## **STAFF SELECTION COMMISSION**

## **COMBINED GRADUATE LEVEL (TIER-I)**

## **SOLVED PAPER**

## (26<sup>th</sup> September 2024: Shift-2)

#### Time Allotted: 1 hour

#### General Intelligence and Reasoning

1. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

ABC FG JK MOPQ TUV Y

1. DHLRW 2. DHLSX 3. EHLRX 4. EHLRW

- 2. In a certain code language, 'FUTURE' is written as 'IXWXUH' and 'ISLAND' is written as 'LVODQG'. How will 'JERSEY' be written in that language?
- 1. KHTUHA 2. MHTVGB 3. MHUVHB 4. KGTVGA 3. Read the given statements and conclusions carefully. You have to take the given statements to be true even if they
- seem to be at variance from commonly known facts. You have to decide which conclusion(s) logically follow(s) from the given statements. Statements:

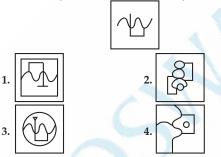
All Grapes are Berries.

Some Berries are Juices. All Juices are Sodas.

## **Conclusions:**

(I) Some Berries are Grapes.

- (II) Some Sodas are Berries.
- 1. Only conclusion (I) follows
- 2. Only conclusion (II) follows
- 3. Both the conclusions (I) and (II) follow
- 4. Both the conclusions (I) and (II) do not follow
- 4. Select the option figure in which the given figure (X) is embedded (rotation is NOT allowed).

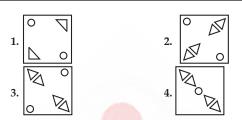


5. Each of the letters in the word 'DARKEN' is arranged in the English alphabetical order.

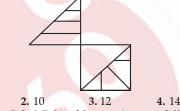
How many letters are there in the English alphabetical series between the letter which is second from the left end and the one which is third from the right end in the new letter-cluster thus formed?

6. A sheet of paper is folded along the dotted line successively along the directions shown and is then punched in the last. How would this paper look when unfolded?

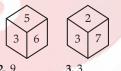




7. How many triangles are there in the figure given below?



8. Six numbers 5, 3, 6, 7, 9 and 2 are written on different faces of a dice. Two positions of this dice are shown in the figure below. Find the number on the face opposite to the one having 5.



4.6 'Conceal' is related to 'Disclose' in the same way as 'Identical' is related to '.....'.

(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.)

1. Similar 3. Distinct 2. Analogous 4. Homogeneous

4.71

10. Select the number that will come in the place of the question mark(?), if '+' and ' - ' are interchanged and '×' and '+' are interchanged  $11 \div 8 - 78 \times 6 + 37$ 

$$2 64 = 3.58$$

same way as are the numbers of the following set.

$$3 - 20 - 5$$
  
 $4 - 17 - 3$ 

1.62

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) 1

4. 11 - 28 - 5

Max Marks: 200

2 9 **1.** 2 9.

1.8

12. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its 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.)

(16, 7, 112)

(8, 12, 96) 1. (13 7 %

(0,1=, ,0)	
1. (13, 7, 96)	<b>2.</b> (14, 9, 128)
3. (12, 5, 65)	4. (15, 8, 120)

13. Which figure should replace the question mark (?) if the following series is to be continued?

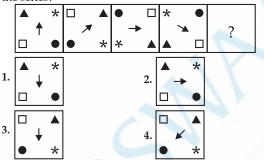
			·	_						_			_	
	S	Р	F	F	V	S	V	F	Ν	Ν	С	V		
		V			Ν			С			Р			?
		Ν	С		С	Р		Р	D		S	F		
	F	Р	Ν						Γ	С	N	Р	-	
1.		S							2.		S			
1.		С	Е						-		F	V		
	C	NI	Б						Г	V	NT	C		
	C	Ν	г							V	IN			
3.		V							4.		F			
5.		Р	S						1.		Р	S		

- 14. In a certain code language
  - 'A + B' means 'A is the mother of B';
  - 'A B' means 'A is the brother of B';
  - 'A  $\times$  B' means 'A is the wife of B' and
  - 'A  $\div$  B' means 'A is the father of B'.

Based on the above, how is I related to H if 'B + R  $\times$  I – T  $\div$  H'?

2. Father's brother

- 1. Brother
- 4. Father's father 3. Father's sister
- 15. Identify the figure given in the options which when put in place of the question mark (?) will logically complete the series?



16. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster 2. ORTU

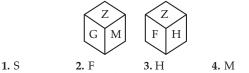
constituent digits. e.g., 13 - Operations on 13 such as

adding/deleting/multiplying etc., to 13 can be performed.

- 1. PRUZ 3. MORW
- 4. XZCH 17. 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 the whole numbers, without breaking down the numbers into its

Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

18. Two different positions of the same dice with faces Z, G, M, F, H and S are shown below. Select the letter that will be on the face opposite to the one having G.



19. Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in 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/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

23 - 29 - 27

48 - 50 - 46 - 52; 37 - 39 - 35 - 41

- 3. 19 17 21 25 4.15 - 13 - 9 - 19
- **20.** Select the number from among the given options that can replace the question mark (?) in the following series. 176,167,156,147,136,?

21. Which of the four options will replace the question mark (?) in the following series?

FX32, EV38, DT44, CR50, ?

- 1. BP56 2. CR54 3. DP55 4. CQ55
- 22. What will come in the place of '?' in the following equation, if  $' \div '$  and ' - ' are interchanged and  $' \times '$  and ' +are interchanged?
  - $7 + 4 \div 18 3 \times 2 = ?$ 1.18
    - **2.** 16 3.24 4.20
- 23. Which of the following terms will replace the question mark (?) in the given series? QGMW, VCPU, AYSS, ? , KQYO
  - **2.** FTUO 3. FVOO 1. FUVQ 4. FUXO
- 24. In a certain code language, 'D' is coded as '16', 'B' is coded as '4' and 'T' is coded as '400'. How will 'H' be coded in the same language? 1.36 4.8

- 25. In a certain code language, 'bright colour rainbow' is coded as 'mq bj st' and 'sunny bright day' is coded as 'nv bj fm'. How is 'bright' coded in that language? 1. st
  - **2.** mq 3. nv 4. bj

#### **General Awareness**

- 26. At the 36th National Games, Hashika Ramchandra won six gold medals in which of the following sports?
  - **1.** Swimming **2.** Boxing 3. Wrestling 4. Badminton

27. Which state in India was the most transformed by the Green Revolution?

- 1. Kerala 2. Maharashtra
- 3. Punjab 4. West Bengal
- 28. Which of the following ports was developed as a Satellite port to relieve the pressure at the Mumbai port?
  - 1. Marmagao Port 2. New Mangalore Port
  - 3. Deendayal Port Authority 4. Jawaharlal Nehru Port

29. Who among the following was the shortest-serving Prime Minister of India?

<ol> <li>Atal Bihari Vajpayee</li> </ol>	2. Gulzarilal Nanda
3. Chandra Shekhar	4. Charan Singh

