use \pi = \frac{22}{7} \right)$

**2.** 6342 cm<sup>3</sup> **3.** 4268 cm<sup>3</sup> **4.** 4851 cm<sup>3</sup> 1.  $5232 \text{ cm}^3$ 68. If  $\cos(x-y) = \frac{\sqrt{3}}{2}$  and  $\sin(x+y) = 1$ , where x and y are

- positive acute angles and  $x \ge y$ , then x and y are  $(0^\circ < (x + y))$ 
  - ≤ 90°)
- **2.** 50°; 40° **3.** 80°; 10° **4.** 60°; 30° **1.** 70°; 20° 69. The length of each side of a regular hexagon is 10 cm. What is
- the area of the hexagon? 111 5 150 12

1. 
$$156\sqrt{3}$$
 cm<sup>2</sup> 2.  $144\sqrt{3}$  cm<sup>2</sup>

**3.** 
$$148\sqrt{3}$$
 cm<sup>2</sup> **4.**  $150\sqrt{3}$  cm<sup>4</sup>

- **70.** The factors of  $a^2 1 2x x^2$  are **1.** (a - x - 1)(a - x - 1)**3.** (a - x + 1)(a - x + 1)2. (a+1+x)(a-1-x)4. (a - x + 1)(a - x - 1)
- 71. The area of a square is  $9m^2 + 12m + 4$ . Find the measure of the side of the square.
  - **2.** 3m + 4 **3.**  $3m^2 + 2$  **4.**  $3m^2 + 2m$ **1.** 3m + 2
- 72. A man spends  $10\frac{1}{2}\%$  of his salary on items of daily use and

30% of the remainder on house rent; after that, he is left with ₹ 12,000. How much is his salary (consider the round-up value)?

2. ₹ 19,154 3. ₹ 10,054 4. ₹ 19,000 1. ₹ 18.050

**73.** Simplify  $p^3 + 27$ 

3. raw data

1.  $(p+3)(p^2-3p-9)$ 2.  $(p+3)(p^2+3p+9)$ 

- 3.  $(p-3)(p^2-3p+9)$ 4.  $(p+3)(p^2-3p+9)$
- 74. A way of punching data that exhibits the values of the variables and corresponding frequencies is called: 1. an array
  - 2. frequency of observation
  - 4. frequency distribution
- 75. Two tangents TP and TQ are drawn to a circle with centre O from an external point T. If TP = 7 cm, find the length of TQ. 1. 7 cm **2.** 10.5 cm 3. 3.5 cm **4.** 14 cm

## **General Awareness**

- 76. Which of the following novels is written by Mulk Raj Anand that shows the cruelty of the caste system based on preindependence era of India?
  - 1. The Village 2. Untouchable
  - 3. Across the Black Waters 4. Coolie
- 77. Which organisation was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) to assess the science related to climate change?
  - 1. Intergovernmental Panel on Climate Change (IPCC)
  - 2. International Climate Action Network (ICAN)
  - 3. Global Climate Growth Institute (GCGI)
  - 4. Australian Youth Climate Coalition (AYCC)
- 78. In the ancient times, which river was also known as 'Pooni' in Tamil which is the fourth largest river flowing in the southeast direction through the states of Karnataka and Tamil Nadu?
  - 2. Satluj River 1. Kaveri River
  - 3. Ravi River 4. Tapi River
- 79. The term 'off break' is used in which of the following sports? 1. Football 2. Hockey
  - 3. Badminton 4. Cricket
- 80. Who among the following has written the Hindi novel 'Kafan'?
  - 1. Sumitranandan Pant 2. Mahadevi Verma
  - 3. Jaishankar Prasad 4. Premchand

81.

- is a situation in the bonds market when the rate
- of interest falls to its lowest level and the speculative demand for money becomes perfectly elastic.
  - 1. Cash crunch 2. Infinite supply
  - **3.** Liquidity trap 4. Zero money velocity
- 82. Which Indian musician won the Grammys in 2015 in the Best New Age Album category, his album Winds of Samsara was a collaboration with a South African falutist Wouter Kellerman?
  - 1. Alokananda Dasgupta 2. Sadhu Kokila 3. Rickey Kej
    - 4. Stephen Devassy
- 83. Three Indians were named amongst Time Magazine's '100 Most Influential People' of 2021. Who among the following is NOT one of them?
  - 1. Gautam Adani
    - 2. Narendra Modi 4. Adar Poonawalla
- 3. Mamata Banerjee 84. Who among the following is known as Sarangi instrumentalist?
  - 1. T.N Krishnan 2. T Brinda
  - 3. T.M Krishna 4. Ustad Bundu Khan
- 85. 2021 marked the 145th birth anniversary of the designer of the Indian National Tricolour. What was his/her name?
  - 1. Madame Bhikaji Cama
  - 2. Bankim Chandra Chattopadhyay
  - 3. Pingali Venkayya
  - 4. Annie Besant
- 86. What is the percentage of land used for agriculture in India as per the 2009 data by National Institute of Hydrology? 1. 51.09% **2.** 50.09% **3.** 59.09% 4. 59.01%

- 87. Sonal Mansingh, the classical dance legend, has NOT received which of the following awards?
  - 1. Sangeet Natak Akademi Award
  - **2.** Padma Vibhushan
  - 3. Padma Shri
  - 4. Padma Bhushan
- 88. Who among the following Indian musicians introduced shehnai to the concert stage and was selected to perform for the ceremony at Delhi's historic Red Fort on the occasion of India's Independence Day on 15th August 1947? 1. Ali Bakhsh 2. Anant Lal
  - 4. Ali Ahmad Hussain
- 3. Bismillah Khan 89. The autobiography 'Unbreakable: An Autobiography' is written by which of the following sportspersons of India?
  - 1. Yuvraj Singh 2. M C Marv Kom
  - 3. Abhinav Bindra 4. P T Usha
- 90. Davis Cup is associated with which of the following sports? 1. Badminton 2. Football 3. Hockey 4. Tennis
- 91. What kind of substances are separated using the technique of steam distillation?
  - **1.** Coloured substances
  - 2. Substances with many electrons
  - **3.** Coarse substances
  - 4. Substances that are steam volatile
- 92. Identify the acid that helps in digestion.
  - 1. Nitric acid 2. Acetic acid
  - **3.** Hydrochloric acid 4. Sulphuric acid
- 93. DDT adversely affects our environment because:
  - 1. it can kill beneficial insects like honey bees
  - 2. it can allow growth of harmful insects
  - 3. it can promote growth of harmful insects
  - 4. it can kill harmful insects

