

## SSC CHSL Free Mock

**Q1. Identify the segment in the sentence which contains a grammatical error. If there is no error, then select the option "No error."**

Despite her best efforts, Emily couldn't quell the assuaged feelings of anxiety that plagued her before the performance.

- (a) couldn't quell the assuaged feelings of
- (b) Despite her best efforts, Emily
- (c) No error
- (d) anxiety that plagued her before the performance.

**Q2. Select the correct indirect form of the given sentence.**

"Please close the door," John said to Mark.

- (a) John said to Mark to please close the door.
- (b) John requested Mark to close the door.
- (c) John told Mark that please close the door.
- (d) John ordered Mark to please close the door.

**Q3. Fill in the blank with an appropriate option.**

The \_\_\_\_\_ of the storm caused widespread destruction in the coastal region.

- (a) tranquility
- (b) aftermath
- (c) premonition
- (d) apathy

**Q4. Select the word that means the same as "Eminent".**

- (a) Notorious
- (b) Distinguished
- (c) Insignificant
- (d) Tedious

**Q5. Choose the word that means the same as the given word.**

Impecunious

- (a) Affluent
- (b) Destitute
- (c) Lucrative
- (d) Opulent

**Q6. Choose the incorrectly spelled word**

- (a) Exhilarate
- (b) Acquaintance
- (c) Perseverance
- (d) Ambiguous

**Q7. Select the most appropriate one-word substitution for the given group of words.**

A person who speaks or writes in defense or support of someone or something.

- (a) Philanthropist
- (b) Apologist
- (c) Connoisseur
- (d) Renegade

**Q8. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.**

She must attend the meeting, no matter how important is her work.

- (a) She must attend the meeting,
- (b) no matter how
- (c) important is her work.
- (d) No error

**Q9. Select the most appropriate 'one word' for the expression given below.**

Fear of spiders.

- (a) Arachnophobia
- (b) Hydrophobia
- (c) Nyctophobia
- (d) Ophidiophobia

**Q10. Choose the sentence with no spelling error.**

- (a) She was exhausted after a long day at work.
- (b) She was exhaussted after a long day at work.
- (c) She was exhausted after a long day at work.
- (d) She was exauhsted after a long day at work.

**Q11. Select the most appropriate meaning of the given idiom.**

To cut corners.

- (a) To take shortcuts or find easier ways to do something.
- (b) To be indecisive and unable to make a choice.
- (c) To exaggerate or overstate something.
- (d) To be extremely cautious and avoid taking risks.

**Q12. Choose the word that can substitute the given group of words.**

One who hates or distrusts humankind.

- (a) Misanthrope
- (b) Misogynist
- (c) Miscreant
- (d) Misnomer

**Q13. Choose the word that means the same as the given word.**

Ardent

- (a) Indifferent
- (b) Enthusiastic
- (c) Mediocre
- (d) Repulsive

**Q14. Rearrange the parts of the sentence in correct order.**

P. A variety of health benefits, including improved cardiovascular function and reduced stress levels.

Q. It has been scientifically proven that spending time in nature provides.

R. Such as parks, forests, or beaches, can have positive effects on our well-being.

S. Visiting natural environments.

- (a) PSQR
- (b) RQPS
- (c) SRQP
- (d) QPRS

**Q15. Select the word that is opposite in meaning (ANTONYM) to the word given below.**

Emerge

- (a) Subside
- (b) Disappear
- (c) Vanquish
- (d) Immerse

**Q16. Improve the highlighted part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.**

He is very **skilled on playing** the guitar.

- (a) skilled in playing
- (b) skilled at playing
- (c) skilled with playing
- (d) No improvement

**Q17. Improve the highlighted part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.**

Despite the heavy rain and strong winds, the football match continued as scheduled without either of the teams **giving up or disheartened**.

- (a) giving up or being disheartened.
- (b) No improvement
- (c) gave up or be disheartening.
- (d) given up or dishearten.

**Q18. Choose the option that is the correct passive form of the sentence.**

The committee awarded him the prestigious prize.

- (a) He was awarded the prestigious prize by the committee.
- (b) He had been awarded the prestigious prize by the committee.
- (c) The prestigious prize was awarded to him by the committee.
- (d) The prestigious prize has been awarded to him by the committee.

**Q19. Rearrange the parts of the sentence in correct order.**

P. it is believed that the early Polynesians

Q. explore across the vast ocean,

R. using only the stars, winds, and natural landmarks

S. were able to navigate and

- (a) RQSP
- (b) SQRP
- (c) PSRQ
- (d) PSQR

**Q20. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom or Phrase.**

Now and again.

- (a) Occasionally
- (b) Always
- (c) To be continued
- (d) At present time or future

**Directions (21-25): In the following passage some of the words have been deleted. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.**

TCS is a renowned IT company that offers a wide range of services in the technology sector. They (1) \_\_\_\_\_ innovative solutions to their clients and have a strong (2) \_\_\_\_\_ on customer satisfaction. TCS has successfully (3) \_\_\_\_\_ its presence globally and has been recognized for its (4) \_\_\_\_\_ contributions to the IT industry. To stay competitive, TCS continuously (5) \_\_\_\_\_ the skills of its employees through training and development programs.

**Q21. Select the most appropriate option to fill in blank number (1).**

- (a) deliver
- (b) develop
- (c) integrate
- (d) manage

**Q22. Select the most appropriate option to fill in blank number (2).**

- (a) value
- (b) emphasis
- (c) belief
- (d) reliance

**Q23. Select the most appropriate option to fill in blank number (3).**

- (a) expanded
- (b) maintained
- (c) transformed
- (d) diminished

**Q24. Select the most appropriate option to fill in blank number (4).**

- (a) substantial
- (b) negligible
- (c) incidental
- (d) marginal

**Q25.** Select the most appropriate option to fill in blank number (5).

- (a) enhance
- (b) eradicate
- (c) stagnate
- (d) overlook

**Q26.** In a certain code language, 'ABOVE' is written as 'CESAK' and 'LONG' is written as 'NRRL'. How will 'LIST' be written in that language?

- (a) NHJY
- (b) NJHY
- (c) LMHY
- (d) NLWY

**Q27.** Select the set in which the numbers are related in the same way as are the numbers of the following set: (2, 4, 8)

- (a) (3, 9, 27)
- (b) (5, 10, 20)
- (c) (6, 12, 18)
- (d) (7, 14, 21)

**Q28.** 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 politicians are liars.
- Some liars are wealthy.
- No wealthy is honest.

**Conclusions:**

- I. All politicians are wealthy.
- II. Some wealthy are not politicians.
- III. Some liars are not honest.
- (a) None of the conclusions follows.
- (b) Only I follow.
- (c) Only III follows.
- (d) Only II and III follows.

**Q29.** In a certain code language, 'HEART' is written as 'PJBJN' and 'EAT' is written as 'JBN'. How will 'PLAY' be written in that language?

- (a) FXBX
- (b) FYBH
- (c) GHBJ
- (d) WSDF

**Q30.** Which two signs and two numbers should be interchanged in the following equation to make it correct?

$$3-8+2\times 49\div 7=9$$

- (a)  $\times$  and  $\div$ , 7 and 8
- (b) + and -, 2 and 7
- (c) + and  $\times$ , 3 and 8
- (d)  $\div$  and -, 3 and 8

**Q31.** What should come in place of the question mark (?) to complete the following letter cluster series? TV, WZ, ZD, CH, ?

- (a) JP
- (b) FL
- (c) HJ
- (d) KR

**Q32.** What is the correct sequence of mathematical signs to replace the "?" signs in the following equation to make it balanced?

$$10 ? 2 ? 5 ? 4 ? 3 = 26$$

- (a) +,  $\times$ ,  $\div$ , -
- (b)  $\div$ , +, -,  $\times$
- (c)  $\times$ , -,  $\div$ , +
- (d)  $\div$ ,  $\times$ , +, -

**Q33.** A person walks 10 meters towards the east, takes a right turn and walks 15 meters, takes another right turn and walks 20 meters, and then takes a left turn and walks 5 meters. How far away the person form the starting point ?

- (a)  $10\sqrt{5}$  m
- (b)  $20\sqrt{5}$  m
- (c)  $10\sqrt{3}$  m
- (d)  $20\sqrt{3}$  m

**Q34.** If 'X' is the son of 'Y', 'Y' is the sister of 'Z', and 'Z' is the mother of 'W', then how is 'W' related to 'X'?

- (a) Brother
- (b) Cousin
- (c) Son
- (d) Nephew

**Q35.** P, Q, R, S, and T are five members of a family. Q is the son of R, who is the wife of S. P is the father of S, and T is the brother of S. What is the relationship between P and Q?

- (a) Father and son
- (b) Uncle and nephew
- (c) Grandfather and grandson
- (d) Cannot be determined

**Q36.** Two 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.

**Statement 1:** All computers are processors.

**Statement 2:** Some processors are expensive.

**Conclusion:**

- (I) All expensive devices are computers.
- (II) Some computers are not expensive.
- (III) All processors are computers.
- (IV) Some processors are not in computers.
- (a) Only II follows.
- (b) None of the above
- (c) I, IV and III follow.
- (d) II, IV and I follow.