- 30. In the context of Mathura school of Art, during which of the following periods were a number of sculptures of Brahmanical deities, such as Kartikeya, Vishnu and Kubera carved?
- 1. Satavahana 2. Shaka 3. Parthian 4. Kushana
- 31. In which of the following situations does the government run a deficit budget?
  - 1. When the government expenditure and revenue both are zero.
  - 2. When the government revenue exceeds expenditure.
  - 3. When the government expenditure equals revenue.
  - 4. When the government expenditure exceeds revenue.
- 32. Tsang Po and Jamuna are other names of which river? 1. Narmada 2. Indus 3. Ganga
  - 4. Brahmaputra
- 33. Which of the following groups/parties was started in San Francisco, United States of America during the Indian National Movement?
  - 1. Khilafat Committee 2. Ghadar Party
  - 3. Swaraj Party
  - 4. Hindustan Socialist Republican Association
- 34. Which of the following organisations is NOT a winner of the \$100,000 cash prize as 'Best Small Business: Good Food for All', announced by the United Nations for providing inspiring, diverse and impactful solutions in improving access to healthy and sustainable food?
  - 1. Edible Routes Private Limited
  - 2. Oorja Development Solutions India Private Limited
  - 3. Taru Naturals
  - 4. Pataniali
- 35. 'Castling' is related to which of the following sports? **1.** Chess 2. Billiards 3. Tennis 4. Table tennis
- 36. What is the cost of the 'Nand Baba Milk Mission' scheme launched by the Uttar Pradesh state government in 2023 to provide milk producers the facility of selling their milk at a reasonable price in villages through dairy cooperative societies?
  - 1. ₹ 2,000 crore 2. ₹ 1,500 crore
  - 3. ₹ 500 crore 4. ₹ 1,000 crore
- 37. In the context of vernier calliper, an internal jaw is used to measure:
  - **1.** the depth of a beaker
  - 2. the length correct up to 1 mm
  - 3. the length of a rod and diameter of a sphere
  - 4. the internal diameter of a hollow cylinder and pipes
- 38. Match the terms in column A with their respective properties in column B.

(	Column-A		Column-B			
i.	Glucose	a.	Intermediate substance in breakdown of glucose			
ii.	Yeast	b.	Glucose is converted into pyruvic			
iii.	Glycolysis	c.	Uses nutrients for fermentation process			
iv.	Pyruvic acid	d.	Best organic substrate fro respiration			

1. i-d, ii-c, iii-b, iv-a

- **2.** i-b, ii-d, iii-a, iv-c
- 3. i-a, ii-b, iii-c, iv-d

4. i-b, ii-a, iii-d, iv-c

- 39. If a bar magnet is hung from a string, in which direction does its north pole point?
  - 1. North 2. South 3. East 4. West
- 40. Match the points under Column A with those under Column B.

Column-A			Column-B	
i.	Hexapoda	a.	Daphnia	
ii.	Crustacea	b.	Mosquito	
iii.	Myriapoda	c.	Limulus	
iv.	Chelicerata	d.	Julus	
i hii a iii diwa 💦 O i dii a iii hiwa				

- **1.** i-b, ii-a, iii-d, iv-c **2.** i-d, ii-c, iii-b, iv-a 3. i-a, ii-b, iii-c, iv-d 4. i-b, ii-c, iii-a, iv-d
- 41. Fugdi dance is associated with which of the following states?
  - 1. Uttar Pradesh 2. Goa
  - 3. Kerala 4. Uttarakhand
- **42.** The concept of 'Independence of judiciary' in the Indian Constitution is taken from the Constitution of: 1. France
  - 2. Britain
  - 3. Ireland 4. The USA
- 43. Umayalpuram K Sivaraman is an eminent musician associated with which of the following musical instruments? 2. Sitar
  - 1. Dhol
  - 3. Mridangam 4. Guitar
- 44. Rottela Panduga or the Roti Festival is celebrated in which Indian state?
  - 2. Andhra Pradesh 1. Maharashtra 3. Tamil Nadu 4. Karnataka
- 45. Belur Math was founded by which of the following social reformers in British India?
  - 2. Swami Vivekanand 1. KT Telang
  - 3. VN Mandlik 4. RG Bhandarkar
- 46. Which of the following parts of the mountain will receive the most rainfall from moisture-laden winds? 1. Leeward side 2. Relief side
  - 3. Upward side 4. Windward side
- 47. Which singer from Assam was posthumously awarded the Bharat Ratna in 2019?
  - 1. Rameshwar Pathak 2. Padmanav Bordoloi
  - 3. Archana Mahanta 4. Bhupen Hazarika
- 48. Medini Rai of Chanderi, Hasan Khan of Mewat and Mahmud Lodi joined Rana Sanga with their forces to fight against which of the following Mughal rulers? 1. Aurangzeb 2. Humayun 3. Babur 4. Akbar
- **49.** Which writ is issued by a high court or supreme court when a lower court has considered a case going beyond its jurisdiction?
  - 1. Certiorari 2. Quo Warrant
  - 3. Habeas Corpus 4. Prohibition
- 50. As per the UNDP, the rank of Sri Lanka in the Human Development Index (2022) is:

1. 
$$\frac{72}{189}$$
 2.  $\frac{74}{189}$  3.  $\frac{75}{189}$  4.  $\frac{73}{189}$ 

#### **Quantitative Aptitude**

**51.** If  $8\cot\theta = 7$  then the value of  $\frac{1+\sin\theta}{\cos\theta}$  is:

1. 
$$\frac{1+\sqrt{113}}{8}$$
 2.  $\frac{7+\sqrt{113}}{8}$  3.  $\frac{1+\sqrt{113}}{7}$  4.  $\frac{8+\sqrt{113}}{7}$ 

52	. The table	e given bel	low shov	vs the dist	ribution	of emp.	loyees
	in four d	ifferent co	ompanie	es in 2022.		-	

Company	Number of zones	Average number of employees per zone	Male: Female
А	30	300	3:5
В	35	400	5:3
С	27	500	4:5
D	25	450	5:4

Find the total number of male employees working in company D in 2022.

- **53.** The side BC of  $\triangle$ ABC is produced to a point D. If AC = BC and  $\angle BAC = 70^\circ$ , then find the value of  $2.5 \angle ACD - 1.5 \angle ABC$ . 1. 235° 2. 245° 3.225° 4. 230°
- 54. The marked price of an electronic watch in a store is ₹ 15,620 and it is available at a discount of 27%. What is the price (in  $\overline{\mathbf{x}}$ , to the nearest tens) that a customer pays if he buys from the store?
  - 1. 11,400 2. 9,880 3.2,500 4. 10,800
- 55. The five-digit number 45yz0 is divisible by 40. What is the maximum possible value of (y + z)?

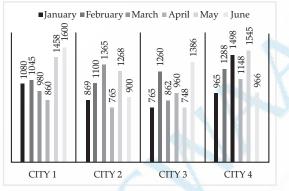
**56.** If  $x = \sqrt{6} + 2$  and  $y = \sqrt{6} - 2$ , then what is the value of

$$\left(\frac{x}{y} + \frac{y}{x}\right)^2 - 3?$$
  
1. 22 2. 35

4.97 57. Study the given bar graph and answer the question that follows.