- 94. Which of the following Indian classical singers was known as Mallika-e-Ghazal or the Queen of Ghazal and got appreciations by the Nightingale of India, Sarojini Naidu at the age of fifteen?
  - 1. Chitra Singh

**3.** Suraiya

- 2. Begum Akhtar 4. Amrutha Suresh
- 95. Which of the following Odissi dancers is also a master of percussion instruments like Mridangam, Pakhavaj and Tabla? 1. Kelucharan Mohapatra 2. Sujata Mohapatra
  - 4. Sudhakar Sahoo 3. Ramani Ranjan Jena
- 96. Which unicellular organism acquires food by a process in which cells absorb external material by engulfing it with the cell membrane?
  - 1. Yeast 2. Volvox 3. Amoeba 4. Spirogyra
- 97. Which of the following Indian classical Bharatanatyam dancers received the honours of Padma Shri in 1981 and Padma Bhushan in 2003?
  - 1. Savitha Sastry 3. Rukmini Devi
- 2. Mallika Sarabhai 4. Padma Subrahmanyam
- 98. Mallika Sarabhai, a Kuchipudi and Bharatanatyam dancer, was awarded with the Padma Bhushan in which of the following years?
  - 1. 2012 2. 2008 3. 2006 4. 2010
- 99. In February 2022, which of the following persons was nominated for Laureus 'World Breakthrough of the Year' award?
  - 1. Max Parrot 3. Neeraj Chopra
- 2. Sachin Tendulkar 4. Vinesh Phogat
- 100. of the Constitution of India provides protection against arrest and detention in certain cases.
  - 2. Article 22 3. Article 23 4. Article 20 1. Article 25

## Answer Key

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

## **Answers with Explanations**

#### 1. Option (3) is correct.

Alternative, apart

Options 1, 2, and 4 will be inappropriate for the context, as the words given in the options will not be making the sentence sensible and meaningful. The sentence talks about two dates and so, the blank must be fillied in with 'alternative' and the sentence further mentions that the dates are "a few days", so logically "apart" makes sense in the given context. So apart is the right usage there in front of 'a few days'.

#### 2. Option (2) is correct.

#### CDAB

Sentence C introduces the subject 'smartphones' and their significance in communication. So, it must be the first sentence as it introduces the subject. D speaks about the impact of smartphones in a rational human being, and so it must be the second sentence. Sentence A further explains the advantages of using smartphones and hence, it must be the third sentence. B gives still more information about the advantages of smartphones, supporting sentence C, and hence becomes the final sentence.

#### 3. Option (2) is correct.

#### Disregard

The antonym of quarrel is harmony or concord. The antonym of 'disregard' is 'desiderate'. The antonym of 'acquire' is 'disperse.' The antonym of 'mandate' is refusal.

### 4. Option (3) is correct.

### Conscientous

The incorrectly spelled word is Conscientous. The right spelling is conscientious.

## 5. Option (4) is correct.

Petitioner

A detective is an investigator. A culprit is a criminal. An abuser is an addict. A petitioner is a litigant.

## 6. Option (4) is correct.

The panel will publish the outcome of the interview by next week.

The sentence given for conversion is "The outcome of the interview will be published by next week". This sentence is in passive construction. A sentence in passive construction focuses on the action rather than the doer of the action. The passive construction given here is impersonal passive in nature. When we convert a passive construction into active, the object of the passive will become subject in the active construction. The sentence is in simple future tense and hence, the verb will be 'will publish'. The subject of passive is converted as the object in active and hence, 'the outcome' becomes the object in the active structure.

#### 7. Option (3) is correct.

#### Jealous

Option 1, 2, and 4 are inappropriate in the context as they are not related to the idiom.

#### 8. Option (1) is correct.

Inaction

The antonym of suffocation is free. The antonym of traction is slipperiness. The antonym of reaction is failure. The antonym of inaction is exertion.

## 9. Option (3) is correct.

#### Inferior

The antonym of superior is inferior. The antonym of interior is exterior. The antonym of inferior is superior. The antonym of exterior is interior. The antonym of sublime is inferior.

#### 10. Option (3) is correct.

#### Cramp

A charley horse is a muscle spasm -- when a muscle suddenly tightens up on its own and can't relax. Options 1, 2, and 4 are irrelevant to the context of the idiom and hence, they cannot be the answers.

## 11. Option (3) is correct.

The minister hoisted the national flag.

The sentence given for conversion is: The national flag was hoisted by the minister.

The given sentence is in passive construction and in the simple past tense. A sentence in passive construction focuses only on the action and not on the doer of the action, but in active construction, the sentence gives significance to the subject or the doer of the action. As the minister is the doer of the action, the agent in the passive construction, it must be the subject in the active voice. As the verb is in the simple past form, the second or the simple past form of the verb 'hoisted' is used here. The national flag becomes the object of active construction.

## 12. Option (3) is correct.

#### Dilemma

The given sentence is focuses on the choice Prerana has. She has the option of going to the party or dropping the same, and it is a situation in which she finds difficulty in choosing one option. Options 1, 2, and 4 will not fit in the context, and hence option 3 is the right answer as it is a situation in which we must make a difficult choice between two or more things.

#### 13. Option (2) is correct.

#### Winning

The meaning of the idiom 'carry the day' is being successful or victorious. Options 1, 3, and 4 are not appropriate in meaning.

## 14. Option (2) is correct.

## Suzerainty

Options 1, 3, and 4 are correctly spelled. The wrongly spelled word is 'suzeranity'. The correct spelling is suzerainty. The synonym of suzerainty is the right of one country to partly control another country.