**Q37.** Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster. MAKING : PXNFQD :: PLAYED : SIDVHA :: PERMAN : ?  
 (a) RTFHGH  
 (b) SHYPXQ  
 (c) PXNVHA  
 (d) SBUJDK

**Q38.** Four letter-clusters have been given out of which three are alike in some manner and one is different. Select the one that is different.  
 (a) AZX  
 (b) EVT  
 (c) FUH  
 (d) IRP

**Q39.** Select the odd group of numbers. (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)  
 (a) (600 – 75 – 15)  
 (b) (640 – 80 – 14)  
 (c) (480 – 60 – 12)  
 (d) (700 – 100 – 20)

**Q40.** Select the set in which the numbers are related in the same way as are the numbers of the given set. (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.)  
 (6, 56, 672)  
 (9, 27, 486)  
 (a) (6,15,165)  
 (b) (8,15,240)  
 (c) (5,56,255)  
 (d) (8,45,225)

**Q41.** What will come next in the following series?  
 11, 17, 23, 31, \_\_\_\_  
 (a) 41  
 (b) 43  
 (c) 42  
 (d) 53

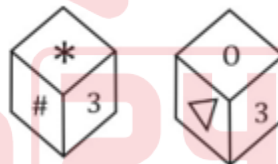
**Q42.** What will come next in the following series?  
 18, 27, 81, 364.5, \_\_\_\_  
 (a) 729  
 (b) 2187  
 (c) 856.3  
 (d) 1457

**Q43.** Complete the following series:  
 8,19,33,52,78,113,\_\_\_\_  
 (a) 153  
 (b) 147  
 (c) 145  
 (d) 159

**Q44.** Arrange the following words in alphabetical order:  
 1. Insect  
 2. Insert  
 3. Inside  
 4. Insane  
 5. Induct  
 (a) 5-4-1-2-3  
 (b) 5-4-2-3-1  
 (c) 5-1-2-4-3  
 (d) 1-2-3-4-5

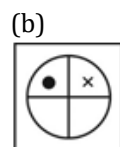
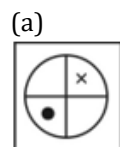
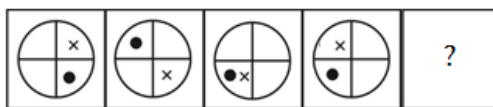
**Q45.** Select the option that represents the letters that, when placed from left to right in the following blanks, will complete the letter-series.  
 mn\_pmo\_\_m\_opmo\_pm\_\_p  
 (a) opnmmp  
 (b) mnonopo  
 (c) onpnnno  
 (d) pomnopm

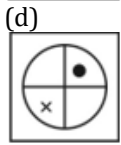
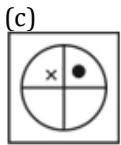
**Q46.** Two positions of the same dice are shown. Which number will be at the top if 3 is at the bottom?



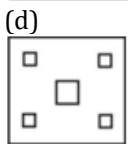
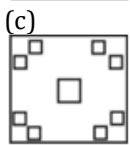
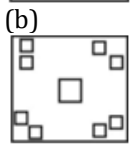
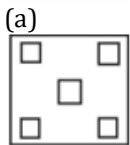
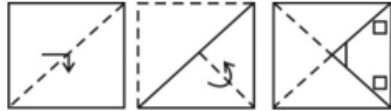
(a) 3  
 (b) 0  
 (c) Δ  
 (d) none of these.

**Q47.** Select the figure that will come next in the following series?

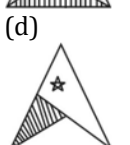
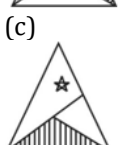
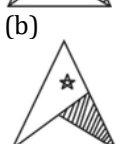
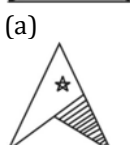
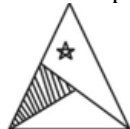




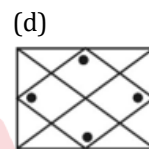
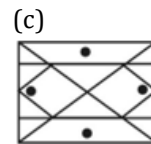
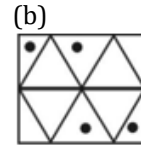
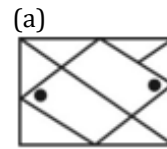
**Q48.** A paper is folded and cut as shown below. How will it appear when unfolded?



**Q49.** Select the correct mirror image of the figure when the mirror is placed to the right of the figure.



**Q50.** Select the option in which the given figure is embedded



**Q51.**

If  $\operatorname{cosec} 3\theta = \frac{1}{\cos(\theta - 36^\circ)}$  where  $3\theta$  is an acute angle, find the value of  $\theta$ .

- (a)  $28.5^\circ$
- (b)  $31.5^\circ$
- (c)  $30^\circ$
- (d)  $25^\circ$

**Q52.** Rs.12,800 is invested at a certain rate of simple interest. If the amount of interest earned in the first two years is Rs. 3200 and the amount of interest earned in three years is Rs. 4800, find the rate of interest per annum.

- (a) 13.5%
- (b) 16%
- (c) 12.5%
- (d) 14%

**Q53.** Simplify  $(2a + 3b - 4c)^2 - (2a - 3b - 4c)^2$ .

- (a)  $6b(a+2c)$
- (b)  $12b(a-2c)$
- (c)  $12b(a+2c)$
- (d)  $24b(a-2c)$

**Q54.** If  $\cos\theta = \frac{8}{17}$ , find the value of  $\sec 2\theta$ .

- (a)  $\frac{225}{289}$
- (b)  $-\frac{225}{289}$
- (c)  $-\frac{289}{161}$
- (d)  $\frac{225}{161}$

**Q55.** A manufacturer sells a product for Rs. 750 and earns a profit of 25%. If the manufacturer wants to increase the selling price to Rs. 900, what will be the new profit percentage?

- (a) 50%
- (b) 45%
- (c) 60%
- (d) 40%

**Q56.**

A cylinder has a curved surface area of  $100\pi \text{ cm}^2$  and a

- (a) 785
- (b) 790
- (c) 782
- (d) 770

**Q57.**

A rectangular box has dimensions 12 cm x 8 cm x 6 cm placed inside the box (in  $\text{cm}^3$ )? (Round off to one decimal place)

- (a) 112.5
- (b) 113.1
- (c) 128.5
- (d) 115.6

**Q58.** In triangle PQR, PS is the angle bisector of angle P. If PQ = 12 cm and PR = 9 cm and SR = 3 cm, then the length of side QR will be:

- (a) 7.5 cm
- (b) 8 cm
- (c) 6.5 cm
- (d) 7 cm

**Q59.** A can complete a work in 20 days and B can complete the same work in 25 days. If they start working together and after some days, A leaves the work, and then B completes the remaining work in 16 more days, then in how many days did A work before leaving?

- (a) 3
- (b) 4
- (c) 6
- (d) 7

**Q60.**

If  $x + \frac{1}{x} = 5$  and  $y + \frac{1}{y} = 13$ , what is the value of  $(x^2 + \frac{1}{x^2})(y^2 + \frac{1}{y^2})$ ?

- (a) 3841
- (b) 3569
- (c) 2588
- (d) 5898

**Q61.** 30% of 90 is what percentage of 25% of 200?

- (a) 56%
- (b) 52%
- (c) 54%
- (d) 55%

**Q62.** A store is offering a 20% discount on all products for a limited time. Additionally, there is a special offer of buy two and get one free. If the original price of a t-shirt is Rs. 800, and Sarah buys four t-shirts, how much will she have to pay after availing the discounts?

- (a) Rs. 2560
- (b) Rs. 1920
- (c) Rs. 2400
- (d) Rs.3200

**Q63.** A train is traveling at a speed of 100 km/hour. Another train, traveling in the same direction, passes it with a speed of 140 km/hour. If the length of the second train is 150 meters and both trains take 25 seconds to completely cross each other, what is the length of the first train in meters (approx.)?

- (a) 128
- (b) 132
- (c) 125
- (d) 135

**Q64.** What is the largest number that will divide 980, 1015, and 1125 and leave the same remainder in each case?

- (a) 6
- (b) 4
- (c) 15
- (d) 5

**Q65.** If the cost of painting a wall is directly proportional to the area of the wall to be painted and inversely proportional to the number of workers assigned to the job, and it costs Rs. 2400 to paint a wall with an area of 60 square meters using 4 workers, how much would it cost to paint a wall with an area of 120 square meters using 6 workers?

- (a) Rs. 4800
- (b) Rs. 3200
- (c) Rs. 2800
- (d) Rs. 3000

**Q66.** A man can row a boat at a speed of 12 km/h in still water. He wants to cross a canal that flows at a speed of 4 km/h. If the length of the canal is 2 km, how long (in minutes) will it take him to cross the canal in the direction of water flow.

- (a) 7.5
- (b) 9
- (c) 8.5
- (d) 6

**Q67.** What is the smallest 4-digit number that is divisible by both 12 and 15?

- (a) 1080
- (b) 1000
- (c) 1020
- (d) 1030



**Q68.** AD is the median of triangle ABC. P is the centroid of triangle ABC. If AD = 27 cm, then what is the length of PD?