The following bar graph shows the number of deaths that happened in cities 1, 2, 3 and 4 in the months mentioned.

3.42



The average number of deaths that occurred during April across all the cities (rounded off to the next integer) is: 1.953 2.965 3.928 4.934

- **58.** If a : b = c : d = e : f = 5 : 7, then what is the ratio (3a + 5c + 11e) : (3b + 5d + 11f)?
  - **1.** 11 : 7 2.3:7 **3.** 7 : 11 4.5:7
- 59. Varun and Raju, working together, can complete a job in 40 hours whereas Varun alone can complete the same job in 50 hours. The number of hours required by Raju to complete the job alone is: 1. 1 90

60. What principal would amount to ₹21,420 in 2 years at the rate of 9.5% p.a. simple interest?

1. ₹16,000 2. ₹12,000 3.₹11,273 4. ₹18,000

61. Raman fixes the sale price of his goods at 16% above the cost price. He sells his goods at 12% less than the fixed price. Find the profit percentage correct to two places of decimal. 1. 0.08% 2. 2.08% 3.1.07% 4. 3.01%

**62.** If 
$$2a - b = 3$$
 and  $8a^3 - b^3 = 999$ , then find the value of  $4a^2 - b^2$ .  
**1.** 61 **2.** 65 **3.** 67 **4.** 63

63. If the radius and height of a right circular cylinder are 21 cm and 5 cm, respectively, then the total surface area of the cylinder is | use  $\pi$  =

64. If 
$$p = \frac{\sin n}{1 + \cos A}$$
, then  $\frac{\sin n}{1 - \cos A}$  is equal to:

**1.** 
$$p-1$$
 **2.**  $\frac{1}{p}$  **3.**  $\frac{1}{1-p}$  **4.**  $\frac{1}{p+1}$ 

65. A thief takes off on his bike at a certain speed, after seeing a police car at a distance of 250 m. The police car starts chasing the thief and catches him. If the thief runs 1.5 km before being caught and the speed of the police car is 70 km/h, then what is the speed of thief's bike (in km/h)? 1.65 2.50 4.60 3.55

Partners	Percentage of shares
Jeevan	10%
Kiran	15%
Lokesh	8%
Rasool	22%
Meera	45%

66. Study the below data and answer the question that follows.

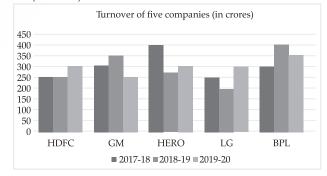
The company has issued 10 lakh shares between its five partners. If Jeevan offers to sell 20,000 of his shares to Meera, how many shares will Meera have? 1. 4,60,000 2. 4,80,000 3. 4,70,000 4. 5,10,000

4, 90

67. The sum of two consecutive even numbers is 174. Find the smaller number.

1.86

- 68. The central angle of a sector is 80° and whose length is 96 $\pi$ . What is the radius of the circle?
- 1. 196 units 2. 216 units 3. 204 units 4. 116 units **69.** Simplify the following expression.
  - $(60 + 64 \div 4 \text{ of } 4) \times \{1000 \div ((10 \text{ of } (3 + 2)) \times 2 \text{ of } 5)\} 28$  $+ (100 \times 3 \text{ of } 3).$
- **1.** 1000 **2.** 100 3.500 4.600 **70.** In  $\triangle$  ABC, DE || BC and 5 AE = 3EC. If AB = 6.4 units, then the value of DB (in units) is: 1.3.2
  - 2.5 3.4 4.2.4
- 71. In a circle with centre O, an arc ABC subtends an angle of 138° at the centre of the circle. The chord AB is produced to a point P. Then, the measure of  $\angle$ CBP is: **4.** 108° **1.** 42° **2.** 111° **3.** 69°
- 72 The given bar graph shows the turnover of five companies (in crores).



What is the difference between the average sales turnover of all the compaines put together between the years 2018-2019 and 2019-2020?

1. ₹2 crore 2. ₹5 crore 3. ₹6.5 crore 4. ₹3.5 crore

73. Suresh's expenditure and savings are in the ratio of 3 : 1. His income increases by 25%. If his savings increase by 20%, then by how much percentage does his expenditure increase?

1. 
$$26\frac{2}{3}\%$$
 2.  $27\frac{2}{3}\%$  3.  $25\frac{2}{3}\%$  4.  $28\frac{2}{3}\%$ 

74. Half litre of a solution contains 15% of alcohol. To change the alcohol concentration to 50%, find the quantity of alcohol to be mixed. 1.

**75.** In a  $\triangle ABC$ , right angled at B if tan C =  $\sqrt{3}$  then find  $\sin^2 C + \cos^2 C$ 

_	$1 + \cot^2 C$	-		
1.	$\frac{16}{3}$	2. $\frac{3}{4}$	3. $\frac{3}{16}$	4. $\frac{4}{15}$

#### **English Comprehension**

- 76. Select the INCORRECTLY spelt word. 1. Accessibility 2. Apparatus 3. Aptitude 4. Atrocios 77. Identify the error in the given sentence.
- My colleague always works latest than me. 1. My colleague 2. latest
  - 3. than me. 4. always works
- 78. Select the option that can be used as a one-word substitute for the given group of words. Loud enough to be heard.
- 2. Audacity 3. Audacious 4. Audible 1. Audit 79. Identify from the given options the word which is similar

in meaning to the following word. Munificent

1. Miserly

2. Malicious

- 3. Underappreciated 4. Magnanimous
- 80. Parts of a sentence are given below in jumbled order. Arrange the parts in the correct order to form a meaningful sentence.

P) once said

Q) a wise man

R) that action speaks

- S) louder than words
- 1. SQPR 2. QSRP 3. PQRS 4. QPRS
- 81. Select the most appropriate option to fill in the blank. Just bite the ..... and tell him the truth.

1. shot 2. gun 3	. dust 4. bulle
------------------	-----------------

- 82. Select the option that expresses the opposite meaning of the underlined word.
  - In front of the big screen, this behaviour is generally considered taboo. 2. Obedience
  - 1. Prescription
  - 3. Promotion 4. Acceptable
- 83. Select the most appropriate option that can substitute the underlined word in the given sentence. <u>Verity</u> is a good virtue for human life.

1. Truth 2. Information

- 3. Knowledge 4. Cooperation
- 84. Parts of a sentence are given below in jumbled order. Arrange the parts in the correct order to form a meaningful sentence.

Founding father / is / of / New Historicism / Greenbalt / considered / the.