## 15. Option (1) is correct.

## Abdicated

To abdicate is to give up being King or Queen. A step is one action in a series of actions that you take in order to achieve something. Sacrifice is giving up something that is important or valuable to you in order to get or do something that seems more important; something that you give up in this way. Sacrilege is the act of treating a religious object or place without the respect that it deserves.

### 16. Option (3) is correct.

#### Blizard

Options 1,2, and 4 are correctly spelled words. The incorrectly spelled word is blizard. The correct spelling is blizzard. The meaning of a blizzard is a snowstorm.

#### 17. Option (3) is correct.

Games are liked to be played by children all the time.

The given sentence for conversion is: Children like to play games all the time. The given sentence is in the simple present form. The sentence is in the active voice form, focusing on the subject 'children.' When we convert a sentence into passive form, our focus is on the action rather than the subject. The object of the active sentence becomes the subject in the passive sentence and based on the number of subjects, we use the be verb and here the subject 'games' is plural in form and hence, we need to use the be verb 'are.' We use the past participle form of the verb in the passive construction.

## 18. Option (4) is correct.

Bravery

The synonym of eagerness is enthusiasm. The synonym of hard-heartedness is pitilessness. The synonym of wisdom is knowledge. The synonym of bravery is boldness.

#### **19.** Option (4) is correct.

put inverted commas

The given sentence is structured in the positive degree. Option 1 is more like superlative degree. Options 2 and 3 are also inappropriate. Option 4 is in the exact form of positive degree.

#### 20. Option (3) is correct.

#### Emigrant

A vagabond is a person without a home or a job who keeps traveling from one place to another. A mercenary is a person who is interested only in making money. An emigrant is someone who leaves his/her country in order to live permanently in another country. An immigrant is a person who has come to a foreign country to live there permanently.

## 21. Option (4) is correct.

## Walked

The sentence speaks about wearing new clothes and shoes, and hence the answer is 'walked' across the bridge. Options 1, 2, and 3 are meaningless in this context.

## 22. Option (3) is correct.

## Off

We cannot turn under the road, or turn inside the road. Turnover is the amount of business that a company does. A turn-off is a place where a road leads away from a larger or more important road.

## 23. Option (4) is correct.

#### Open

Options 1, 2, and 3 are inappropriate in this context and cannot be fitting into the context as the point denotes water; we will not say closed water, wet water, and dry water.

## 24. Option (4) is correct.

#### façade

The options architecture, tunnel, and vent are inappropriate in the context. Façade is the right option. Façade is the frontage or the portico of the church.

## 25. Option (4) is correct.

Icy

We will not say some cold, abundantly cold, and sparingly cold. We will say 'icy cold', and hence option 4 is the correct answer.

#### 26. Option (1) is correct.

## Explanation:



**Logic:** In an open dice, alternate faces are opposite to each other. Hence, 1-6, 3-4, 2-5 are opposite to each other and opposite faces are not adjacent to each other.

Hence, the box that can be formed by folding the given sheet is given below.



27. Option (3) is correct.

#### **Explanation:**

Given series: 641, 647, 659, 673, 683, ?

#### Logic:

The pattern followed here is:

One Prime number is skipped in each step...

Prime number series: 641, 643, 647, 653, 659, 661, 673, 677, 683, 691, 701.

Here, 643,653,661,677 and 691 are skipped. Hence, 701 is the missing number.

## 28. Option (4) is correct.

**Explanation:** 

Producer	Profound	Prophet	Prudent	Puberty	Quest

## 29. Option (1) is correct.

Explanation:

Given that:  $T \_ r S S \_ T T r \_ S u T T r r \_ u$ T T r r S S U/T T r r s S u /T T r r s s u

## **30.** Option (4) is correct.

#### Explanation:

- $(1) \qquad 3: 14 \Rightarrow (33 \div 2) + 0.5$
- $\Rightarrow$  (27 ÷ 2) + 0.5
- $\Rightarrow$  13.5 + 0.5 = 14
- $(2) \qquad 5:63 \Rightarrow (53 \div 2) + 0.5$
- $\Rightarrow$  (125 ÷ 2) + 0.5
- $\Rightarrow$  62.5 + 0.5 = 63
- $(3) \qquad 7:172 \Rightarrow (73 \div 2) + 0.5$
- $\Rightarrow$  (343 ÷ 2) + 0.5
- $\Rightarrow$  171.5 + 0.5 = 172
- (4)  $9:355 \Rightarrow (93 \div 2) + 0.5$
- $\Rightarrow$  (729 ÷ 2) + 0.5
- $\Rightarrow$  364.5 + 0.5  $\Rightarrow$  365  $\neq$  355
- Hence, 9:355 is the odd one out.

Hence, option (4) is not following the pattern.

#### 31. Option (1) is correct.

## Explanation:



According to the venn diagram, the 6 number is common for dancers, girls, and players. Hence, 6 is correct.

## 32. Option (2) is correct.

Explanation:

Given that: Watch: Wrist: Clock :? Logic: The watch is tied on the wrist, in the same way, clock

is hung on the wall.

## 33. Option (3) is correct.

Explanation: Given that: 25\*5\*10\*2\*4\*7

after putting sign,  $\div$ , +, -, ×, =

- Using BODMAS
- $25 \div 5 + 10 2 \times 4 = 7$
- $5 + 10 2 \times 4 = 7$
- 5 + 10 8 = 7
- 15 8 = 7

7 = 7

#### 34. Option (4) is correct. Explanation:

Given that: 'SKATE' is written as '191122010' & 'ROLLER' is written as '183012121018'. Logic: Consonant = It's place value in alphabetical series. Vowel =  $2 \times It's$  place value in alphabetical series.

S	L	I	D	Е
9	12	$9 \times 2 = 18$	4	$5 \times 2 = 10$

Hence, code for SLIDE = 191218410.

## 35. Option (4) is correct.

Explanation:

"ENSURE" is written as "FPVTPB", and "EQUITY" is written as "FSXHRV"

Е	N	S	U	R	Е
+1	+2	+3	-1	-2▼	-3▼
F	Р	V	Т	Р	В

Similarly, "FINGER" can be written as

F	Ι	Ν	G	Е	R
+1	+2▼	+3	-1	-2	-3
G	K	Q	F	С	0

#### 36. Option (1) is correct.

**Explanation:** 

Given that: 1, 24, 58, 125, 247, 446,?