- (a) 9 cm
- (b) 18 cm
- (c) 13.5 cm
- (d) 54 cm

**Q69.** If  $x + 1/x = 1$  then the value of  $x^{18} + x^{15} + x^{12} + x^9 + x^6 + x^3 + 3$  is

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

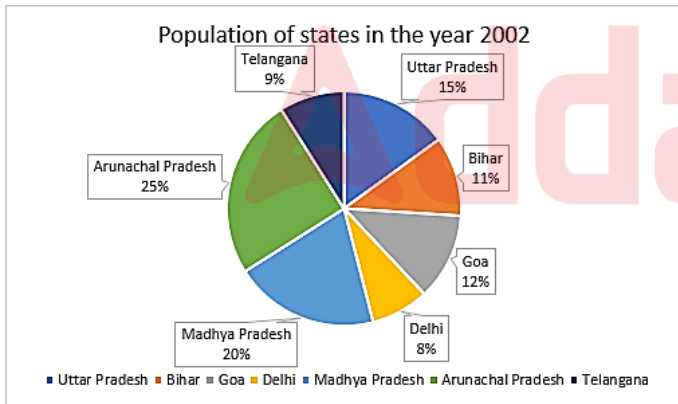
**Q70.** Simplify the expression:  $\frac{(3^4 - 2^4)}{[(3^2 + 2^2) \times 4^{0.5}]}$

- (a) 4
- (b) 6.5
- (c) 3
- (d) 2.5

**Q71.** In a certain lottery, there are 50 tickets sold and 5 prizes to be awarded. If you buy 5 tickets, what is the probability of winning at least one prize?

- (a) 40951/100000
- (b) 59049/100000
- (c) 562/100000
- (d) 85216/100000

**Q72.** Study the given graph and table and answer the following question:-



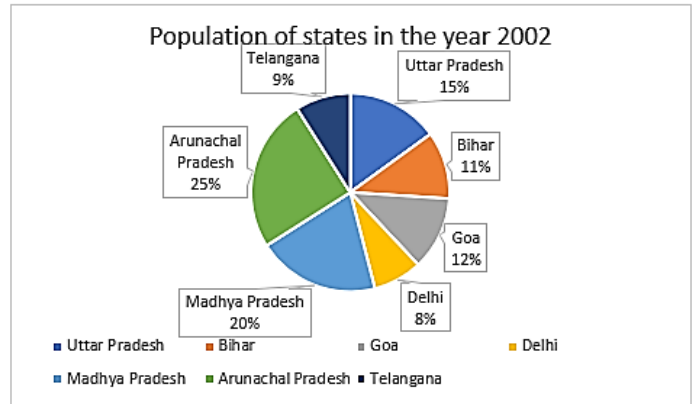
Total Population of all states- 65,52,000

States	Sex and literacy wise Population Ratio			
	Sex		Literacy	
	M	F	Literate	Illiterate
Arunachal Pradesh	5	3	2	7
Madhya Pradesh	3	1	1	4
Delhi	2	3	2	1
Goa	3	5	3	2
Bihar	3	4	4	1
Uttar Pradesh	3	2	7	2
Telangana	3	4	9	4

What is the population of males in Telangana?

- (a) 3,68,000
- (b) 2,52,720
- (c) 4,52,698
- (d) 3,96,520

**Q73.** Study the given graph and table and answer the following question:-



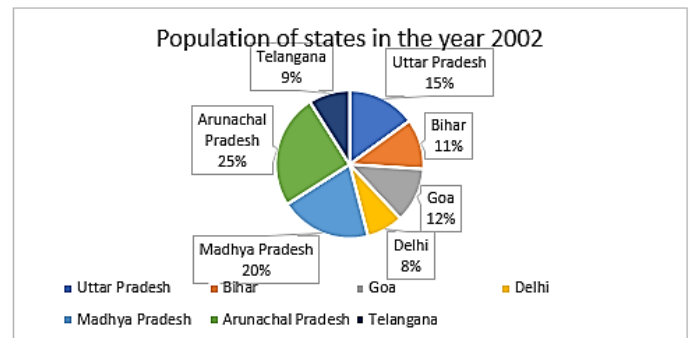
Total Population of all states- 65,52,000

States	Sex and literacy wise Population Ratio			
	Sex		Literacy	
	M	F	Literate	Illiterate
Arunachal Pradesh	5	3	2	7
Madhya Pradesh	3	1	1	4
Delhi	2	3	2	1
Goa	3	5	3	2
Bihar	3	4	4	1
Uttar Pradesh	3	2	7	2
Telangana	3	4	9	4

How many literate people are there in Madhya Pradesh and Arunachal Pradesh?

- (a) 6,52,140
- (b) 9,56,210
- (c) 5,54,258
- (d) 6,26,080

**Q74.** Study the given graph and table and answer the following question:-



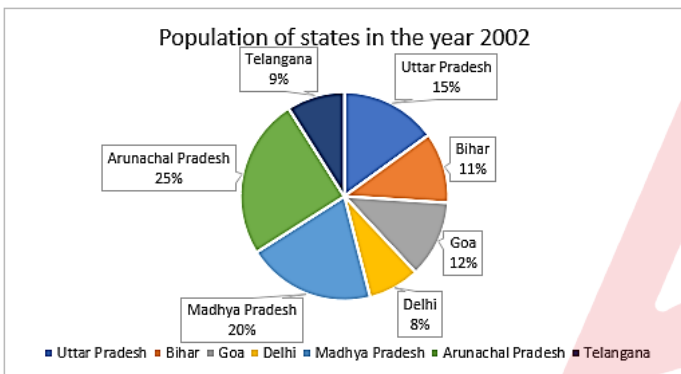
Total Population of all states- 65,52,000

States	Sex and literacy wise Population Ratio			
	Sex		Literacy	
	M	F	Literate	Illiterate
Arunachal Pradesh	5	3	2	7
Madhya Pradesh	3	1	1	4
Delhi	2	3	2	1
Goa	3	5	3	2
Bihar	3	4	4	1
Uttar Pradesh	3	2	7	2
Telangana	3	4	9	4

The ratio of females of Bihar with Males of Uttar Pradesh is:

- (a) 44:63  
 (b) 22:45  
 (c) 18:53  
 (d) 21:41

**Q75.** Study the given graph and table and answer the following question:-



Total Population of all states- 65,52,000

States	Sex and literacy wise Population Ratio			
	Sex		Literacy	
	M	F	Literate	Illiterate
Arunachal Pradesh	5	3	2	7
Madhya Pradesh	3	1	1	4
Delhi	2	3	2	1
Goa	3	5	3	2
Bihar	3	4	4	1
Uttar Pradesh	3	2	7	2
Telangana	3	4	9	4

Number of females in Arunachal Pradesh is what percentage of males in Arunachal Pradesh?

- (a) 80%  
 (b) 50%  
 (c) 40%  
 (d) 60%

**Q76.** Who led the English Army in the Battle of Buxar?

- (a) Lord Clive  
 (b) Vensittart  
 (c) Hector Munro  
 (d) Eyre Coot

**Q77.** Which of the following was published by Gandhiji during his stay in South Africa?

- (a) Young India  
 (b) Indian Opinion  
 (c) Nav Jivan  
 (d) None of these

**Q78.** Pipli Ghat Pass is located in which mountain area?

- (a) Western Ghats  
 (b) Eastern Ghats  
 (c) Vindhyaachal Ghat  
 (d) Aravali

**Q79.** Papikonda national park is located in which of the following state of India

- (a) Assam  
 (b) Andaman and Nicobar Islands  
 (c) Andhra Pradesh  
 (d) Rajasthan

**Q80.** Who among the following Indian singers has written 'Raag Sarita'?

- (a) Pandit Kumar Gandharva  
 (b) Balasaheb Poonchwale  
 (c) Chintaman Raghunath Vyas  
 (d) Vishnu Narayan Bhatkhande

**Q81.** The first train inaugurated in 1853 was between which two stations?

- (a) Delhi and Chandigarh  
 (b) Mumbai and Thane  
 (c) Mumbai and Surat  
 (d) Bangalore and Mysore

**Q82.** Ustad Bade Ghulam Ali Khan was renowned a \_\_\_\_\_.

- (a) sarod player  
 (b) harmonium player  
 (c) tabla player  
 (d) classical singer

**Q83.** The title of the autobiography of actor Dilip Kumar is \_\_\_\_\_.

- (a) The Substance And The Shadow: An Autobiography  
 (b) Romancing With Life: An Autobiography  
 (c) Actually ... I Met Them  
 (d) An Unfinished Story

**Q84.** What is the tenure of the Chairperson of the National Human Rights Commission?

- (a) Three Years  
 (b) Five Years  
 (c) Six Years  
 (d) Four Years



**Q85.** Name the first Indian woman to win a Gold at Paralympics.

- (a) Deepa Mehta
- (b) Apoorvi Chandela
- (c) Avani Lekhara
- (d) Bhavinaben Patel

**Q86.** Who was the architect of the famous Mysore Palace in Karnataka?

- (a) Henry Irwin
- (b) William Emerson
- (c) Fredrik William Stevens
- (d) Edwin Lutyens

**Q87.** Which is NOT correct about the Election Commission of India?

- (a) They hold a six-year term or continue till the age of 65, whichever is earlier.
- (b) They are appointed by the President of India
- (c) The Election Commission is a multi-member body consisting of a Chief Election Commissioner and two other Election Commissioners.
- (d) The CEC enjoys more powers than the other two Election Commissioners.

**Q88.** Which of the following Viceroy of British India took the first step to separate provincial finance from central finance and introduced financial decentralization in India in 1870?

