

### Verbal Ability in English

**Directions (Q. No. 1-4):** Read each sentence part to find out whether there is any error and indicate your response against the corresponding option, i.e., (a) or (b) or (c). If you find no error, your response should be indicated as (d).

- Neither of the (a)/ men are (b)/ available here.(c)/ No error (d)  
(a) a (b) b  
(c) c (d) d
- The students are eagerly (a)/ awaiting for the results (b)/ of their final exams. (c)/ No error (d)  
(a) a (b) b  
(c) c (d) d
- Childrens of schools and colleges (a)/ are expected to follow (b)/ certain rules and regulations. (c)/ No error (d)  
(a) a (b) b  
(c) c (d) d
- He has bought (a)/ a scissors to shave (b)/ his moustache. (c)/ No error (d)  
(a) a (b) b  
(c) c (d) d

**Directions (Q. No. 5-8):** Each of the following sentences in this section has a blank space and is followed by four choices. Select the most appropriate choice to fill in the blank and mark your response on the Answer Sheet accordingly.

- How are you \_\_\_\_\_ in your new job? Are you enjoying it?  
(a) keeping on (b) getting up  
(c) going on (d) carrying on
- I would like to go to the concert \_\_\_\_\_ I can find a babysitter.  
(a) if (b) may  
(c) unless (d) because
- I \_\_\_\_\_ what it would be like to be inside a chocolate factory.  
(a) have always wondered  
(b) am always wondered  
(c) have always wonder  
(d) have always wondering

8. His \_\_\_\_\_ comments about the murder made me shiver.

- (a) callous (b) compassionate  
(c) benevolent (d) indurate

**Directions (Q. No. 9-14):** In the following question, out of the given alternatives, choose the best one that expresses the synonym of the given word.

#### 9. Dilemma

- (a) Blessing (b) Benefit  
(c) Agreement (d) Quandary

#### 10. Blare

- (a) Gurgle (b) Roar  
(c) Plash (d) Hum

#### 11. Decrepid

- (a) Sturdy (b) Dilapidated  
(c) Uninterrupted (d) Stout

#### 12. Tyranny

- (a) Autonomy (b) Oppression  
(c) Hatred (d) Mystery

#### 13. Entice

- (a) Authorize (b) Baffle  
(c) Repulse (d) Misplace

#### 14. Scuffle

- (a) Battle (b) Combat  
(c) Conflict (d) Truce

**Directions (Q. No. 15-17):** Read the following passage carefully and answer the question given below it.

Astronomy is one of humanity's oldest scientific disciplines, evolving from the simple practice of counting stars and charting constellations with the naked eye to the advanced technological feats we witness today. In ancient times, early civilizations were captivated by the night sky, using it to navigate, track time, and organize their lives around the cycles of the heavens.

Monuments such as Stonehenge and artifacts like the bronze-age Nebra disk reveal how central sky-watching was to these cultures. For example, the ancient Assyro-Babylonians systematically recorded the motions of celestial bodies, and similar records have been found in early China.

The Greeks further elevated astronomy by applying mathematical and observational methods. Aristarchus of Samos made the first (highly inaccurate) attempt to calculate the distance of Earth to the sun and moon, and Hipparchus sometimes considered the father of empirical astronomy, cataloged the positions of over 800 stars using just the naked eye. He also developed the brightness scale that is still in use today, according to ESA.

Despite the progress made over millennia, astronomers continue to grapple with the vast mysteries of the universe. As technology advanced, the simple star-studded sky that our ancestors admired transformed into a complex array of celestial phenomena. Modern telescopes and detectors reveal objects such as black holes, white dwarfs, neutron stars, and supernovas. What was once perceived as a two-dimensional array of constellations has been understood as an optical illusion, hiding the dynamic movement of galaxies and the story of the universe, which began with the Big Bang around 13.8 billion years ago.

Astronomy today is a broad discipline encompassing subfields like observational and theoretical astronomy, planetary science, astrophysics, cosmology, and astrobiology. While astronomy uses mathematics, physics, and chemistry to study celestial objects and phenomena, it should not be confused with astrology, which is considered a pseudoscience. As our understanding of the universe deepens, astronomy continues to evolve, helping us explore fundamental questions about our place in the cosmos.

- How did the work of Hipparchus contribute to the empirical approach in astronomy?  
(a) He calculated the distance between the Earth and the Sun with high accuracy.  
(b) He developed the brightness scale still in use today and cataloged over 800 stars.  
(c) He discovered the elliptical orbits of planets and their retrograde motion.  
(d) He created the first detailed map of the constellations based on mythological stories.