1	24 人	58 <b>人</b>	125	247	446	774 <b>J</b>
	+23	+34	+67	+122	+199	+298
		+11	+33	+55	+77	+99

## **37.** Option (1) is correct.

#### Explanation:

- 15<sup>th</sup> October 2008 = Wednesday
- $14^{\text{th}}$  October 2012 = ?
- Number of odd days
- 15<sup>th</sup> October 2008 to 15<sup>th</sup> October 2009 =1
- 15th October 2009 to 15th October 2010=1
- 15<sup>th</sup> October 2010 to 15<sup>th</sup> October 2011 =1
- 15<sup>th</sup> October 2011 to 15<sup>th</sup> October 2012 =2, hence total=1+1+1+2=5. Wednesday +5 days = Monday 15<sup>th</sup> October 2012 = Monday

 $14^{\text{th}}$  October 2012 =Sunday

## 38. Option (2) is correct.

## Explanation:

In a certain code language, "MATURE" is written as "AMUTER", and "MENTAL" is written as "EMTNLA".

2

1 4 3 6 5

 $= |\mathbf{A}| |\mathbf{M}| |\mathbf{U}| |\mathbf{T}| |\mathbf{E}| |\mathbf{R}|$ 

Similarly,

2 3

M A T U

1

"MOBILE" can be written as

4 5 6

Μ	0	В	Ι	L	Е	=	0	Μ	Ι	В	Е	L
1	2	3	4	5	6		2	1	4	3	6	5

#### 39. Option (3) is correct.

Explanation: Given that: 18:55::28:85::36:?

R E

$$18 \times 3 + 1 = 55$$

 $28 \times 3 + 1 = 85$ 

Similarly,  $36 \times 3 + 1 = 109$ 

40. Option (3) is correct.

**Explanation:** 

р

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

## 41. Option (4) is correct.

```
Explanation:
```



42. Option (3) is correct.

**Explanation:** Given that: 17\*18\*6\*5\*2\*10

Upon checking option 3 and after putting sign, we get +,  $\div$ , -,  $\times$ , = Using BODMAS  $17 + 18 \div 6 - 5 \times 2 = 10$  $17 + 3 - 5 \times 2 = 10$ 

- 17 + 3 10 = 10
- 20 10 = 10
- 10 = 10
- 43. Option (3) is correct.

**Explanation:** 



- (1) From diagram: no gamma is alpha;
- (2) From diagram: some thetas are betas; and
- (3) From diagram: no alpha is gamma.

## 44. Option (4) is correct.

## **Explanation:**

Given that: 1778, 1609, 1465, 1344, 1244, ?

1778	1609	1465	1344	1244	1163
	$+(13)^{2}$	$+(12)^{2}$	$+(11)^{2}$	$+(10)^{2}$	$+(9)^{2}$

45. Option (1) is correct.

**Explanation:** Given that: 17\*4\*63\*7\*21\*3\*59

After putting sign, we get  $\times$ , +,  $\div$ , -, +, =

- $17 \times 4 + 63 \div 7 21 + 3 = 59$
- $\Rightarrow 17 \times 4 + 9 21 + 3 = 59$
- $\Rightarrow 68 + 9 21 + 3 = 59$
- $\Rightarrow 80 21 = 59$
- $\Rightarrow 59 = 59$

46. Option (1) is correct. Explanation: Given that: 27:81 :: 18:36 :: 33:? 27 : 81 =  $(27 \div 3)^2 = 9^2 = 81$ 18 : 36 =  $(18 \div 3)^2 = 6^2 = 36$ 

$$33: ? = (33 \div 3)^2 = 11^2 = 121$$

47. Option (3) is correct.

Explanation:

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

48. Option (4) is correct. **Explanation:** 

Given that: GOWB, MVEK, SCMT, ?, EQCL

0 W G В ♥+8 ♥ +6 ♥ +7 +9 V Е Κ М ♥ +6 ♦ +7 ♥+8 +9 S С М Т ♥ +6 +7 ♥+8 +9 U Y J С ♥ +6 +7 ♥+8 +9 🕈 Е Q С L 49. Option (4) is correct. **Explanation:** Given that: 25 \* 3 \* 5 \* 15 \* 1 after putting sign, we get  $\times$ , =,  $\times$ ,  $\times$ Using BODMAS  $25 \times 3 = 5 \times 15 \times 1$ 75 = 7550. Option (3) is correct. **Explanation:** Embedded figure is shown by shaded colour. 51. Option (4) is correct. Given expression:  $1980 \div 9 + [-77 + \{-1980 + (\frac{1}{4} \text{ of } 7920)\}]$  $= 1980 \div 9 + [-77 + \{-1980 + 1980\}]$  $= 1980 \div 9 + [-77]$ = 220 - 77= 14352. Option (2) is correct. Given: Total amount = ₹ 10000 Total SI earned in 1 year = ₹ 880 Let he lent  $\overline{\mathbf{x}}$  at a rate of 8% and remaining  $\overline{\mathbf{x}}$  (10000 – x) at a rate of 10% We have, SI =  $\frac{P \times R \times T}{100}$ According to the question,  $\Rightarrow \frac{x \times 8 \times 1}{100} + \frac{(10000 - x) \times 10 \times 1}{100} = 880$  $\Rightarrow 8x + 100000 - 10x = 88000$  $\Rightarrow 2x = 12000$  $\Rightarrow x = 6000$ So, the sum lent at 8% = ₹6000