- (a) Lord Chelmsford
- (b) Lord Northbrook
- (c) Lord Mayo
- (d) Lord Dufferin

**Q89.** The members of the state legislative assembly participate in the election of

- (a) the President
- (b) the Vice-President
- (c) Members of the legislative council
- (d) both (a) and (c)

**Q90.** Epidermal cells of which part of plant often secrete a waxy water-resistant layer on their outer surface?

- (a) Aerial parts only
- (b) Roots only
- (c) Both aerial parts and roots
- (d) Neither aerial parts nor roots

**Q91.** On what basis did Greek thinker Aristotle classified the animals for the first time?

- (a) Habitat
- (b) Size
- (c) Locomotion
- (d) Food

**Q92.** Which of the following device is best suited for measuring the temperature inside metallurgical furnaces?

- (a) Pyrometer
- (b) Thermocouple
- (c) Thermometer
- (d) Thermistor

**Q93.** Which of the following is a radioactive element?

- (a) Cobalt
- (b) Uranium
- (c) Argon
- (d) Chromium

**Q94.** What is the name of the book translated by Pankaj Kumar Chatterjee that earned him the Romain Rolland Book Prize?

- (a) "Le Divan de Staline"
- (b) "Staliner Divan"
- (c) "Romain Rolland's Legacy"
- (d) "Jean-Daniel Baltassat's Masterpiece"

**Q95.** What is the primary objective of the SWAYAM Plus platform launched by Union Education Minister Pradhan?

- (a) Providing entertainment courses
- (b) Enhancing the employability of learners
- (c) Offering traditional academic courses
- (d) Promoting cultural studies

**Q96.** Where is the 'Swaminarayan Institute of Medical Science and Research' inaugurated?

- (a) Ahmedabad
- (b) Surat
- (c) Gandhinagar
- (d) Vadodara

**Q97.** What is the theme of Zero Discrimination Day 2024?

- (a) "Promoting Equality and Inclusion"
- (b) "Ending Discrimination: A Global Imperative"
- (c) "To protect everyone's health, protect everyone's rights"
- (d) "Advocating for Change"

**Q98.** Which DRDO laboratory led the development of the VISHORADS missile?

- (a) Aeronautical Development Establishment (ADE)
- (b) Defence Electronics Applications Laboratory (DEAL)
- (c) Research Centre Imarat (RCI)
- (d) Laser Science & Technology Centre (LASTEC)

**Q99.** Who became the first Indian citizen to be conferred with an honorary Knighthood by Britain's King Charles III?

- (a) Mukesh Ambani
- (b) Sunil Bharti Mittal
- (c) Azim Premji
- (d) Anand Mahindra

**Q100.** Who has been appointed as the new director general of the National Security Guard (NSG)?

- (a) Rajesh Ranjan
- (b) Daljit Singh Chaudhary
- (c) K. N. Chaudhary
- (d) Anil Chauhan

# Solutions

## S1. Ans.(a)

**Sol.** The sentence contains a grammatical error in segment (a), "couldn't quell the assuaged feelings of".

- The error is not grammatical per se, but rather it is semantic.
- 'Assuage' means to make something unpleasant less severe, so 'assuaged feelings of anxiety' would imply feelings that have already been mitigated or lessened.
- It's contradictory to say that Emily 'couldn't quell the assuaged feelings', because 'assuaged' and 'quell' essentially mean the same thing.
- A better way to write the sentence could be: "Despite her best efforts, Emily couldn't quell the feelings of anxiety that plagued her before the performance."
- Or, if you want to use 'assuage', you could say: "Despite her best efforts, Emily couldn't assuage the feelings of anxiety that plagued her before the performance."

## S2. Ans.(b)

**Sol.** Option b is the correct indirect form of the given sentence.

**Direct speech-** Direct speech, also known as quoted speech or direct quotation, is a way of reporting someone's exact words.

**Indirect speech-** Indirect speech, also known as reported speech or indirect quotation, is a way of reporting someone's words or thoughts indirectly, without using their exact words. Rules for changing direct speech to indirect speech for imperative sentences-

- Comma, inverted comma is replaced by some verbs like requested, ordered, suggested and advised. Forbid-forbade is used for negative sentences. Therefore, **the imperative mood in the direct speech changes into the Infinitive in indirect speech.**
- Conjunctions are used according to the sentence. in the given sentence conjunction "to" should be used.

According to the given rules,

Option b is the correct passive form of the given sentence.

## S3. Ans.(b)

**Sol.** The correct word to fill in the blank in the sentence "The \_\_\_\_\_ of the storm caused widespread destruction in the coastal region." is (b) aftermath.

"Aftermath" refers to the consequences or results of a significant and often destructive event, in this case, the storm. So, it fits into the sentence logically and contextually.

Here's why the other options don't work:

- "**Tranquility**" means calm or peacefulness, which does not fit in the context of a storm causing widespread destruction.
- "**Premonition**" refers to a strong feeling that something is about to happen, especially something unpleasant. This doesn't fit as the sentence is about the direct result of the storm, not a forewarning or feeling of it.
- "**Apathy**" means lack of interest, enthusiasm, or concern, which is not relevant to the destructive consequences of a storm.

## S4. Ans.(b)

**Sol.** The word that means the same as "Eminent" is (b) Distinguished.

**Eminent-** means famous and respected within a particular sphere or profession.

Synonyms - **distinguished**, renowned, esteemed, and prominent.

Antonyms - obscure, unknown, insignificant, and unremarkable.

Meaning of other options-

- **Notorious:** Known widely and usually unfavorably; infamous.
- **Distinguished:** Recognized for excellence or achievement; highly respected.
- **Insignificant:** Too small or unimportant to be worth consideration.
- **Tedious:** Too long, slow, or dull, resulting in being tiresome or boring.

## S5. Ans.(b)

**Sol.** Option b is the correct synonym of the given word.

**Impecunious-** means having very little or no money.

Synonyms - penniless, **destitute**, impoverished, and indigent.

Antonyms - wealthy, affluent, rich, and opulent.

Meaning of other options-

- **Affluent:** Having a great deal of money; wealthy.
- **Destitute:** Extremely poor and lacking the means to provide for oneself.
- **Lucrative:** Producing a great deal of profit.
- **Opulent:** Ostentatiously rich and luxurious or lavish.

## S6. Ans.(d)

**Sol.** Option d is incorrectly spelt.

Correct spelling is "Ambiguous".

Meaning of the given options-

- **Exhilarate:** To make (someone) feel very happy, animated, or elated.
- **Acquaintance:** A person one knows slightly, but who is not a close friend.
- **Perseverance:** Persistence in doing something despite difficulty or delay in achieving success.
- **Ambiguous:** Open to more than one interpretation; not having one obvious meaning.

## S7. Ans.(b)

**Sol.** The most appropriate one-word substitution for "A person who speaks or writes in defense or support of someone or something" is (b) Apologist.

Here are the meanings of the other options:

- **Philanthropist:** A person who seeks to promote the welfare of others, usually through the donation of money or resources to good causes.
- **Connoisseur:** An expert judge in matters of taste, particularly in fields like art, wine, food, etc.
- **Renegade:** A person who deserts and betrays an organization, country, or set of principles.

**S8. Ans.(c)**

**Sol.** The sentence has an error in segment (c), "important is her work."

In English, indirect questions and dependent clauses generally follow subject-verb-object (SVO) word order in this case the subject-auxiliary inversion should be used because the second sentence is a dependent clause. So, "how important is her work" should be "how important her work is"

The corrected sentence should read: "She must attend the meeting, no matter how important her work is."

**S9. Ans.(a)**

**Sol.** The most appropriate 'one word' for the expression "Fear of spiders" is (a) Arachnophobia.

Here are the meanings of the other options:

- **Hydrophobia:** Fear of water.
- **Nyctophobia:** Fear of darkness or night.
- **Ophidiophobia:** Fear of snakes.

**S10. Ans.(c)**

**Sol.** Option c has no spelling error.

In other options "Exhausted" is incorrectly spelt which means completely depleted of energy, extremely tired, or physically and mentally drained.

**S11. Ans.(a)**

**Sol.** The most appropriate meaning of the idiom is option a.

**To cut corners** - To take shortcuts or find easier ways to do something.

Idiom used in sentence- He was running late for the presentation, so he decided to cut corners and skip the final review of his slides.

**S12. Ans.(a)**

**Sol.** The word that can substitute the given group of words is option a.

**One who hates or distrusts humankind** - Misanthrope.

Here are the meanings of the other options:

- **Misogynist:** One who hates or holds a strong prejudice against women.
- **Miscreant:** A person who behaves badly or breaks the law.
- **Misnomer:** A wrong or inaccurate name or designation given to something.

**S13. Ans.(b)**

**Sol.** Option b is the most appropriate synonym of the given word.

**Ardent**- having or showing intense passion, enthusiasm, or eagerness.

Synonyms - passionate, fervent, zealous, and **enthusiastic**.

Antonyms - indifferent, apathetic, cold, and unenthusiastic.

Meanings of all options are as follows:

- **Indifferent:** Having a lack of interest or concern; neutral or apathetic.
- **Enthusiastic:** Showing great excitement, interest, or eagerness.

- **Mediocre:** Average or ordinary in quality; not particularly good or bad.
- **Repulsive:** Causing strong dislike, disgust, or aversion.