- 1. Greenbelt is the founding father of New Historicism considered.
- 2. Greenbalt is considered the founding father of New Historicism.
- 3. The founding father of New Historicism is considered Greenbalt.
- 4. The founding father is considered Greenbalt of New Historicism.
- 85. Select the most appropriate verb / verb phrase to fill in the blank.
  - The team ..... the championship before their star player got injured.
- 1. has won 2. was won 3. win 4. had won 86. Select the correct ANTONYM of the underlined word to fill in the blank and complete the following sentence. He is always active in a party but ..... in the class. 1. angry 2. inert 3. careless 4. naughty
- 87. Select the most appropriate option that can rectify the incorrectly spelt word in the following sentence. In our quest for power, we often fail to acknowlege the existence of other people. 1. acknowledge 2. accknowledge
  - 4. acknowledje
- 3. acknowlede 88. Select the option that can be used as a one-word substitute for the given group of words.
  - Money collected from people for a cause.
  - 3. Collection 4. Savings **1**. Deposit 2. Fund
- 89. Select the most appropriate meaning of the underlined idiom.
  - Bincy's mother kept her cards close to her chest.
  - 1. Kept her plans and thoughts hidden
  - 2. Informed that all the cards must be kept safe
  - 3. Kept her purse and money by herself
  - 4. Decided to show more affection
- 90. Select the option that expresses the following sentence in active voice.

The issue has been successfully resolved by the customer care team.

- 1. The customer care team has successfully resolved the issue
- 2. The issue has successfully resolved the customer care team
- 3. The customer care team successfully resolves the issue.
- 4. The customer care team successfully resolved the issue.
- 91. Select the most appropriate option to fill in the blank.

I like bread made up of corn ...... **1.** failure

- 4. flower 2. floor **3.** flour
- 92. 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. He remembered her as she once was an eager, glowing girl.
  - B. He had not seen her for nearly thirteen years.
  - C. Mr. Satterthwaite went to meet her.
  - D. And now he saw a Frozen Lady.
  - 2. ABCD 3. DBAC 1. CBAD 4. DCBA
- 93. Select the option that expresses the following sentence in passive voice.
  - Gill scored 3 centuries in Tata IPL 2023.
  - 1. 3 centuries had been scored by Gill in Tata IPL 2023.
  - 2. 3 centuries were scored by Gill in Tata IPL 2023.

3. 3 centuries has been scored by Gill in Tata IPL 2023.

4. 3 centuries were being scored by Gill in Tata IPL 2023.94. Select the most appropriate ANTONYM of the given

word. Insert

1. Remove 2. Select 3. Inject 4. Inform

**95.** Select the most appropriate SYNONYM of the given word.

Carcass

**1.** Scrap **2.** Corpse **3.** Prison **4.** Gale In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Social media companies (1) \_\_\_\_\_ claim that they promote democracy and are dedicated to the empowerment of ordinary individuals. The assertion (2) \_\_\_\_\_ entirely unfounded. Recent history shows how (3) citizens

have been mobilised against totalitarian regimes on social networking sites. Starting from MeToo to Black Lives Matter, digital networks citizens have been mobilised against totalitarian regimes on social networking sites. Starting from MeToo to Black Lives Matter, digital networks (4) \_\_\_\_\_\_\_\_ indispensable in bringing together critical voices against social and political (5)

- 96. Select the most appropriate option to fill in blank no. 1.1. never2. don't3. frequently4. seldom
- 97. Select the most appropriate option to fill in blank number 2.1. cannot2. may not be3. should4. shall
- 98. Select the most appropriate option to fill in blank number 3.1. neutral2. alien3. foreign4. common
- 99. Select the most appropriate option to fill in blank number 4.1. can2. were3. that4. have been
- 100. Select the most appropriate option to fill in blank number 5.1. democracy 2. election 3. justice 4. injustice

## Answer Key

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

## **Answers with Explanations**

UVWY

#### General Intelligence and Reasoning

1. Option (4) is the correct.

ABCE

FGHJ KLMO PQRT

As per the given every five letters in the series, every forth letter is missing.

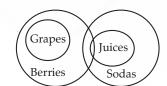
2. Option (3) is the correct.

$$F + 3 = I I + 3 = L J + 3 = M U + 3 = X S + 3 = V E + 3 = H T + 3 = W L + 3 = O R + 3 = U U + 3 = X A + 3 = D S + 3 = V$$

$$R + 3 = U$$
  $N + 3 = O$   $E + 3 = H$ 

$$E + 3 = H$$
  $D + 3 = G$   $Y + 3 = B$ 

## 3. Option (3) is the correct. It is clear from figure both the conclusions (I) and (II) follow.



4. **Option (3) is the correct.** Other than option (3), figures are in rotation.

- 5. Option (3) is the correct. ADEKNR
  - Second letter from the left end = D
  - Third letter from the right end = K

Number of letters between D and K in English alphabetical series = 6

- 6. Option (2) is the correct. It is clear that option (2) is correct when paper unfolded.
- 7. Option (2) is the correct.Total number of triangles = 10
- 8. Option (1) is the correct.

Number 3 in second cube in fixed and rotted clockwise or anticlockwise 2 times we get same position like as first cube and number apposite 5 is 2.

#### 9. Option (3) is the correct.

Disclose is the antonym word of conceal So, the antonym word of identical is distinct.

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

Since, + and x interchanged with – and  $\div$  respectively.

 $\therefore 11 \times 8 + 78 \div 6 - 37$ = 88 + 13 - 37 = 64

-00 + 13 - 37 - 04

11. Option (3) is the correct.  $3 \times 5 + 5 = 20$  $4 \times 3 + 5 = 17$ 

$$\therefore 9 \times 8 + 5 = 77$$

#### 2. Option (4) is the correct.

	$16 \times 7 = 112$
	$8 \times 12 = 96$
.: <b>.</b>	$15 \times 8 = 120$

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

$S \not \xrightarrow{P} F$	$\begin{array}{c} \overleftarrow{F} V S \\ \overleftarrow{N} \downarrow \end{array}$	$V \xrightarrow{F} N$	$\begin{bmatrix} N & C & V \\ P & \downarrow \end{bmatrix}$	C N P S
Ń←Č	Ċ←P	Ṕ←Š	S←F	F V

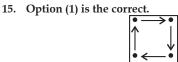
14. Option (2) is the correct.

 $B + R \times I - T \div H$  means

B mother of R wife of I brother of T father of H



Hence, I is father's brother of H.



And the encircled element rotates 45° clockwise.

16. Option (2) is the correct.  $P^{+2} \rightarrow R^{+3} \rightarrow U^{+5} \rightarrow Z$   $O^{+3} \rightarrow R^{+2} \rightarrow T^{+1} \rightarrow U$   $M^{+2} \rightarrow O^{+3} \rightarrow R^{+5} \rightarrow W$   $X^{+2} \rightarrow Z^{+3} \rightarrow C^{+5} \rightarrow H$ 

So, option (2) is different

17. Option (1) is the correct. 17

 $\therefore \frac{34}{44} = \frac{17}{22}$ (Not simplest form)

18. Option (2) is the correct.

Z is fixed and second cube turn clockwise and anticlockwise, it reaches the same position like first cube. So letter opposite G is F.