16. Which of the following statements best describes how modern astronomy differs from ancient practices?

- (a) Modern astronomy relies on astrology to predict celestial events.
- (b) Ancient astronomy was primarily theoretical, while modern astronomy is observational.
- (c) Ancient astronomy viewed the sky as a static array, while modern astronomy reveals dynamic phenomena like black holes and galaxies.
- (d) Modern astronomy focuses solely on planetary science, whereas ancient astronomy included all celestial objects.

17. Which of the following statements are correct based on the passage?

- 1. The Greeks contributed to the empirical approach in astronomy through mathematical and observational methods.
  - 2. Astronomy today encompasses subfields like astrophysics and cosmology, which were not part of ancient astronomy.
  - 3. Stonehenge and the Nebra disk are examples of how ancient cultures integrated sky-watching into their daily lives.
- (a) 1 and 2 only      (b) 2 and 3 only  
(c) All 1, 2, and 3      (d) 1 and 3 only

**Directions (Q. No. 18-20):** The following questions, consists of an incomplete sentence or a sentence which is split into four parts. All four parts are jumbled up and are named as P, Q, R and S. These four parts are not given in their proper order.

Arrange the jumbled parts of the sentence and find out which of the four combinations from the given options will correctly complete the sentence.

18. The first-generation small modular \_\_\_\_\_ at economical rates.

- P: assembled on-site with factory-made parts, to  
Q: technologies and power that can be sold  
R: reactors are expected to use low-enriched uranium in facilities  
S: produce waste that can be handled using existing

- (a) PSQR      (b) RPSQ  
(c) PQRS      (d) PRQS

19. Between the eighth and eleventh centuries A.D., \_\_\_\_\_ severe internal decline.

- P: the Byzantine Empire staged an almost unparalleled  
Q: it followed a long period of  
R: that is all the more striking because  
S: economic and cultural revival, a recovery

- (a) PSRQ      (b) PQRS  
(c) RQPS      (d) SRPQ

20. In the two decades between 1910 and 1930, \_\_\_\_\_ it is claimed, between 1916 and 1918.

- P: had been located, and migrated to northern states,  
Q: over ten percent of the Black population of the United States left the South,  
R: where the preponderance of the Black population  
S: with the largest number moving,  
(a) QPRS      (b) QRPS  
(c) RPQS      (d) RPSQ

**Directions (Q. No. 21-23):** Read the following passage and answer the given questions.

Each of the following sentences in this section has a blank space with four words or group of words given. Select whichever word or group of words you consider most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.

The momentary triumph of debate is \_\_\_\_ (X) \_\_\_\_\_. This does not change the thoughts of the person in front of you. Maliciousness arises in the mind, which lasts for a long time. It is more effective to influence people with your work without saying \_\_\_\_ (Y) \_\_\_\_\_. Arguing is like making noise. You cannot say for sure what effect it \_\_\_\_ (Z) \_\_\_\_ on the other person. Maybe he agrees with you but is angry inside. Your work should be more effective and meaningful. Therefore, if you reveal your thoughts through work, then the opponents will listen to you.

21. Select the most appropriate word from the options against X.

- (a) consequential      (b) hollow  
(c) void      (d) spatial

22. Select the most appropriate word from the options against Y.

- (a) something      (b) anything  
(c) nothing      (d) everything

23. Select the most appropriate word from the options against Z.

- (a) have had      (b) has had  
(c) had had      (d) had

**Directions (Q. No. 24-25):** In the following question, out of the four alternatives, choose the one which is nearest to the meaning of the given idiom or phrase.

24. **Paint the town red**

- (a) To do something that makes it impossible to return to the previous situation later  
(b) To go out and enjoy yourself  
(c) A special and memorable day  
(d) To greatly impress a large number of people

25. **Cool one's heels**

- (a) To show impudent contempt  
(b) Win approval  
(c) To be kept waiting  
(d) To be useful

26. In the following question, out of the four alternatives, choose the one which is appropriate to fill the blank.

Because it was the last day of class, the teachers \_\_\_\_\_.

- (a) cut us down to size.  
(b) cut us some slack.  
(c) cut us out of the class.  
(d) cut us short.

27. Each question consists of two words which have a certain relationship to each other followed by four pairs of related words, Select the pair which has the same relationship.

Window: Panes :: Book: ?

- (a) Cover      (b) Novel  
(c) Glass      (d) Pages

28. In the following question there is a related pair of words given. Each pair is followed by four other pairs of words. Choose the pair from the given option the pair of words that best expresses the relationship like the original pair.