**S14. Ans.(c)**

**Sol.** The correct order of the parts of the sentence is (c) SRQP.

- **S.** This sentence introduces the idea of spending time in natural environments.
- **R.** Sentence R provides examples of natural environments like parks, forests, or beaches that can positively impact our well-being.
- **Q.** This sentence establishes that scientific research has proven the benefits of spending time in nature.
- **P.** Finally, sentence P states the specific health benefits that can be derived from spending time in nature, such as improved cardiovascular function and reduced stress levels.

**S15. Ans.(b)**

**Sol.** Option b is the correct synonym of the given word.

**Emerge**- means to come forth or become visible, to come out from a hidden or obscured state, or to become known or prominent.

Synonyms - appear, surface, arise, manifest, and materialize.

Antonyms - **disappear**, recede, submerge, withdraw, and hide.

Meanings of other options-

- **Subside:** To become less intense, violent, or prominent; to decrease or diminish.
- **Disappear:** To cease to be visible or exist; to vanish.
- **Vanquish:** To defeat thoroughly or overcome completely.
- **Immerse:** To submerge or dip into a liquid; to involve deeply or engross.

**S16. Ans.(b)**

**Sol.** The highlighted part of the sentence "He is very skilled on playing the guitar" can be improved by choosing option (b) "skilled at playing."

The correct expression is "skilled at playing" when referring to someone's proficiency in a particular instrument or activity. So, the sentence should be written as: "He is very skilled at playing the guitar." This conveys that the person has a high level of skill when it comes to playing the guitar.

**S17. Ans.(a)**

**Sol.** The highlighted part of the sentence "without either of the teams giving up or disheartened" can be improved by choosing option (a) "giving up or being disheartened."

- The original sentence is not grammatically correct because it lacks parallel structure. To make it grammatically correct and maintain parallelism, we need to ensure that both verb phrases are in the same form. Therefore, we should use the gerund form of the verb "giving up" and the verb "be" in the same form.
- The corrected sentence should be: "Despite the heavy rain and strong winds, the football match continued as scheduled without either of the teams giving up or being disheartened."

**S18. Ans.(a)**

**Sol.** Option a is the correct passive form of the given sentence.

- **Active Voice**- Active voice is a grammatical structure in which the subject of the sentence performs the action expressed by the verb.
- **Passive Voice**- Passive voice refers to a grammatical construction where the subject of a sentence undergoes an action rather than performing it. In passive voice sentences, the emphasis is on the recipient or object of the action.

To convert an active voice sentence to passive voice, follow these steps:

- Identify the subject, the verb, and the object in the active voice sentence.
- The object of the active voice sentence becomes the subject of the passive voice sentence.
- Change the verb to its past participle form. If necessary, use a form of "be" (is, are, am, was, were, be, been) and the past participle of the main verb. For modals (like might, may, can, could, etc.), the structure is usually modal + "be" + past participle.
- The subject of the active sentence becomes the object of the passive sentence (or is dropped).

Rule for changing the given sentence-

**Subject + V2 + object. -> <- Subject + V2 + object. Object + auxiliary verb (was, were) + past participle + by + subject.**

According to the given rules,

Option a, "He was awarded the prestigious prize by the committee." is the correct passive form of the given sentence.

**S19. Ans.(d)**

**Sol.** The correct order of the parts of the sentence is (d) PSQR.

- **P.** Sentence P introduces the topic of the early Polynesians and their navigation abilities.
- **S.** Sentence S explains that the early Polynesians had the capability to navigate.
- **Q.** Sentence Q describes the purpose of their navigation, which was to explore across the vast ocean.
- **R.** Finally, sentence R provides the means by which the early Polynesians navigated, relying solely on the stars, winds, and natural landmarks.

Together, the rearranged sentence reads: "It is believed that the early Polynesians were able to navigate and explore across the vast ocean, using only the stars, winds, and natural landmarks."

**S20. Ans.(a)**

**Sol.** Option a is the correct meaning of the given idiom.

**Now and again**- Occasionally.

Idiom used in sentence- He doesn't visit us often, but now and again, he drops by for a cup of coffee.

**S21. Ans.(a)**

**Sol.** The correct option to fill in blank number (1) is (a) "Deliver."

Meaning of options:

- **Deliver** - provide or supply (something).
- **Develop** - create or produce (something) over time.
- **Integrate** - combine (one thing) with another so that they become a whole.
- **Manage** - be in charge of the activities and performance of (a company or organization).

As per the passage and meanings of the options given, 'Deliver' is the most appropriate option to fill in the blank.

**S22. Ans.(b)**

**Sol.** The correct option to fill in blank number (2) is (b) "Emphasis."

Meaning of options:

- **Focus** - the center of interest or activity.
- **Emphasis** - special importance, value, or prominence given to something.
- **Belief** - an acceptance that something exists or is true, especially without proof.
- **Reliance** - dependence on or trust in someone or something.

As per the passage and meanings of the options given, 'Emphasis' is the most appropriate option to fill in the blank.

**S23. Ans.(a)**

**Sol.** The correct option to fill in blank number (3) is (a) "Expanded."

Meaning of options:

- **Expanded** - become or make larger or more extensive.
- **Maintained** - cause or enable (a condition or state of affairs) to continue.
- **Transformed** - make a thorough or dramatic change in the form, appearance, or character of.
- **Diminished** - make or become less.

As per the passage and meanings of the options given, 'Expanded' is the most appropriate option to fill in the blank.

**S24. Ans.(a)**

**Sol.** The correct option to fill in blank number (4) is (a) "Substantial."

Meaning of options:

- **Substantial** - of considerable importance, size, or worth.
- **Negligible** - so small or unimportant as to be not worth considering.
- **Incidental** - happening as a minor accompaniment to something else.
- **Marginal** - of, relating to, or situated at the edge or margin of something.

As per the passage and meanings of the options given, 'Substantial' is the most appropriate option to fill in the blank.

**S25. Ans.(a)**

**Sol.** The correct option to fill in blank number (5) is (a) "Enhance."

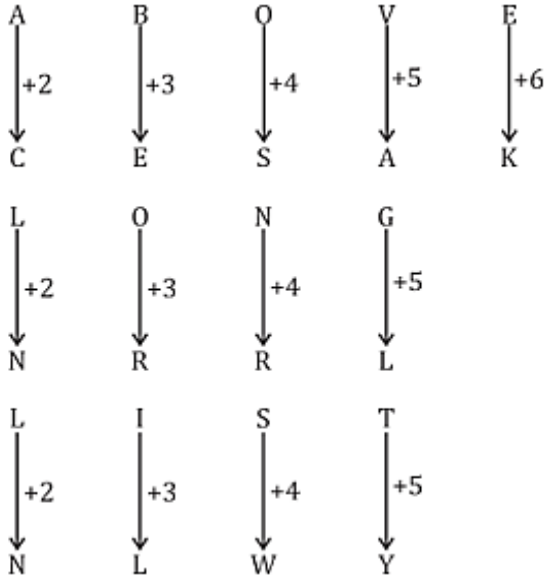
Meaning of options:

- **Enhance** - intensify, increase, or further improve the quality, value, or extent of.
- **Eradicate** - destroy completely; put an end to.
- **Stagnate** - cease developing; become inactive or dull.
- **Overlook** - fail to notice, perceive, or consider.

As per the passage and meanings of the options given, 'Enhance' is the most appropriate option to fill in the blank.

**S26. Ans.(d)**

**Sol.**

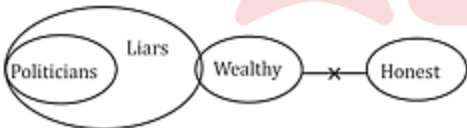


**S27. Ans.(b)**

**Sol.** (2, 4, 8) ⇒ 2 × 2 = 4, 4 × 2 = 8  
In (5, 10, 20) ⇒ 5 × 2 = 10, 10 × 2 = 20

**S28. Ans.(c)**

**Sol.**

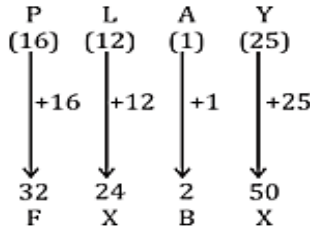
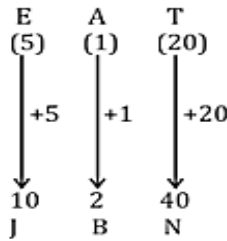
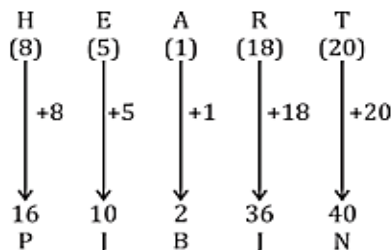