53. Option (3) is correct. Using mixture formula: Science Maths 80% 90% 84% Ratio 4 6 or 3 2 Given that total marks obtained in Science = 54000 $\therefore$  Marks obtained in Maths =  $\frac{54000}{3} \times 2 = 36000$ 54. Option (4) is correct. Given: Marked price of article = ₹ 280 Discount percentage = 20% And profit percentage = 12%Let the cost price of article =  $\mathbf{\xi} \mathbf{x}$ According to the question,  $x \times \frac{112}{100} = 280 \times \frac{80}{100}$  $x = \frac{28 \times 8 \times 100}{112} = 200$ So, the cost price of article = ₹ 20055. Option (3) is correct. Given: Principal amount P = ₹ 50000 Rate of interest r = 8%Time t = 3 years We have, Total amount =  $P\left(1 + \frac{r}{100}\right)^{1}$ Total amount =  $50000(1 + \frac{8}{100})^3$  $\Rightarrow$  $= 50000 \times \frac{27}{25} \times \frac{27}{25} \times \frac{27}{25}$ = ₹ 62985.6 So, total amount ≈ Rs. 62986 56. Option (1) is correct. Given: Distance = 200 m Time = 24 sWe have, speed =  $\frac{\text{distance}}{\text{time}} = \frac{200}{24} \text{ m/s}$  $=\frac{200}{24}\times\frac{18}{5}$  km/h = 30 km/h57. Option (3) is correct. From the given graph: Number of girls studying in grade 5 = 30Number of girls studying in grade 6 = 35Number of girls studying in grade 7 = 25So, required average =  $\frac{30+35+25}{3} = \frac{90}{3} = 30$ 58. Option (4) is correct. According to the question,  $\Rightarrow \frac{48}{72} = \frac{108}{x}$ 

$$\Rightarrow x = 108 \times \frac{3}{2}$$

$$\Rightarrow x = 162$$

59. Option (2) is correct. Let the total number of voters = xSo, number of voters voted in the election = 0.9xAccording to the question,

$$\Rightarrow 0.9x \times \frac{30}{100} + 900 = 0.9x \times \frac{70}{100}$$
$$\Rightarrow 0.9x \times \frac{40}{100} = 900$$

 $\Rightarrow x = 2500$ 

So, total number of voters = 2500

#### 60. Option (3) is correct.

From the given graph:

Total number of students surveyed = 10 + 7 + 7 + 6 + 4 + 7 + 5 + 6 = 52

#### 61. Option (2) is correct.

Given: A seller gives 4 toys free of cost on buying 14 toys.

So, profit percentage = 
$$\frac{4}{18} \times 100 = 22\frac{2}{9}\%$$

## 62. Option (2) is correct.

The number will only be divisible by 24 when it will be divisible by both 3 and 8.

Divisibility by 3: digit sum of the number must be divisible by 3.

Only option 478656 have a digit sum of 36, which is a multiple of 3.

#### 63. Option (2) is correct.

Given:

Harsh drove 1 hour at a speed of = 50 km/hAnd drove next 3 hours at speed of = 60 km/h

We have, average speed =  $\frac{\text{Total distance}}{\text{Total time}}$ 

average speed =  $\frac{50 \times 1 + 60 \times 3}{1+3} = \frac{230}{4} = 57.5 \text{ km/h}$ 

#### 64. Option (3) is correct.

Given:

6 men can complete the work in = 77 days So, total work done by 1 men =  $77 \times 6$  days

2 women can complete the work in = 77 days

So, total work done by 1 women =  $77 \times 2$  days

4 boys can complete the work in = 77 days

So, total work done by 1 boy =  $77 \times 4$  days

Let the total work

= LCM 
$$(77 \times 6, 77 \times 2, 77 \times 4) = 77 \times 12$$
 units

So, per day work of 1 man = 
$$\frac{77 \times 12}{77 \times 6} = 2$$
 unit/day

And per day work of 1 woman =  $\frac{77 \times 12}{77 \times 2} = 6$  unit/day

And per day work of 1 boy = 
$$\frac{77 \times 12}{77 \times 4} = 3$$
 unit/day

So, time taken by 1 man, 1 woman and 1 boy together to finish the work  $=\frac{77 \times 12}{2+6+3} = 84$  days

#### Shortcut:

```
A.T.Q.
```

 $\Rightarrow$ 

Total work = 
$$6 \text{ M} \times 77 = 2 \text{ W} \times 77 = 4 \text{ B} \times 77$$

3M = W = 2B = xSo.

M = x/3, W = x, and B = x/2

So, time taken by 1 man, 1 woman and 1 boy to finish the

work = 
$$\frac{6M \times 77}{M + W + B} = \frac{6 \times \frac{1}{3} \times 77}{\frac{x}{3} + x + \frac{x}{2}} = \frac{2 \times x \times 77}{\frac{11x}{6}} = 84 \text{ days}$$

#### 65. Option (1) is correct.

Let Raghuvir purchased 100 articles for ₹ 100. So, the cost price for remaining 64% article will be ₹ 64 only. According to the question,

The selling price of remaining 64% items

$$=100 \times \frac{128}{100} = ₹ 128$$

So, required percentage =  $\frac{128 - 64}{64} \times 100 = 100\%$ 

## 66. Option (4) is correct.

Given: sides of the cubes are 6 cm, 8 cm and 10 cm respectively.

We have, volume of cube =  $side^3$ Volume of  $1^{st}$  cube =  $6^3 = 216 \text{ cm}^3$ Volume of  $2^{nd}$  cube =  $8^3 = 512 \text{ cm}^3$ Volume of  $3^{rd}$  cube =  $10^3 = 1000 \text{ cm}^3$ So, Volume of new cube = 216 + 512 + 1000 = 1728Side of new cube =  $\sqrt[3]{1728}$  = 12 cm

67. Option (4) is correct. Given: Diameter of sphere = 21 cm

We have, volume of sphere =  $\frac{4}{2}\pi r^3$ 

$$= \frac{4}{3} \times \frac{22}{7} \times \frac{21}{2} \times \frac{21}{2} \times \frac{21}{2} = 4851 \text{ cm}^2$$

68. Option (4) is correct.

Given:	$\cos\left(x-y\right) = \frac{\sqrt{3}}{2}$	
$\Rightarrow$	$\cos\left(x-y\right) = \cos 30^{\circ}$	
So,	$x - y = 30^{\circ}$	(1)
Also given,	$\sin\left(x+y\right) = 1$	
$\Rightarrow$	$\sin\left(x+y\right) = \sin 90^{\circ}$	
So,	$x + y = 90^{\circ}$	(2)
By equation (1) and	d (2),	
x	$= 60^{\circ}$ and $y = 30^{\circ}$	