- **19.** Option (1) is the correct.  $48(+2) \rightarrow 50(-4) \rightarrow 46(+6) \rightarrow 52$   $37(+2) \rightarrow 39(-4) \rightarrow 35(+6) \rightarrow 41$ 
  - $26(+2) \rightarrow 28(-4) \rightarrow 24(+6) \rightarrow 30$
- **20.** Option (3) is the correct. 176(-9) → 167(-11) → 156(-9) → 147(-11) → 136(-9) → 127
- 21. Option (1) is the correct.  $F(-1) \rightarrow E(-1) \rightarrow D(-1) \rightarrow C(-1) \rightarrow B$   $X(-2) \rightarrow V(-2) \rightarrow T(-2) \rightarrow R(-2) \rightarrow P$  $32(+6) \rightarrow 38(+6) \rightarrow 44(+6) \rightarrow 50(+6) \rightarrow 56$

22. Option (3) is the correct. Since,  $\div$  and  $\times$  are interchanged with – and + respectively.  $\therefore$  7 × 4 – 18  $\div$  3 + 2 = 28 – 6 + 2 = 24

#### 23. Option (1) is the correct.

$$\begin{split} &Q(+5) \rightarrow V(+5) \rightarrow A(+5) \rightarrow F(+5) \rightarrow K \\ &G(-4) \rightarrow C(-4) \rightarrow Y(-4) \rightarrow U(-4) \rightarrow Q \\ &M(+3) \rightarrow P(+3) \rightarrow S(+3) \rightarrow V(+3) \rightarrow Y \\ &W(-2) \rightarrow U(-2) \rightarrow S(-2) \rightarrow Q(-2) \rightarrow O \end{split}$$

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

$$D \rightarrow (4)^2 = 16; B \rightarrow (2)^2 = 4;$$

$$T \rightarrow (20)^2 = 400; H \rightarrow (8)^2 = 64$$

#### 25. Option (4) is the correct.

Since bright and bj are common in both. So, bright is coded bj

#### **General Awareness**

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

Hashika Ramchandra won six gold medals in swimming at the 36<sup>th</sup> National Games. She won a total of seven medals, of which one was bronze. She was also crowned the best female athlete at the National Games. She is the first athlete from Karnataka to win this title.

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

The Green Revolution, initiated in the 1960s, introduced highyielding seed varieties, chemical fertilisers and enhanced irrigation techniques. Punjab saw remarkable agricultural progress, resulting in a substantial rise in wheat and rice production. This transformation not only boosted the state's economy but also made it a key contributor to India's food security. While other states also benefited, Punjab is often cited as the most dramatically affected.

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

Jawaharlal Nehru Port, located in Navi Mumbai, was established in 1989 to handle container traffic and ease congestion at the Mumbai port. It has since become one of the largest container ports in India, designed to accommodate the growing trade and shipping needs of the region, thereby supporting economic development while reducing the burden on the older Mumbai port.

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

Gulzarilal Nanda served as the acting Prime Minister of India on two occasions, following the deaths of Jawaharlal Nehru in 1964 and Lal Bahadur Shastri in 1966. His total time in office was very brief, only about 13 days each time, making him the shortest-serving Prime Minister in Indian history. The other candidates served longer terms in various capacities.

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

In the context of the Mathura school of Art, a number of sculptures of Brahmanical deities, such as Kartikeya, Vishnu, and Kubera, were carved during the Kushana period. The Kushana period (approximately 1<sup>st</sup> to 3<sup>rd</sup> centuries CE) is known for its flourishing art and culture, particularly in Mathura. During this time, the Mathura school of art produced numerous sculptures depicting various Brahmanical deities, reflecting the religious and cultural dynamics of the era. The Kushanas played a significant role in promoting and patronizing the arts, leading to the development of distinctive styles in sculpture that emphasized naturalism and intricate detailing.

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

A deficit budget arises when the government expenditures surpass its revenues, such as those from taxes and fees. This situation typically necessitates borrowing to make up the difference, signifying that the government is financing its activities through debt.

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

The Brahmaputra River is known as Tsang Po in Tibet and as Jamuna in certain regions of India. It is one of the major rivers in Asia, flowing through China, India and Bangladesh. The river is significant not only for its length and volume but also for its cultural and economic importance in the regions it traverses.

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

The Ghadar Party was established in 1913 by Indian expatriates in the United States, specifically in San Francisco. Its main objective was to achieve India's independence from British rule through revolutionary action. The party focused on mobilising Indians living abroad and supporting an armed struggle against colonial oppression in India. It became an important player in the nationalist movement, particularly among the Indian diaspora in North America.

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

The award recognises small businesses that contribute to improving access to healthy and sustainable food. While Edible Routes, Oorja Development Solutions and Taru Naturals have been acknowledged for their impactful solutions in this area, Patanjali, although a well-known brand, has not been listed among the winners of this specific prize.

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

Castling is a unique move in chess involving the king and one of the rooks. It is the only move that permits a player to move two pieces at once, enhancing the king's safety while simultaneously developing the rook.

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

The Nand Baba Milk Mission is designed to assist milk producers by enabling them to sell milk at fair prices through dairy co-operative societies in rural areas. The ₹ 1,000 crore allocation aims to strengthen the dairy sector, improve the livelihoods of milk producers and encourage milk consumption within the state.

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

The internal jaws of a vernier caliper are specifically designed to measure the dimensions of objects from the inside. This allows for accurate measurement of the internal diameter of hollow objects, such as cylinders and pipes. The external jaws, on the other hand, are used for measuring external dimensions like the length of rods.

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

Glucose - Best organic substrate for respiration

Yeast – Uses nutrients for fermentation process

Glycolysis – Glucose is converted into pyruvic acid

Pyruvic acid – Intermediate substance in breakdown of glucose

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

When a bar magnet is suspended from a string, its north pole points towards the north. This is because a bar magnet aligns with the Earth's magnetic field, which has a magnetic north pole situated near the geographic north pole.

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

Hexapoda-Mosquito

Crustacea – Daphnia

Myriapoda – Julus

#### Chelicerata - Limulus

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

The Fugdi dance is primarily associated with Goa. It is a traditional folk dance performed by women, often during festivals and celebrations. The dance involves rhythmic clapping and lively movements, reflecting the vibrant culture of Goan communities.

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

The concept of 'Independence of judiciary' in the Indian Constitution is primarily taken from the Constitution of the USA. The American Constitution establishes a separate judiciary branch, providing for its independence from the executive and legislative branches. This principle has been adopted and enshrined in the Indian Constitution, ensuring that the judiciary can operate independently and impartially.

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

Umayalpuram K. Sivaraman is a renowned Indian musician known for his mastery of the mridangam, a traditional percussion instrument used in Carnatic music. He has made significant contributions to the field, both as a performer and as a teacher.

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

RottelaPanduga, or the Roti Festival, is primarily celebrated in Andhra Pradesh and marks the end of the harvest season, usually in the month of October. The festival involves making and sharing various types of rotis, symbolising the abundance of the harvest and community spirit. The festival emphasises community bonding, gratitude for the harvest and the joy of sharing food.