**Conclusions**

- ×
- ×
- ✓

**S29. Ans.(a)**

**Sol.**



**S30. Ans.(c)**

**Sol.**

$$3 - 8 + 2 \times 49 \div 7 = 9$$

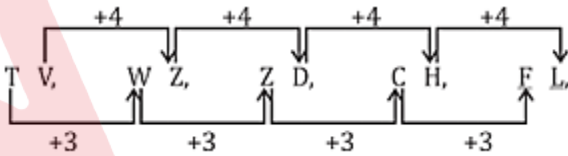
$$\downarrow \quad \downarrow \downarrow \quad \downarrow$$

$$8 - 3 \times 2 + 49 \div 7 = 9$$

$$8 - 6 + 7 = 9 = \text{R.H.S}$$

**S31. Ans.(b)**

**Sol.**

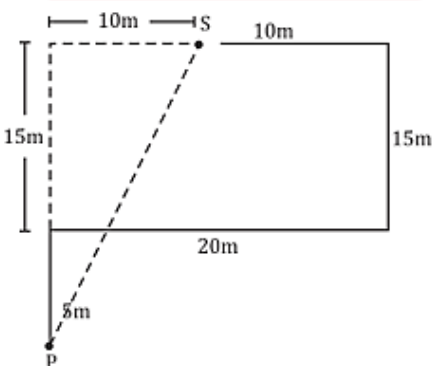


**S32. Ans.(d)**

**Sol.** 10 ? 2 ? 5 ? 4 ? 3 = 26  
From Option (d),  
10 ÷ 2 × 5 + 4 - 3 = 5 × 5 + 4 - 3 = 25 + 1 = 26

**S33. Ans.(a)**

**Sol.**

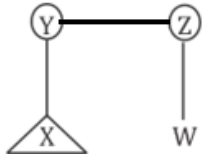


Direction → South - West  
Distance = PS =  $\sqrt{10^2 + 20^2}$   
=  $\sqrt{100 + 400}$   
=  $\sqrt{500}$   
=  $10\sqrt{5}$  m



S34. Ans.(b)

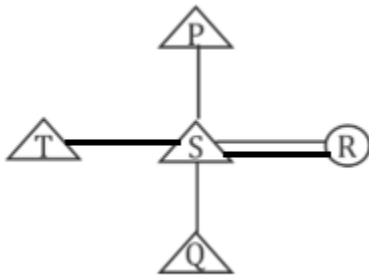
Sol.



W is the cousin of X.

S35. Ans.(c)

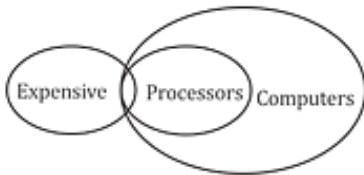
Sol.



P is the grandfather of Q.

S36. Ans.(b)

Sol.

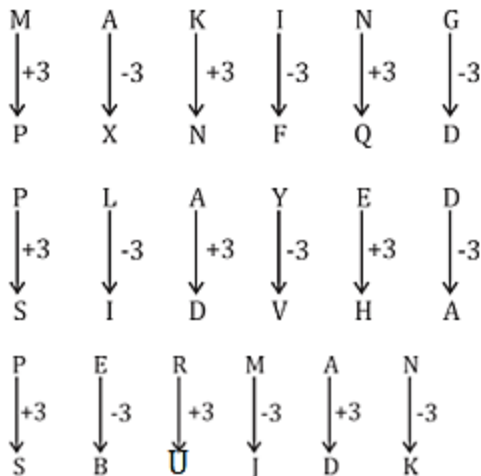


Conclusions

- x
- x
- x
- x

S37. Ans.(d)

Sol.



S38. Ans.(c)

Sol.

- (a)  $A \xrightarrow{\text{Opposite Letter}} Z \xrightarrow{-2} X$
  - (b)  $E \xrightarrow{\text{Opposite Letter}} V \xrightarrow{-2} T$
  - (c)  $F \xrightarrow{\text{Opposite Letter}} U \xrightarrow{-13} H$
  - (d)  $I \xrightarrow{\text{Opposite Letter}} R \xrightarrow{-2} P$
- (c) is odd and different.

S39. Ans.(d)

- Sol.  $(600 - 75 - 15) \rightarrow 600 \div 8 = 75, 75 \div 5 = 15$
- $(640 - 80 - 14) \rightarrow 640 \div 8 = 80, 80 \div 5 = 16$
- $(480 - 60 - 12) \rightarrow 480 \div 8 = 60, 60 \div 5 = 12$
- $(700 - 100 - 20) \rightarrow 700 \div 7 = 100, 100 \div 5 = 20 (\checkmark)$

S40. Ans.(b)

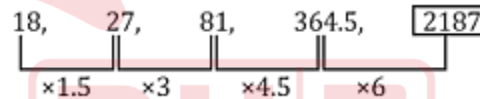
- Sol.  $(6, 56, 672) \rightarrow 56 \times 6 \times 2 = 672$
- $(9, 27, 486) \rightarrow 27 \times 9 \times 2 = 486$
- In (b)  $(8, 15, 240) \rightarrow 15 \times 8 \times 2 = 240$

S41. Ans.(a)

Sol. The series contains Alternate Prime numbers starting with 11.

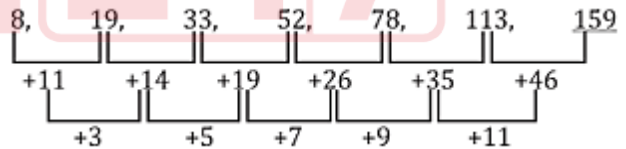
S42. Ans.(b)

Sol.



S43. Ans.(d)

Sol.



S44. Ans.(a)

Sol.

Induct - Insane - Insect - Insert - Inside  
5 - 4 - 1 - 2 - 3

S45. Ans.(c)

Sol.

$m n o p / m o n p / m n o p / m o n p / m n o p$

S46. Ans.(d)

Sol. O and Δ will be on the faces adjacent to 3 so they cannot be opposite to 3.



S47. Ans.(b)

Sol. × is moving +1

• is moving +2, +3, +4

S48. Ans.(c)

S49. Ans.(b)

S50. Ans.(c)

S51. Ans.(b)

Sol.

$$\operatorname{cosec} 3\theta = \frac{1}{\cos(\theta - 36^\circ)}$$

$$\sec(90 - 3\theta) = \sec(\theta - 36^\circ)$$

$$90 - 3\theta = \theta - 36^\circ$$

$$4\theta = 126^\circ$$

$$\theta = 31.5^\circ$$

S52. Ans.(c)

Sol.

Interest earned in 2 years = Rs. 3200

Interest earned in 3 years = Rs. 4800

Interest for one year = 1600

$$\frac{P \times R \times T}{100} = SI$$

$$PR = 160000$$

$$R = \frac{160000}{12,800} = \frac{1600}{128} = 12.5\%$$

S53. Ans.(d)

Sol. Using  $x^2 - y^2 = (x + y)(x - y)$

$$(2a + 3b - 4c)^2 - (2a - 3b - 4c)^2$$

$$= (2a + 3b - 4c + 2a - 3b - 4c)(2a + 3b - 4c - 2a + 3b + 4c)$$

$$= (4a - 8c)6b = 24b(a - 2c)$$

S54. Ans.(c)

Sol.

$$\cos \theta = \frac{8}{17} = \frac{B}{H}$$

$$P = \sqrt{H^2 - B^2} = \sqrt{17^2 - 8^2} = \sqrt{289 - 64} = \sqrt{225} = 15$$

$$\sin \theta = \frac{P}{H} = \frac{15}{17}$$

$$\cos 2\theta = \cos^2 \theta - \sin^2 \theta = \frac{64}{289} - \frac{225}{289} = \frac{-161}{289}$$

$$\sec 2\theta = \frac{289}{-161}$$

S55. Ans.(a)

Sol.

$$SP = 750$$

$$125\% \text{ of } CP = 750$$

$$CP = \frac{750}{125} \times 100 = 150 \times 4 = \text{Rs. } 600$$

$$\text{New S.P.} = \text{Rs. } 900, \text{ Profit} = \text{Rs. } 300$$

$$\text{Profit}\% = \frac{300}{600} \times 100 = 50\%$$

Or

$$25\% = \frac{1}{4}$$

$$5 \rightarrow 750$$

$$900 \rightarrow \frac{5}{750} \times 900 \rightarrow 6$$

$$\text{Profit} = \frac{6-4}{4} \times 100 = 50\%$$

S56. Ans.(a)

Sol.

$$\text{CSA of Cylinder} = 100 \pi \text{ cm}^2$$

$$2\pi rh = 100\pi$$

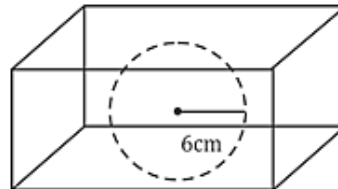
$$2rh = 100$$

$$r = \frac{100}{2h} = \frac{100}{20} = 5 \text{ cm}$$

$$\text{Volume} = \pi r^2 h = 3.14 \times 25 \times 10 = 31.4 \times 25 = 785 \text{ cm}^3$$

S57. Ans.(b)

Sol.



$$\text{Radius the largest sphere} = \frac{6}{2} = 3 \text{ cm}$$

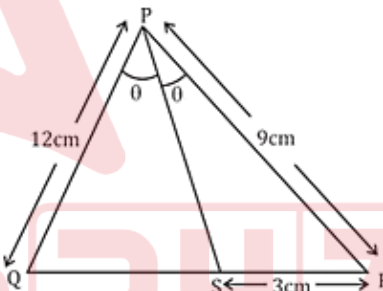
$$\text{Volume} = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \times \frac{22}{7} \times 3 \times 3 \times 3$$

$$= \frac{9 \times 4 \times 22}{7} = 113.1 \text{ cm}^3$$

S58. Ans.(d)

Sol.



by angle bisector theorem,

$$\frac{PQ}{PR} = \frac{QS}{SR} \Rightarrow \frac{12}{9} = \frac{x}{3}$$

$$x = 4 \text{ cm}$$

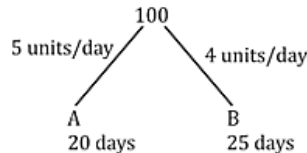
$$QR = (4 + 3) \text{ cm}$$

$$= 7 \text{ cm}$$

S59. Ans.(b)

Sol.