69. Option (4) is correct.

Given: Side of regular hexagon = 10 cm

We have, the area of regular hexagon

$$=\frac{3\sqrt{3}}{2}s^2 = \frac{3\sqrt{3}}{2} \times 10 \times 10 = 150\sqrt{3} \text{ cm}^2$$

## 70. Option (2) is correct.

Given expression,

=

$$a^{2}-1-2x-x^{2} = 0$$

$$\Rightarrow \qquad a^{2}-(x^{2}+2x+1) = 0$$

$$\Rightarrow \qquad a^{2}-(x+1)^{2} = 0$$

$$\Rightarrow \qquad (a+x+1)(a-x-1) = 0$$
[as  $a^{2}-b^{2} = (a+b)(a-b)$ ]

Given: Area of the square =  $9 m^2 + 12 m + 4$ 

We have, area of the square =  $side^2$ 

$$\Rightarrow \text{side} = \sqrt{\left(9\,m^2 + 12\,m + 4\right)} = \sqrt{\left(3\,m + 2\right)^2}$$

 $\Rightarrow$  side = 3 m + 2

72. Option (2) is correct.

Let the salary of the person  $= \overline{\mathbf{x}} x$ So, amount left after his daily use items spendings

$$= x - \frac{21}{200}x = \frac{179}{200}x$$

According to the question,

$$\Rightarrow \frac{179}{200} \times \frac{70}{100} x = 12000$$

 $\Rightarrow$  x = 19154

So, the salary of the person = ₹ 19154

## 73. Option (4) is correct.

Given expression:  $p^3 + 27$ We have,  $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$ So,  $p^3 + 3^3 = (p + 3)(p^2 + 3^2 - 3p)$  $= (p + 3)(p^2 - 3p + 9)$ 

## 74. Option (4) is correct.

A way of punching data that exhibits the value of the variables and corresponding frequencies is called frequency distribution.

## 75. Option (1) is correct.



We have, the length of tangents drawn from a point will be of equal length.

So, TP = TQ = 7 cm

#### 76. Option (2) is correct.

Untouchable is written by Mulk Raj Anand that shows the cruelty of the caste system based on pre-independence era of India. The book was written in 1935.

The village is a novel written by Mulk Raj Anand. It is a part of three novel series that focused on political structure of pre independence era and Indian independence movement. The other two books in this three novel series are Across the Black Waters and The Sword and the Sickle.

Across the Black Waters is an English novel by Mulk Raj Anand.

Mulk Raj Anand was an Indian English writer. Some of his famous works are Coolie and Two leaves and a bud.

#### 77. Option (1) is correct.

Intergovernmental Panel on Climate Change (IPCC) was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) to assess the science related to climate change. IPCC is an intergovernmental organisation of the UN with its headquarters in Geneva, Switzerland. Global Climate Growth Institute (GCGI) is a treaty based international and inter-governmental organisation that aims at sustainable growth of developing countries and emerging economies. It is headquartered in Seoul, South Korea. It basically works in four areas namely-water, energy, land-use planning, and green cities.

Australian Youth Climate Coalition (AYCC) is based out of Melbourne, Australia. The organisation aims to build a movement of young people leading solutions to the climate crisis.

#### 78. Option (1) is correct.

In the ancient times, Kaveri River was also known as 'Pooni' in Tamil which is the fourth largest river flowing in the southeast direction through the states of Karnataka and Tamil Nadu. It originates in Brahmagiri ranges, Kodagu district, Karnataka in the Western Ghats at an elevation of 1341m above the sea level.

Sutlej river flows through Himachal Pradesh and Punjab in India. It is also known as Satadru. The Bhakra dam is built around the River. It is the longest of the five rivers that flows through Punjab. Also, it is the easternmost tributary of Indus River.

Ravi river is one of the five Rivers flowing through Punjab and is one of the five tributaries of Indus River. It flows through Punjab and Himachal Pradesh. It is also known as Irawati to ancient Indians. It rises in the Himalayas in the Multhan tehsil of Himachal Pradesh's Kangra district.

Tapi or Tapti River is a River of Central India and it flows through Madhya Pradesh, Maharashtra, and Gujarat. It is supposedly named after the goddess Tapati and it has a length of around 724 km.

## 79. Option (4) is correct.

The term 'off break' is used in Cricket. It is a type of delivery in cricket by an off-spin bowler. In this the ball is held between the palm and the spin is imparted on the ball with the fingers as the ball is delivered. It is for a right handed batsman by a right handed bowler. It is basically the trajectory followed by the ball and this kind of delivery is delivered by an off-spin bowler. In an off spin delivery, the index and middle fingers are well spread across the seam. The ball rests against the third finger. It is the index finger and rotation of wrist which is used to deliver the ball and provide a spin to it.

#### 80. Option (4) is correct.

Premchand has written the Hindi novel 'Kafan'. Premchand was the pen name of Dhanpat Rai Srivastava. He was a famous Hindi and Urdu writer. Some of his notable works include Godaan, Karmabhoomi, Gaban, Mansarovar, Idgah. His first pen name was 'Nawab Rai.' He is also known as Upanyas Samrat.

Jaishankar Prasad is one of the greatest Hindi literary works and is the epitome of Chhayavadi school of Hindi poetry. Jaishankar Prasad was also known as Chhayavadi poet. He is considered one of the four pillars of Romanticism in Hindi Literature (Chhayavad), along with Sumitranandan Pant, Mahadevi Verma, and Suryakant Tripathi 'Nirala'. He is the author of epic poem 'Kamayani'.

Mahadevi Varma is also known as 'Modern Meera' and was a Hindi essayist, poet, and sketch story writer. Some of her notable works include' Rashmi, Neerja, Yama and Mera Parivaar.

Sumitranandan Pant was an Indian poet of Hindi language. He has been awarded with Padma Bhushan and Jnanpith award.

## 81. Option (3) is correct.

Liquidity trap is a situation in the bond market when the rate of interest falls to its lowest level and the speculative demand for money becomes perfectly elastic. In this situation, the consumers and investors hold their cash rather than spend or invest it. This situation arises when people anticipate an adverse event such as deflation or war.