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

Belur Math, situated near Kolkata, was established by Swami Vivekananda in 1897. It serves as the headquarters for the Ramakrishna Math and Ramakrishna Mission. The Math encapsulates the teachings of Sri Ramakrishna, Vivekananda's guru and advocates for spiritual and social reform. It highlights the unity of all religions and underscores the significance of humanitarian service, embodying Vivekananda's vision for a harmonious and progressive society.

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

The windward side of a mountain is the area that faces the prevailing winds. When moisture-laden winds hit this side, they are forced to rise, leading to cooling and condensation, which results in heavy rainfall. In contrast, the leeward side, or the rain shadow area, receives much less precipitation because the winds lose their moisture as they descend. Thus, the windward side typically receives the most rainfall.

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

Bhupen Hazarika was a prominent singer, composer, and filmmaker from Assam, renowned for his significant contributions to Indian music and culture. In 2019, he was posthumously awarded the Bharat Ratna, India's highest civilian honour, in recognition of his profound impact on the arts and his dedication to promoting Assamese and Indian folk music. His songs often conveyed themes of love, humanity, and social justice, making him a beloved figure in Indian music.

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

Medini Rai of Chanderi, Hasan Khan of Mewat, and Mahmud Lodi allied with Rana Sanga to oppose Babur, the founder of the Mughal Empire. This alliance was formed to resist Babur's expansion into northern India, particularly after his victory at the First Battle of Panipat in 1526. Ultimately, they confronted Babur at the Battle of Khanwa in 1527, where Babur achieved victory.

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

The writ of Prohibition is issued by a higher court or Supreme Court when a lower court has considered a case going beyond its jurisdiction.

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

According to the 2022 Human Development Report by the UNDP, Sri Lanka ranks 73<sup>rd</sup> out of 189 countries with a score of 0.782. This indicates that Sri Lanka has made significant strides in human development, but there is still room for improvement in areas such as health, education, and income levels.

#### Quantitative Aptitude

51. Option (4) is correct.

# $\cot\theta = \frac{7}{8} \Rightarrow \csc\theta = \sqrt{1 + \cot^2 \theta} = \sqrt{1 + \frac{49}{64}} = \frac{\sqrt{113}}{8}$

$$\therefore \sin\theta = \frac{1}{\csc \theta} = \frac{8}{\sqrt{113}}$$
$$\cos\theta = \sqrt{1 - \sin^2 \theta} = \sqrt{1 - \frac{64}{113}} = \sqrt{\frac{49}{113}} = \frac{7}{\sqrt{113}}$$

Now, 
$$\frac{1+\sin\theta}{\cos\theta} = \frac{1+\frac{8}{\sqrt{113}}}{\frac{7}{\sqrt{113}}} = \frac{\sqrt{113}+8}{\sqrt{113}} \times \frac{\sqrt{113}}{7}$$
$$= \frac{\sqrt{113}+8}{7}$$

52. Option (4) is correct. Total number of male employees working in company D in 2022.

$$= 25 \times 450 \times \frac{5}{9} = 6250$$

53. Option (2) is correct. Given that AC = BC

$$= 2.5 \times 140^{\circ} - 1.5 \times 70$$
$$= 350^{\circ} - 105^{\circ} = 245^{\circ}$$

54. Option (1) is correct.

Now,

 $\frac{27}{100}$ The price of customer =  $15620 \mid 1 -$  $= 15620 \times \frac{73}{100} = 11402.60$ 

= ₹ 11,400 (Nearest tens)

55. Option (1) is correct. Given that 45yz0 is divisible by 40. So, *yz* is divisible by 4 The possible value of yz is 96, 92, 88... Maximum value of (y + z) = 8 + 8 = 16

56. Option (4) is correct.

$$\left(\frac{x}{y} + \frac{y}{x}\right)^2 - 3 = \left(\frac{\sqrt{6} + 2}{\sqrt{6} - 2} + \frac{\sqrt{6} - 2}{\sqrt{6} + 2}\right)^2 - 3$$
$$= \left[\frac{(\sqrt{6} + 2)^2 + (\sqrt{6} - 2)^2}{6 - 4}\right]^2 - 3$$
$$= \left(\frac{6 + 4 + 4\sqrt{6} + 6 + 4 - 4\sqrt{6}}{2}\right)^2 - 3$$
$$= \left(\frac{20}{2}\right)^2 - 3 = 100 - 3 = 97$$

57. Option (4) is correct. The average number of deaths that ocurred during April across all the cities

$$= \frac{860 + 765 + 960 + 1148}{4} = \frac{3733}{4} = 934$$

58. Option (4) is correct.

Given that, 
$$\frac{a}{b} = \frac{c}{d} = \frac{e}{f} = \frac{5}{7}$$
  
 $\therefore a = \frac{5}{7}b; c = \frac{5}{7}d; e = \frac{5}{7}f;$ 

Now, 
$$\frac{3a+5c+11e}{3b+5d+11f} = \frac{3 \cdot \frac{5}{7}b+5 \cdot \frac{5}{7}d+11 \cdot \frac{5}{7}f}{3b+5d+11f}$$
  
=  $\frac{5}{7}\left(\frac{3b+5d+11f}{3b+5d+11f}\right) = \frac{5}{7}$ 

59. Option (3) is correct.

 $\frac{1}{40}$ Efficiency of Varun and Raju together =

Efficiency of Varun = 
$$\frac{1}{50}$$
  
 $\therefore$  Efficiency of Raju =  $\frac{1}{40} - \frac{1}{50} = \frac{5-4}{200} = \frac{1}{200}$ 

Hence, Raju alone can complete the same job in 200 days.

50. Option (4) is correct.  
Amount = P + PRT  
⇒ 21420 = P + 
$$\frac{P \times 9.5 \times 2}{100}$$
  
⇒ 21420 = P $\left(1 + \frac{19}{100}\right) = \frac{119P}{100}$   
⇒ P =  $\frac{21420 \times 100}{119} = ₹$  18000

61. Option (2) is correct. Let the cost price be ₹ 100

$$\therefore \text{ Fixed price} = 100 \left(1 + \frac{16}{100}\right) = ₹ 116$$

Selling price = 
$$116 \left( 1 - \frac{12}{100} \right)$$

$$= 116 \times \frac{88}{100} = ₹ 102.08$$

:. Profit = 102.08 - 100 = 2.08:. Profit percentage = 2.08%

62. Option (4) is correct.

 $(2a-b)^3 = 8a^3 - b^3 - 6ab(2a-b)$  $27 = 999 - 6ab(3) \Rightarrow ab = 54$  $(2a + b)^2 = (2a - b)^2 + 8ab = 9 + 8 \times 54 = 441$ (2a + b) = 21:.  $4a^2 - b^2 = (2a + b)(2a - b) = 21 \times 3 = 63$ 

63. Option (1) is correct. Total surface area =  $2\pi r (r+h)$ 

$$= 2 \times \frac{22}{7} \times 21(21+5)$$

 $= 2 \times 22 \times 3 \times 26 = 3432 \text{ cm}^2$ 

64. Option (2) is correct.

$$\frac{1}{p} = \frac{1 + \cos A}{\sin A} = \frac{(1 + \cos A)\sin A}{\sin^2 A}$$
$$= \frac{(1 + \cos A)\sin A}{1 - \cos^2 A} = \frac{(1 + \cos A)\sin A}{(1 - \cos A)(1 + \cos A)}$$
$$= \frac{\sin A}{1 - \cos A}$$

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

Let speed of thief = x km/h

Time taken by police = 
$$\frac{1.5 + 0.250}{70} = \frac{1.75}{70}h$$

Time taken by thief  $=\frac{1.5}{r}h$ 

$$\frac{1.75}{70} = \frac{1.5}{x} \Rightarrow x = \frac{1.5 \times 70}{1.75} = 60$$

Hence, speed of thief = 60 km/h.