Let the work be 100 units.



B worked alone for 16 days.

B's 16 days work =  $4 \times 16 = 64$  units

Work left =  $100 - 64 = 36$  units (done by A and B together)

A and B worked for =  $\frac{36}{9} = 4$  days

i.e., A left after 4 days.

**S60. Ans.(a)**

**Sol.**

$$x + \frac{1}{x} = 5$$
$$\left(x + \frac{1}{x}\right)^2 = (5)^2 \Rightarrow x^2 + \frac{1}{x^2} = 25 - 2 = 23$$
$$y + \frac{1}{y} = 13$$
$$y^2 + \frac{1}{y^2} = (13)^2 - 2 = 169 - 2 = 167$$
$$\left(x^2 + \frac{1}{x^2}\right) \left(y^2 + \frac{1}{y^2}\right) = 23 \times 167 = 3841$$

**S61. Ans.(c)**

**Sol.**

$$30\% \text{ of } 90 = 27$$
$$25\% \text{ of } 200 = 50$$
$$\text{Required \%} = \frac{27}{50} \times 100 = 54\%$$

**S62. Ans.(b)**

**Sol.** Price of T-shirt after discount = 80% of 800  
= Rs. 640  
Sarah buys 4 t-shirts, so one will be free and price of 3 will be paid.  
Price of 3 T-shirts =  $3 \times 640 = \text{Rs. } 1920$

**S63. Ans.(a)**

**Sol.**

$$\text{Relative speed} = 140 - 100 = 40 \text{ km/h} = 40 \times \frac{5}{18}$$
$$= \frac{100}{9} \text{ m/s}$$

Let the length of train 1 be  $L_1$ .

Distance covered by second train =  $(L_1 + 150)$  meters

Time = 25 seconds

$$\frac{L_1 + 150}{25} = \frac{100}{9}$$
$$L_1 = \left(\frac{100}{9} \times 25\right) - 150$$

$$L_1 = 277.78 - 150 = 127.78$$

$\approx 128$  meters

**S64. Ans.(d)**

**Sol.** Relative difference of

- (i) 980 and 1015 = 35  
(ii) 1015 and 1125 = 110  
(iii) 1125 and 980 = 145  
 $35 = 5 \times 7$   
 $110 = 5 \times 11 \times 2$   
 $145 = 5 \times 29$   
(35, 110, 145) HCF = 5  
Largest number = 5

**S65. Ans.(b)**

**Sol.**

$$\text{cost} \propto \frac{\text{Area}}{\text{No. of workers}}$$
$$2400 = k \times \frac{60}{4}$$
$$k = 160$$
$$\text{New cost} = 160 \times \frac{120}{6} = 160 \times 20 = \text{Rs. } 3200$$

**S66. Ans.(a)**

**Sol.**

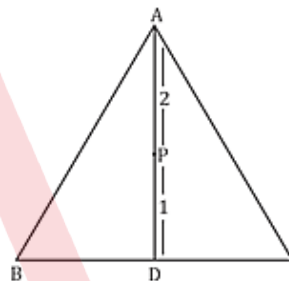
Speed of boat = 12 km/hr  
Speed of stream = 4 km/hr  
Relative speed (Downstream) =  $(12 + 4) = 16$  km/hr  
Distance = 2 km  
Time =  $\frac{2}{16} \times 60 \text{ min} = \frac{15}{2} \text{ min} = 7.5 \text{ mins}$

**S67. Ans.(c)**

**Sol.** LCM of 12 and 15 = 60  
Largest 3 digit number = 999  
 $999 = 60 \times 16 + 39$   
 $999 = 60 \times 16 + (60 - 21)$   
Required smallest 4 digit number can be founded by adding 21 in 999. Which is 1020.

**S68. Ans.(a)**

**Sol.**



Centroid divides median in the ratio 2 : 1

$$AD = 27 \text{ cm}$$

$$PD = \frac{1}{3} \times 27 = 9 \text{ cm}$$

**S69. Ans.(b)**

**Sol.**

$$x + \frac{1}{x} = 1 \Rightarrow x^2 + 1 = x \Rightarrow x^2 + 1 - x = 0$$
$$x^3 + 1 = (x + 1)(x^2 + 1 - x) = 0$$
$$x^{18} + x^{15} + x^{12} + x^9 + x^6 + x^3 + 3 = x^{15}(x^3 + 1) + x^9(x^3 + 1) + x^3(x^3 + 1) + 3$$
$$= 0 + 0 + 0 + 3 = 3$$

**S70. Ans.(d)**

**Sol.**

$$\frac{(3^4 - 2^4)}{[(3^2 + 2^2) \times 4^{0.5}]} = \frac{81 - 16}{13 \times 2} = \frac{65}{13 \times 2} = \frac{5}{2} = 2.5$$

**S71. Ans.(a)**

**Sol.**

Probability of winning at least 1 prize  
= 1 - Probability of winning no. prize

$$= 1 - \left(\frac{45}{50}\right)^5$$
$$= 1 - \left(\frac{9}{10}\right)^5 = 1 - \frac{59049}{100000}$$
$$= \frac{40951}{100000}$$

**S72. Ans.(b)**

**Sol.**

$$\begin{aligned}\text{Population of Males in Telangana} &= \frac{3}{7} \times 9\% \text{ of } 6552000 \\ &= \frac{3}{7} \times \frac{9}{100} \times 6552000 = 2,52,720\end{aligned}$$

**S73. Ans.(d)**

**Sol.**

$$\begin{aligned}\text{Population of Madhya Pradesh} &= 20\% \text{ of } 65,52,000 \\ \text{Literates} &= \frac{1}{5} \text{ of } 20\% \text{ of } 6552000 = \frac{1}{5} \times 20 \times 65520 \\ \text{Population of Arunachal Pradesh} &= 25\% \text{ of } 6552000 \\ \text{Literates} &= \frac{2}{9} \text{ of } 25\% \text{ of } 6552000 = \frac{2}{9} \times 25 \times 65520 \\ \text{Total number of literates} &= 262080 + 364000 \\ &= 6,26,080\end{aligned}$$

**S74. Ans.(a)**

**Sol.**

$$\begin{aligned}\text{Females in Bihar} &= \frac{4}{7} \times 11\% \text{ of } 6552000 \\ \text{Males in Uttar Pradesh} &= \frac{3}{5} \times 15\% \text{ of } 6552000 \\ \text{Ratio} &= \frac{\frac{4}{7} \times \frac{11}{100} \times 6552000}{\frac{3}{5} \times \frac{15}{100} \times 6552000} = \frac{4 \times 11 \times 5}{7 \times 3 \times 15} \\ &= \frac{44}{63} \\ \text{Ratio} &\rightarrow 44 : 63\end{aligned}$$

**S75. Ans.(d)**

**Sol.**

$$\text{Required Percentage} = \frac{3}{5} \times 100 = 60\%$$

**S76. Ans.(c)**

**Sol.** The correct answer is (c) Hector Munro. Hector Munro, also known as Major General Sir Hector Munro, led the English Army in the Battle of Buxar.

The Battle of Buxar took place on October 22, 1764, in present-day Bihar, India. The English forces, under the command of Hector Munro, emerged victorious against the combined forces of the Nawab of Bengal, the Nawab of Awadh, and the Mughal Emperor Shah Alam II. The battle played a significant role in establishing British control over large parts of India.

**S77. Ans.(b)**

**Sol.** Indian Opinion was a newspaper that was published by Mahatma Gandhi during his stay in South Africa. It was first published on June 6, 1903, and served as a platform for Gandhi to express his views on various social, political, and economic issues.

The newspaper played a crucial role in advocating for the rights and interests of the Indian community in South Africa and became an important tool for Gandhi's activism and the promotion of nonviolent resistance.

**Young India:** Young India was a weekly journal published by Mahatma Gandhi in India from 1919 to 1931.

**Nav Jivan:** Nav Jivan, meaning "New Life" in English, was a weekly journal published in India by Mahatma Gandhi. It was first published in 1919 and continued until 1933.

**S78. Ans.(d)**

**Sol.** Pipli Ghat Pass is a mountain pass in the Aravalli Range, located in the Sirohi district of Rajasthan, India. It is situated at an elevation of 1,158 meters (3,798 feet) above sea level, and connects the towns of Sirohi and Mount Abu. The pass was historically an important trade route between the Thar Desert and the Gujarat coast, and it is still used by pilgrims and tourists traveling to Mount Abu.

The pass is also home to a number of temples and shrines, including the Pipli Mata Temple, which is dedicated to the Hindu goddess Pipli Mata.

**S79. Ans.(c)**

**Sol.** Papikonda National Park is located in the state of Andhra Pradesh, India. It is situated in the East Godavari and West Godavari districts of the state.

The national park is known for its rich biodiversity and is home to various species of flora and fauna. It is spread across the Eastern Ghats, encompassing an area of around 1,012 square kilometers.

Papikonda Wildlife Sanctuary was established in 1978. It was upgraded to a national park in 2008.

**S80. Ans.(c)**

**Sol.** Chintaman Raghunath Vyas has written 'Raag Sarita'. The updated edition of the book was recently released in 2019 by his son Suhas Vyas.