Pernicious : Malignant

- (a) Harmful : Helpful  
(b) Noxious : Poisonous  
(c) Destructive : Constructive  
(d) Detrimental : Advantageous

29. Select the option that can be used as a oneword substitute for the given group of words.

The fear of aging

- (a) Claustrophobia      (b) Gerascophobia  
(c) Thanatophobia      (d) Acrophobia

30. Select the option that can be used as a oneword substitute for the given group of words.

A lover of mankind

- (a) Chauvinist      (b) Altruist  
(c) Recluse      (d) Termagant

## Numerical Ability

31. If the square of the sum of two numbers is 90 and square of their difference of is 46, what is the product of the two numbers?

- (a) 11      (b) 22  
(c) 30      (d) 32

32. At what rate of compound interest per annum will a sum of ₹1200 become ₹1348.32 in 2 years?

- (a) 5%      (b) 6%  
(c) 7.8%      (d) 8.5%

33. If someone makes a profit of 30% by selling an article, then what would be the profit percent, if it will be calculated on the selling price instead of cost price?  
 (a) 21.8% (b) 20%  
 (c) 25% (d) 23.07%
34. A train covers a certain distance in 45 minutes. If its speed is reduced by 5 km/hr, it takes 3 minutes more to cover the same distance. The distance (in km) is:  
 (a) 50 (b) 70  
 (c) 60 (d) 80
35. If  $a : b = 3 : 5$  and  $b : c = 7 : 8$ , then  $2a : 3b : 7c$  is equal to ?  
 (a) 42 : 105 : 320 (b) 15 : 21 : 35  
 (c) 6 : 15 : 40 (d) 30 : 21 : 350
36. There are 4 semi-circular gardens on each side of a square-shaped pond with each side 21 m. The cost of fencing the entire plot at the rate of ₹12.50 per meter is  
 (a) ₹1650 (b) ₹1750  
 (c) ₹1800 (d) ₹1900
37. The average age of five persons is 28 yrs. If one of them is excluded the average decreases by 2 yrs. The age of the excluded person in yrs is:  
 (a) 34 (b) 28  
 (c) 35 (d) 36
38. Two kinds of daal at ₹18 and ₹24.8 per kg are mixed. In what ratio should they be mixed such that by selling at ₹30 per kg, a profit percentage of 50% is realized?  
 (a) 12 : 5 (b) 12 : 7  
 (c) 4 : 7 (d) 3 : 7
39. A shopkeeper bought 80 kg of rice at a discount of 10%, besides 1 kg rice was offered free to him on the purchase of every 20 kg rice. If he sells the rice at the marked price, his profit percentage will be  
 (a)  $16\frac{2}{3}\%$  (b) 15.25%  
 (c)  $8\frac{1}{3}\%$  (d) 12%
40. The compound Interest on ₹8000 in 1 year at 4% per annum the interest being compounded half yearly is:  
 (a) ₹752.45 (b) ₹632.65  
 (c) ₹323.20 (d) ₹783.45
41. Two equal amounts were borrowed at 5% and 4% simple interest. The total interest after years amounted to ₹405. What was the total amount borrowed ?  
 (a) ₹1075 (b) ₹1100  
 (c) ₹1125 (d) ₹1150
42. Find the smallest 5-digit number divisible by 243.  
 (a) 10345 (b) 11450  
 (c) 10106 (d) 10206

43. If the price of the cooking gas rises by 15%, by what percent should a family reduce its consumption so as not to exceed the budget on cooking gas?  
 (a)  $12\frac{1}{23}\%$  (b)  $13\frac{1}{23}\%$   
 (c)  $14\frac{1}{23}\%$  (d) None of these
44. A is 50% more efficient as B. In one day, C can do half of the work done by A and B together. If C alone can do the work in 40 days, then A, B, and C together can do the work in how many days?  
 (a)  $\frac{44}{3}$  days (b)  $\frac{43}{3}$  days  
 (c)  $\frac{40}{3}$  days (d)  $\frac{50}{3}$  days
45. A sum of ₹8,400 is divided between Anuj and Brijesh such that Anuj's share at the end of 2 years is equal to Brijesh's share at the end of  $2\frac{2}{3}$  years at 15% p.a., interest compounded 8 - monthly. What is Anuj's share (in ₹) in the given sum?  
 (a) 4,400 (b) 4,700  
 (c) 5,600 (d) 6000
46. In a bag, there are 12 apples. Out of those 4 are rotten. If two apples are taken out at random from the bag, what is the probability to get exactly two rotten apples?  
 (a)  $\frac{2}{15}$  (b)  $\frac{1}{11}$   
 (c)  $\frac{1}{15}$  (d)  $\frac{5}{12}$
47. When the price of an item was reduced by 20%, its sales increased by  $x\%$ . If there is an increase of 25% in the receipt of the revenue, then the value of  $x$  is :  
 (a) 56.25% (b) 53.84%  
 (c) 61.5% (d) 55.75%
48. A can finish the work in 25 days while B can finish the work in 16 days. If A started the work alone and B joined him after 5 days. Find out the total time taken to finish the work.  
 (a) 10 days (b) 13 days  
 (c) 15 days (d) 17 days
49. A cow is tied by a rope of 42 feet length. If it grazes 154 sq feet per day then how much days it will take to graze the area fully?  
 (a) 27 Days (b) 32 Days  
 (c) 36 Days (d) 40 Days
50. A retailer purchases a machine at a discount of 10% and sells it for ₹5940 at a profit of 10%. The amount of discount received by the retailer from the wholesaler was  
 (a) ₹500 (b) ₹600  
 (c) ₹5500 (d) ₹650