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

*:*..

Total shares of Meera =  $10,00,000 \times \frac{45}{100} + 20,000$ 

= 4,50,000 + 20,000 = 4,70,000

67. Option (1) is correct. Let two consecutive even numbers be x and x + 2 $\therefore x + x + 2 = 174 \Rightarrow x = 86$ 

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

We know that,  $\theta = \frac{l}{r}$ 

$$80 \times \frac{\pi}{180} = \frac{96\pi}{r}$$

$$r = 96\pi \times \frac{180}{80\pi} = 216$$
 units.

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

 $\Rightarrow$ 

 $(60 + 64 \div 4 \text{ of } 4) \times \{1000 \div 10 \text{ of } (3 + 2) \times 2 \text{ of } 5)\}$  $-28 + (100 \times 3 \text{ of } 3)$  $= (60 + 4) \times \{1000 \div 500\} - 28 + 900$  $= 64 \times 2 - 28 + 900 = 128 - 28 + 900 = 1000$ 

70. Option (3) is correct. Given that, 5AE = 3EC

$$\Rightarrow \frac{AE}{EC} = \frac{3}{5}$$

$$\Rightarrow DE ||BC, by BPT$$

$$\frac{AD}{DB} = \frac{AE}{EC} = \frac{3}{5}$$

$$\Rightarrow \frac{AD}{DB} + 1 = \frac{3}{5} + 1$$

$$\Rightarrow \frac{AD+DB}{DB} = \frac{3+5}{5}$$

$$\Rightarrow \frac{AB}{DB} = \frac{8}{5}$$

$$\Rightarrow \frac{AB}{DB} = \frac{8}{5}$$

$$\Rightarrow DB = 6.4 \times \frac{5}{8} = 4 \text{ units.}$$

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

We know that,  
We know that,  

$$\begin{array}{c}
0\\
0\\
138^{\circ}\\B\\
P\\
\\
\angle AQC = \frac{1}{2} \angle AOC\\
= \frac{1}{2} \angle AOC\\
= \frac{1}{2} \times 138^{\circ} = 69^{\circ}\\
\\
\angle AQC + \angle ABC = 180^{\circ}\\
\\
\angle ABC + \angle CBP = 180^{\circ}\\
\\
\therefore \angle AQC + \angle ABC = \angle ABC + \angle CBP\\
\Rightarrow \angle AQC + \angle ABC = \angle CBP = 69^{\circ}\\
\end{array}$$
72. Option (2) is correct.  
The average turnover of all the comp

The panies in the year 2018-2019

$$\frac{250 + 350 + 275 + 200 + 400}{5}$$

:. /

 $\Rightarrow$ 

=

$$=\frac{1475}{5}=295$$

The average turnover of all the companies in the year 2019-2020

$$= \frac{300 + 250 + 300 + 300 + 350}{5} = \frac{1500}{5} = 300$$

Difference = 300 - 295 = 5

So, required difference 5 crore

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

Let Suresh expenditure and savings are 3x and xrespectively.

New income = 
$$(3x + x)\left(1 + \frac{25}{100}\right)$$
  
=  $4x \times \frac{5}{4} = 5x$   
New saving =  $x\left(1 + \frac{20}{100}\right) = \frac{6x}{5}$   
New expenditure =  $5x - \frac{6x}{5} = \frac{19x}{5}$   
Increase in expenditure =  $\frac{19x}{5} - 3x = \frac{4x}{5}$   
Increase in percentage =  $\frac{\frac{4x}{5} \times 100}{3x} = \frac{80}{3}\%$ 

$$= 26\frac{2}{3}\%$$

74. Option (2) is correct. Let *x* ml of alcohol to be mixed.  $\therefore$  According to the question

$$500 \times \frac{15}{100} + x = (500 + x) \times \frac{50}{100}$$
  

$$75 + x = 250 + \frac{1}{2}x$$
  

$$\Rightarrow \quad x - \frac{1}{2}x = 250 - 75$$
  

$$\Rightarrow \quad \frac{1}{2}x = 175 \Rightarrow x = 175 \times 2 = 350 \text{ ml.}$$

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

$$\tan C = \sqrt{3} = \tan 60^{\circ}$$
$$C = 60^{\circ}$$

Now, 
$$\frac{\sin^2 C + \cos^2 C}{1 + \cot^2 C} = \frac{\sin^2 60^\circ + \cos^2 60^\circ}{1 + \cot^2 60^\circ}$$
$$= \frac{\frac{3}{4} + \frac{1}{4}}{1 + \frac{1}{3}} = \frac{1}{\frac{4}{3}} = \frac{3}{4}$$

#### **English Comprehension**

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

The incorrectly spelt word is 'Atrocios'. It must be 'atrocious', meaning ' horrifyingly wicked', that is to say, 'brutal'. The other words: Accessibility, Apparatus, and Aptitude are spelt correctly.

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

In the sentence "My colleague always works latest than me". the word 'latest' will be replaced by 'later'. This is because the sentence uses the conjunction 'than' to compare two people , therefore, the most appropriate form is comparative degree of the adverb 'late'. The term "Latest" refers to the superlative form (the most recent or last in time), but the sentence is comparing two actions (the colleague's work time and the speaker's work time).

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

'Audit' is conduct an official financial inspection of (a company or its accounts). 'Audacity' means 'a willingness to take bold risks'. While 'audacious' is 'showing a willingness to take surprisingly bold risks.' "Audible" refers to something that is loud enough to be heard. It is derived from the Latin word audibilis, meaning "that can be heard.

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

The word 'Munificent' means 'characterised by or displaying great generosity.' 'Miserly' denotes the opposite - being unwilling or showing unwillingness to share with others. 'Malicious' is characterised by malice; intending or intended to do harm. 'Underappreciated' means not valued or appreciated highly enough. 'Magnanimous' means generous or forgiving, especially towards a rival or less powerful person.

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

The sentence begins with "Q) a wise man" as it introduces the subject, followed by "P) once said," which provides the context that this is a quote or a saying. Then comes "R) that action speaks," which starts the actual statement being quoted, and finally "S) louder than words," completes the meaning. Thus, the correctly arranged sentence is: "A wise man once said that action speaks louder than words." Thus, the logical sequence is QPRS.