- Chintaman Raghunath Vyas, popularly known as C. R. Vyas, was an Indian classical singer. He was known for singing khayal style.

**S81. Ans.(b)**

**Sol.** The first train in India was inaugurated between Mumbai and Thane in 1853.

- The distance between these two stations was 21 miles.
- The formal inauguration ceremony was performed on 16th April 1853.
- Lord Dalhousie dedicated the country's first passenger train on 16 April 1853.

**S82. Ans.(d)**

**Sol.** Ustad Bade Ghulam Ali Khan was a renowned classical singer.

- He was an Indian Hindustani classical vocalist, from the Patiala Gharana, one of the prominent schools of classical music in India.

**S83. Ans.(a)**

**Sol.** The title of the autobiography of actor Dilip Kumar is - The Substance And The Shadow: An Autobiography.

- Mohammed Yusuf Khan better known by his stage name Dilip Kumar, was an Indian actor who worked in Hindi cinema.
- He is also known as the "Tragedy King" and referred to as "Abhinay Samrat" ("Emperor of Acting") by the audience.

**S84. Ans.(b)**

**Sol.** The Chairperson of NHRC has a fixed tenure of five years or until he attains the age of 70 years and once appointed, may only be removed from office by an order of the President of India.

NHRC of India is an independent statutory body established on 12 October 1993 as per provisions of the Protection of Human Rights Act, 1993, later amended in 2006.

It is the watchdog of human rights in the country, i.e., the rights related to life, liberty, equality, and dignity of the individual guaranteed by the Indian Constitution.

**S85. Ans.(c)**

**Sol.** Shooter Avni Lekhara became the first Indian woman to win gold at Paralympics.

She is only the fourth Indian athlete to win a Paralympics gold after swimmer Murlikant Petkar (1972), javelin thrower Devendra Jhajharia (2004 and 2016), and high jumper Mariyappan Thangavelu (2016).

**S86. Ans.(a)**

**Sol.** Henry Irwin was the architect of the famous Mysore palace in Karnataka.

Henry Irwin CIE was an architect of British India. He is mainly known for his works in Indo-Saracenic style of architecture. He was a member of the Institution of Engineers. He was awarded a CIE in the 1888 Birthday Honours.

**S87. Ans.(d)**

**Sol.** The Election Commissioner of India holds a six-year term or continuously holds office till the age of 65 years, whichever is earlier. The members of the election commission are appointed by the president of India. It comprises a chief election commissioner and two other election commissioners. Both the chief election commissioner and other election commissioners enjoy the same power.

**S88. Ans.(c)**

**Sol.** Lord Mayo took the first step to separate provincial finance from Central finance and introduced financial decentralization in India in 1870.

In 1870, under Lord Mayo, provincial governments were granted fixed sums out of central revenues for the administration of certain services like police, jails, education, medical services, and roads and were asked to administer them as they wished.

**S89. Ans.(d)**

**Sol.** Members of the State Legislative Assembly in India participate in the election of both the President and Members of the Legislative Council. Therefore, both the President and Members of the Legislative Council are elected with the participation of members of the State Legislative Assembly. So, option (d) is correct.

- The President of India is elected by an Electoral College, which includes the elected members of both Houses of Parliament (Lok Sabha and Rajya Sabha) and the elected members of the State Legislative Assemblies.
- Members of the Legislative Council, which is the upper house of the state legislature in some states in India, are also elected by an electoral college. The members of the Legislative Assembly participate in the election of the members of the Legislative Council.

**S90. Ans.(a)**

**Sol.** Epidermal cells on the aerial parts of a plant secrete a waxy, water-resistant layer on their outer surface. This layer is called the cuticle, and it helps to protect the plant from water loss and from damage by insects and other pests. The cuticle is also responsible for the glossy appearance of many leaves.

Roots do not have a cuticle, as they need to be able to absorb water and nutrients from the soil. Instead, they have a thin layer of cells called the epidermis, which is permeable to water and nutrients.

**S91. Ans.(a)**

**Sol.** The correct answer is (a), habitat. Aristotle classified animals based on their habitat. He divided animals into three groups: those that lived in water, those that lived on land, and those that lived in the air. He further divided these groups into smaller groups based on their physical characteristics.

Aristotle's system of classification was used for many centuries, and it was not until the 18th century that a new system of classification was developed. This new system was based on the work of Carl Linnaeus, and it is the system that is still used today.

**S92. Ans.(a)**

**Sol.** Pyrometer is the best-suited device for measuring the temperature inside metallurgical furnaces. Pyrometers are specifically designed to measure high temperatures, making them suitable for the extreme heat conditions found in metallurgical furnaces.

They work based on principles such as thermal radiation or optical properties to measure temperature accurately. Pyrometers are commonly used in industrial applications to measure temperatures in furnaces, kilns, and other high-temperature environments.

**S93. Ans.(b)**

**Sol.** Uranium is a radioactive element. It is a naturally occurring element with atomic number 92 and symbol U. Uranium is known for its radioactive properties, which means its atomic nucleus is unstable and undergoes radioactive decay, emitting various types of radiation. Uranium is commonly used as a fuel in nuclear reactors and has various isotopes, with Uranium-235 being the most well-known for its role in nuclear fission reactions.

Cobalt is a transition metal used in various applications, Argon is an inert gas commonly found in the atmosphere, and Chromium is a transition metal known for its corrosion resistance and use in alloys.

**S94. Ans.(a)**

**Sol.** The correct answer is (a) "Le Divan de Staline".

- Pankaj Kumar Chatterjee earned the Romain Rolland Book Prize for translating "Le Divan de Staline" into Bengali.
- The Romain Rolland Book Prize is awarded for the best translation of a French title into any Indian language, including English.
- It is part of the Bonjour India festival, a celebration of Indo-French partnership in innovation and creativity. "Le Divan de Staline", translated by Chatterjee, exemplifies the cultural exchange and literary appreciation between France and India, showcasing the importance of bringing French literary works to the Indian readership.

**S95. Ans.(b)**

**Sol.** The correct answer is (b) Enhancing the employability of learners

The primary objective of the SWAYAM Plus platform, launched by Union Education Minister Dharmendra Pradhan, is Enhancing the employability of learners. SWAYAM Plus aims to provide a comprehensive online learning platform that caters to the educational needs of students across India, focusing on improving their skills and knowledge in various domains to enhance their employability.

SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) is an initiative of the Government of India designed to achieve the three cardinal principles of Education Policy, namely, access, equity, and quality. The platform seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.

**S96. Ans.(c)**

**Sol.** The correct answer is (c)

The 'Swaminarayan Institute of Medical Science and Research' was inaugurated in Gandhinagar. This institution is part of a broader initiative to provide high-quality medical education and healthcare services in the region. Gandhinagar, being the capital city of Gujarat, India, is strategically chosen to host such an institute to ensure accessibility and to cater to a larger population's medical needs. The establishment of this institute in Gandhinagar is expected to enhance the healthcare infrastructure of the state and provide advanced

medical care and research facilities. It aims to produce skilled healthcare professionals who can contribute significantly to the medical field both nationally and internationally.

**S97. Ans.(c)**

**Sol.** The correct answer is (c)

The theme of Zero Discrimination Day for the year 2024 is "To protect everyone's health, protect everyone's rights". This theme emphasizes the critical importance of safeguarding health and human rights for all individuals as a means to end AIDS and promote equality, inclusion, and the well-being of communities worldwide

**S98. Ans.(c)**

**Sol.** The correct answer is (c) Research Centre Imarat (RCI).

The Research Centre Imarat (RCI) is a premier laboratory of the Defence Research and Development Organisation (DRDO) in India, which focuses on the research and development of missile systems and technologies. RCI has been instrumental in the development of various missile systems for India, including ballistic missile defense systems, cruise missiles, and air-to-air missiles. It plays a key role in India's strategic defense capabilities.

The Very Short Range Air Defence System (VSHORADS) missile is part of India's efforts to enhance its air defense capabilities. VSHORADS is designed to counter low-level aerial threats at very short ranges, providing a critical defensive layer for military assets against enemy aircraft, helicopters, drones, and other aerial threats. This missile system is designed to be highly portable, allowing for rapid deployment by ground troops.

**S99. Ans.(b)**

**Sol.** The correct answer is (b)

Sunil Bharti Mittal, the Founder and Chairman of Bharti Enterprises, became the first Indian citizen to be conferred with an honorary Knighthood by Britain's King Charles III. This prestigious honor recognizes his significant contributions to strengthening the business ties between India and the United Kingdom. Specifically, Mittal was granted the title of Knight Commander of the Most Excellent Order of the British Empire (KBE), acknowledging his pre-eminent contribution in the field of India-UK business relations. Therefore, the correct answer is (b) Sunil Bharti Mittal.

**S100. Ans.(b)**

**Sol.** The correct answer is (b)

Daljit Singh Chaudhary, a 1990 batch IPS officer, has been appointed as the Director General (DG) of the National Security Guard (NSG).

The National Security Guard (NSG) is an elite counter-terrorism unit under the Ministry of Home Affairs, Government of India. It was established in 1984, following Operation Blue Star and the assassination of Indira Gandhi, to combat terrorist activities and protect states against internal disturbances. NSG is often referred to as "Black Cats" because of the black dress and black cat insignia worn by its operatives.