Cash Crunch is a situation in which there is not enough liquid money to operate successfully in a business environment. In this situation, companies normally file for bankruptcy.

Infinite supply is also known as infinite elasticity or perfect elasticity. In this case, the quantity demanded or supplied changes by an infinite amount in response to any change in price at all. Some examples of good with perfect elastic supply are the ones with readily available inputs and whose production can be easily expanded such as pizza, books etc. Luxury goods will be the examples of perfectly elastic demand.

Velocity of money is defined as the measurement of rate of exchange of money in the economy. This is generally the ratio of Gross Domestic Product to the money supply of the economy.

## 82. Option (3) is correct.

Rickey Kej won the Grammys in 2015 in the Best New Age Album category. His album Winds of Samsara was collaboration with a South African falutist Wouter Kellerman. Kej is also a UNHCR Goodwill ambassador. He has won Grammy three times. Rickey Kej is an Indian music composer and environmentalist. Grammy awards recognise the outstanding achievements in the music industry. These are presented by the Recording Academy of the United States.

Alokananda Dasgupta is a music composer who's composed music for movies, OTT platforms etc.

Sadhu Kokila is an Indian actor, musician, lyricist, composer, producer, and director who is active in the Kannada cinema.

Stephen Devassy is an Indian musician from Kerala. He is the founder of Musik Lounge.

#### 83. Option (1) is correct.

The Time Magazine's '100 Most Influential People' of 2021did not include Gautam Adani. This list is published annually by the American magazine-Times. However, his name featured in the 2022 list.

The 2022 list was divided into six categories – Icons, Pioneers, Titans, Artists, Leaders and Innovators.

Karuna Nundy-Supreme Court lawyer, Gautam Adanibusiness tycoon and Khurram Parvez- prominent Kashmiri human rights activist have been named among the world's 100 most influential people of 2022 by TIME magazine.

#### 84. Option (4) is correct.

Ustad Bundu Khan is known as Sarangi instrumentalist. He belonged to a family of musicians and moved to Pakistan after the partition. He wrote a book in Urdu by the name Jauhar-i-Mausiqi. It is known as Sangeet Vivek Darpan in Hindi.

T.N. Krishnan was an Indian Carnatic music violinist. He was a part of the violin-trinity of Carnatic music along with Lalgudi Jayaraman and M. S. Gopalakrishnan. He was honoured with Padma Bhushan and Padma Shri.

T Brinda was a representative of Carnatic music and was also known as Brindamma.

TM Krishna is an Indian Carnatic vocalist, writer, activist, author and Ramon Magsaysay awardee.

#### 85. Option (3) is correct.

2021 marked the 145th birth anniversary of the designer of the Indian National Tricolour Pingali Venkayya. He was an

Indian freedom fighter, educationist, polyglot, and geologist. He had come up with a flag having saffron and green colours. The flag was officially adopted by the Indian National Congress in 1931. It however later evolved with a spinning wheel at the centre and a third colour-white Madame Bhikaji Cama was a prominent figure of Indian freedom movement and was also known as 'Mother of Indian revolution.' She was the first Indian to unfurl a precursor of the Indian National Flag in a foreign country. She was an advocate of women's rights.

Bankim Chandra Chatterjee was an Indian poet, novelist, journalist and essayist. He composed the National song of India-Vande Mataram. He is the author of the famous novel Anandamath and is known as Sahitya Samrat (Emperor of Literature) in Bengali.

Annie Besant was a British Socialist, women's right activist, theosophist, educationist, and orator. She was the first woman President of the Indian National Congress and headed the Calcutta session of INC in 1917.

#### 86. Option (1) is correct.

51.09% of land is used for agriculture in India as per the 2009 data by National Institute of Hydrology (NIH). NIH is an autonomous research society under the Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India. The institute conducts, supports, and promotes research in all aspects of Hydrology and water resources. It is in Roorkee, Uttar Pradesh.

#### 87. Option (3) is correct.

Sonal Mansingh, the classical dance legend, has NOT received Padma Shri. She is an Indian classical dancer. She is a Bharatnatyam and Odissi guru. She was the youngest recipient of Padma Bhushan in 1992 and Padma Vibhushan in 2003. She is also a member of Rajya Sabha. She founded Centre for Indian Classical Dances (CICD), New Delhi.

#### 88. Option (3) is correct.

Bismillah Khan introduced Shehnai to the concert stage and was selected to perform for the ceremony at Delhi's historic Red Fort on the occasion of India's Independence Day on 15 August 1947. Bismillah Khan was an Indian Shehnai player and a leading Hindustani classical music artist. He is also known as Shehnai Maestro. He was honoured with Bharat Ratna, India's highest civilian honour.

Ali Bakhsh Jarnail Khan was an Indian classical singer and founder of Patiala Gharana. He co-founded Gharana along with Fateh Ali Khan.

Anant Lal was an Indian classical shehnai player and worked for All India Radio. He was honoured with Sangeet Natak Akademi Award for his contributions.

Ali Ahmad Hussain was a renowned Shehnai player.

## 89. Option (2) is correct.

The autobiography 'Unbreakable: An Autobiography' is written by MC Mary Kom. Mary Kom is an amateur boxer, politician, and a former Rajya Sabha member. She is fondly known as Magnificent Mary.

'The test of my Life' is an autobiography of Yuvraj Singh. He is a former Indian international cricketer who has played all forms of cricket.

'A Shot at History: My Obsessive Journey to Olympic Gold' is an autobiography of Abhinav Bindra. He co-authored the book with sportswriter Rohit Brijnath. He is a retired sports shooter and the first Indian to become an Olympic gold medalist.

PT Usha is a retired track and field athlete. She is also a former member of Rajya Sabha. She is fondly known as 'Golden Girl and Payyoli Express.' She is the first woman president of the Indian Olympic Association (IOA) in its 95 years history.

## 90. Option (4) is correct.

Davis Cup is associated with Tennis. It is an annual international men's tennis event and is named after American collegian Dwight Filley Davis. It was originally known as the International Lawn Tennis Trophy. It is organised by International Tennis Federation. United States has won the maximum number of times.