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

The correct sentence is: Just bite the bullet and tell him the truth. The proverb 'bite the bullet' is an idiomatic expression that means to force oneself to do something unpleasant or difficult, or to be brave in a difficult situation. The expression originated from the practice of soldiers biting on a bullet to endure pain during medical procedures before the availability of anesthesia. In the context of the sentence, it suggests that the person should courageously tell the truth, even if it is uncomfortable. The other options—"shot," "gun," and "dust"—do not fit the idiomatic meaning and would not make sense in this phrase.

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

In the sentence, 'In front of the big screen, this behaviour is generally considered taboo', 'taboo' means 'an activity or behaviour that is considered completely unacceptable or forbidden.' Prescription means 'an order written by a doctor for someone to get a drug that is not available without this permission'. 'Obedience' is the act or practice of obeying; dutiful or submissive compliance.

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

The underlined word 'Verity' connotes the quality or state of being true or real. A good virtue of human life is definitely 'truth/ verity.' "Truth" aligns with the context of the sentence, where it refers to an important virtue in human life. The other options—"Information," "Knowledge," and "Cooperation" do not convey the same meaning. While they are related to understanding or interaction, they are not synonyms for "verity."

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

In the sentence 'Founding father / is / of / New Historicism / Greenbalt / considered / the', the words are arranged in a non uniform way. The correct sentence is: Greenbalt is considered the founding father of New Historicism. The sentence must start with the subject followed by the verb (helping verb +action word) and then the object. The other options either disrupt the logical flow or introduce awkward phrasing.

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

The correct sentence is: The team had won the championship before their star player got injured. The sentence demands a correct tense usage. Since the action states a past event (before their star player got injured), it is understood that the other blank requires tense in its past form. The rule states that past perfect tense is used when an action was incomplete and not done at a specific time in the past when a simple past action took place. The other options are incorrect: "has won" is in the present perfect tense, "was won" is passive and awkward here, and "win" is in the present tense.

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

The correct sentence is: He is always active in a party but inert in the class. The blank requires an opposite of the word 'active', which is evident in the word 'inert', meaning '

lacking the ability or strength to move.' Therefore, the correct opposite is 'inert'. The other options—"angry," "careless," and "naughty"—do not directly relate to being the opposite of active.

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

The correct sentence is: In our quest for power, we often fail to the existence of other people. Here, the word 'acknowledge' has been misspelt; the correct spelling is 'acknowledge', implying ' to accept, admit, or recognise something, or the truth or existence of something'. Option 1 provides the correct spelling, while the other options—"accknowledge," "acknowlede," and "acknowledje"—are incorrect and do not exist in standard English.

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

A "fund" refers to money collected or set aside for a specific purpose, often for a cause, project, or charity. This makes it the appropriate one-word substitute for "money collected from people for a cause." The other options do not fit this context as well: "Deposit" refers to placing money in a bank or other security, "Collection" is a broader term that can refer to gathering items or money but doesn't specifically imply it is for a cause and "Savings" refers to money kept for personal future use.

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

In the sentence, 'Bincy's mother kept her cards close to her chest', the idiom is 'kept her cards close to her chest' which means to keep plans and thoughts hidden. The other options—"Informed that all the cards must be kept safe," "Kept her purse and money by herself," and "Decided to show more affection"—do not align with the idiomatic meaning.

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

In the sentence, 'The issue has been successfully resolved by the customer care team', the sentence is in passive voice. To change passive voice to active, we need to interchange the object of the passive verb (the customer care team) to become the subject of the active verb, and the passive sentence sentence's subject (the issue) becomes the object of the active sentence. Therefore, the correct sentence is: The customer care team has successfully resolved the issue. The verb changes from 'has been resolved' (V3) to has resolved.

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

The correct sentence is: I like bread made up of corn flour. Corn flour is a type of flour milled from dried whole corn kernels. The other options do not fit: "failure" refers to a lack of success, "floor" refers to a surface within a building, and "flower" is a part of a plant that blooms.

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

The correct sentence is: Mr. Satterthwaite went to meet her (C). This sentence introduces the subject- Mr. Satterthwaite. He had not seen her for nearly thirteen years (B). B provides the reason behind going to meet her. He remembered her as she once was – an eager, glowing girl (A). A is a memory that he had of her from the past. And now he saw – a Frozen Lady (D). While D states the contrast in the present.

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

In the sentence, 'Gill scored 3 centuries in Tata IPL 2023', the sentence is in active voice. To change active voice to passive, we need to interchange the object of the active verb (Tata IPL 2023) to the subject of the passive verb and the active sentence's subject(3 centuries) becomes the object of the passive sentence.

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

The word 'insert' means 'to put something inside something else', or to 'inject'. The other options do not serve as antonyms: "Select" means to choose something, "Inject" refers to putting something in, typically a liquid, and "Inform" means to tell or notify someone. Thus, remove is the most appropriate antonym for "insert." Thus, the antonym is 'remove'.

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

'Carcass' means the dead body of an animal. This also refers to a 'corpse'. 'Scrap' implies broken, discarded, or rejected items or parts for use as raw material or in reprocessing. 'Gale' means a very strong wind.

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

The correct sentence is: Social media companies frequently claim that they promote democracy and are dedicated to the empowerment of ordinary individuals. The blank requires an adverb that modify the verb 'claim'. A thorough reading of the paragraph clarifies that social media companies do claim about their commitment to the empowerment of ordinary individual. So, 'frequently' best describes this approach. The other options—"never," "don't," and "seldom"—imply that these claims are rarely or never made, which does not align with the positive assertion being discussed.

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

The correct sentence is: The assertion may not be entirely unfounded. The claim about the commitment of social media companies to the empowerment of ordinary individual is not completely baseless. 'May not' refers to a condition being discussed , which will not occur or is unlikely to happen. The other options—"cannot" is too absolute, "should" implies an expectation, and "shall" refers to future intent—do not fit the nuance of the sentence.

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

The correct sentence is: Recent history shows how common citizens have been mobilised against totalitarian regimes on social networking sites. Here, 'totalitarian regimes' involves authoritarianism, which is opposed to common citizens. The other options—"neutral" suggests a lack of involvement, "alien" and "foreign" imply outsiders, which does not align with the intended meaning.

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

The correct sentence is: Starting from MeToo to Black Lives Matter, digital networks have been indispensable in bringing together critical voices...The sentence states a present truth and this tense is used to describe actions or situations that are connected to the present. The other options—"can" is too speculative, "were" is in the past tense and implies this no longer happens and "that" is a connector word and does not fit the grammatical structure here.

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

The correct sentence is: Starting from MeToo to Black Lives Matter, digital networks have been indispensable in bringing together critical voices against social and political injustice. Social movements bring about change by raising voices against the inequality and injustice. So, 'social and political injustice' is the most suitable phrase. The other options— "democracy," "election," and "justice"—do not fit the context as well, since the passage is focused on challenging social and political wrongs.