FIFA World Cup is the international football competition organised by Fédération Internationale de Football Association (FIFA). FIFA is the sport's governing body and this tournament is held every four years.

Hockey World Cup is an international hockey event organised by International Hockey Federation (FIH). It is held every four years. The BWF World Championships is an international badminton tournament sanctioned by Badminton World Federation (BWF).

#### 91. Option (4) is correct.

Substances that are steam volatile are separated using the technique of steam distillation. It is a process of separation for temperature sensitive material. It is a physical process in which steam is passed through the mixture and vapors undergo condensation and collection in receivers. This method is mostly used in extraction of aromatic oils and volatile compounds. It is also used for separation of a mixture of two immiscible liquids.

#### 92. Option (3) is correct.

Hydrochloric acid helps in digestion. It is present in the gastric juices secreted by the stomach. Due to the presence of HCl in the stomach, it has an acidic pH of the range 1.5 to 3. This acidic environment leads to the killing of many disease causing microorganisms. The acidic environment created in the stomach is essential for the activation of pepsin. The enzyme pepsin is required for the digestion of proteins in the body.

#### 93. Option (1) is correct.

DDT adversely affects our environment because it can kill beneficial insects like honey bees. DDT stands for Dichlorodiphenyltrichloroethane. It is used as an insecticide in agriculture and farming. DDT has the ability to damage the nervous system of bugs and insects, thus killing them. It was first synthesised to suppress malaria and typhus among the troops during the First World War.

However, with time the harmful effects of DDT on human beings such as liver cancer, breast cancer, and uncontrolled cell mutations, diabetes were discovered. It enters the food chain and has profound effect on birds, fish, mammals, wildlife etc. The United States banned the use of DDT in 1970s.

#### 94. Option (2) is correct.

Begum Akhtar was known as Mallika-e-Ghazal or the Queen of Ghazal and got appreciations by the Nightingale of India, Sarojini Naidu at the age of fifteen. Begum Akhtar is regarded as 'Mallika-e-Ghazal' and one of the greatest Hindustani singers of ghazal, dadra, and thumri genres of Hindustani classical music. She was awarded with Padma Shri, Padma Bhushan, and Sangeet Natak Akademi Award.

Suraiya was a popular actress and playback singer of Bollywood. Amrutha Suresh is an Indian composer, singer, radio jockey, and songwriter.

Chitra Singh is an Indian ghazal singer who used to sing alongside her husband Jagjit Singh.

#### 95. Option (1) is correct.

Kelucharan Mohapatra is also a master of percussion instruments like Mridangam, Pakhavaj and Tabla. He was an Indian classical guru, dancer who played a major role in popularising Odissi dance. He was the first person to receive Padma Vibhushan award in Odisha. He was also skilled in the traditional Pattachitra painting. Sujata Mohapatra is an an Indian classical dancer who teaches Odissi dancing style. Ramani Ranjan Jena was an Odissi dancer and teacher. Guru Sudhakar Sahu was an Odissi dancer and teacher. He learned Odissi dance from Guru Duryodhan Mohanty at Cuttack, then from Jayram Kundu at Jaipur.

#### 96. Option (3) is correct.

Amoeba acquires food by a process in which cells absorb external material by engulfing it with the cell membrane. This process is known as phagocytosis. It is a type of endocytosis and is a major mechanism used to remove pathogens and cell debris. It was observed for the first time by Canadian physician William Osler and was named by Élie Metchnikoff. It is one of the mechanisms of innate immune defense.

#### 97. Option (4) is correct.

Padma Subrahmanyam received the honours of Padma Shri in 1981 and Padma Bhushan in 2003. Padma Subrahmanyam is an Indian classical Bharatnatyam dancer and is the founder and developer of dance form Bharata Nrithyam.She is a research scholar, choreographer, teacher, Indologist and author.

Savitha Sastry is an Indian dancer and choreographer of Bharatnatyam dance form. She is considered to be a 'renaissance architect' who brought about a revolution in the presentation of Bharatnatyam.

Mallika Sarabhai is an Indian classical dancer with expertise in Kuchipudi and Bharatnatyam. As a dancer and performer, she used her art for social change and transformation. She is also a Padma Bhushan awardee.Mallika Sarabhai was awarded the French Palme D'or by the French Government in 1977. "French Palme D'or" is the highest civilian award by the French Government.

Rukmini Devi Arundale was a classical dancer who was given the Prani Mitra Award in 1968. She was a Bharatnatyam dancer and the first woman in Indian history to be nominated as the member of Rajya Sabha.

#### 98. Option (4) is correct.

Mallika Sarabhai, a Kuchipudi and Bharatanatyam dancer was awarded with the Padma Bhushan in 2010. She is an Indian classical dancer with expertise in Kuchipudi and Bharatnatyam. As a dancer and performer, she used her art for social change and transformation. She is also a Padma Bhushan awardee. Mallika Sarabhai was awarded the French Palme D'or by the French Government in 1977. "French Palme D'or" is the highest civilian award by the French Government.

#### 99. Option (3) is correct.

In February 2022, Neeraj Chopra was nominated for Laureus 'World Breakthrough of the Year' award. Neeraj Chopra is a track and field athlete who won the Olympic gold in Javelin throw. He belongs to Khandara, Haryana.He is the first Asian athlete to win an Olympic gold medal in Men's Javelin throw. He is is only the third Indian - after wrestler Vinesh Phogat and cricket legend Sachin Tendulkar - to be nominated for a Laureus award. These are an annual sports awards that honours individuals and teams from the world of sports along with sporting achievements throughout the year. It is presented by Laureus Sport for Good Foundation

#### 100. Option (2) is correct.

Article 22 of the Constitution of India provides protection against arrest and detention in certain cases.

Article 25 of the Constitution of India provides the freedom of conscience, the freedom to profess, practice and propagate religion to all citizens. Article 20 of the Constitution of India is a fundamental right which safeguards the rights of an accused/convict. It provides protection against the conviction of offenses

Article 23 of the Constitution of India prohibits trafficking of human beings and forced labour. It guarantees the right against exploitation