## General Awareness

51. The rank of "Major" in the Indian Army is equivalent to which rank in the Indian Air Force?  
 (a) Wing Commander  
 (b) Squadron Leader  
 (c) Flight Lieutenant  
 (d) Group Captain
52. Match the List-I with List-II and select the correct answer using the code given below:

List-I		List-II	
A.	Lord Dalhousie	1.	Introduction of local self government in India
B.	Lord Ripon	2.	Doctrine of Lapse
C.	Lord Curzon	3.	Abolished sati system
D.	Lord William Bentinck	4.	Partition of Bengal

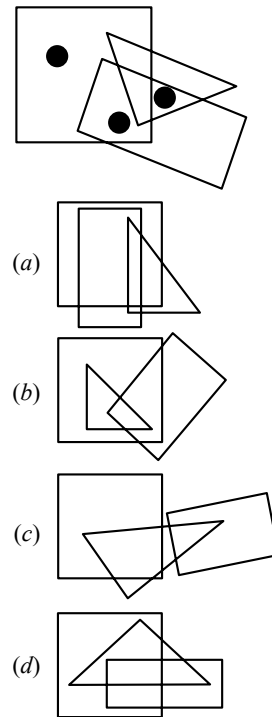
- (a) A-2, B-1, C-3, D-4  
 (b) A-3, B-4, C-1, D-2  
 (c) A-2, B-1, C-4, D-3  
 (d) A-2, B-4, C-1, D-3
53. Which of the following statements best describes the stellar day?  
 (a) The time it takes for the Earth to complete one orbit around the Sun.  
 (b) The time it takes for the Earth to rotate once on its axis relative to the Sun.  
 (c) The time it takes for the Earth to rotate once on its axis relative to distant stars.  
 (d) The time between two consecutive sunrises.
54. Surya Kiran joint military exercise was commenced between India and which country?  
 (a) Myanmar (b) Nepal  
 (c) Singapore (d) Oman
55. Consider the following statements with reference to INS Jatayu:
- INS Jatayu is the new naval base established by the Indian Navy in the Lakshadweep Islands.
  - It will serve as a naval detachment there, enhancing the Indian Navy's operational reach in the region.
- Which of the above statements is/are correct?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
56. Who among the following became the new Prime Minister of Nepal in July 2024?  
 (a) Raj Sharma  
 (b) Ram Chandra  
 (c) Sher Bahadur Deuba  
 (d) KP Sharma Oli

57. Nalanda University built by the which of the following dynasties?  
 (a) Gupta Dynasty (b) Chola Dynasty  
 (c) Kanva Dynasty (d) Chalukya Dynasty
58. Which of the following seas has the highest salinity?  
 (a) Red sea  
 (b) Dead Sea  
 (c) Mediterranean Sea  
 (d) Black Sea
59. Recently added to the Ramsar List, the Nagi and Nakti Bird sanctuaries are situated in which state?  
 (a) Uttar Pradesh (b) Bihar  
 (c) Rajasthan (d) Haryana
60. What percentage of posts in the Supreme Court Bar Association (SCBA) must be reserved for women according to the recent Supreme Court directive?  
 (a) 25% (b) 40%  
 (c) 33% (d) 50%
61. Under which ministry is the Namami Gange Programme implemented?  
 (a) Ministry of Environment, Forest, and Climate Change  
 (b) Ministry of Water Resources, River Development, and Ganga Rejuvenation  
 (c) Ministry of Urban Development  
 (d) Ministry of Jal Shakti
62. How many players can be on a basketball court?  
 (a) Four (b) Five  
 (c) Six (d) Seven
63. Which international alliance is heavily involved in the Orion 23 military exercise alongside the Indian Air Force?  
 (a) NATO (b) OPEC  
 (c) BRICS (d) ASEAN
64. Which among the following sectors includes the industries where finished products are made from natural materials?  
 (a) Primary Sector  
 (b) Secondary Sector  
 (c) Tertiary Sector  
 (d) Quaternary Sector
65. "Dunk" term is associated with which of the following sports?  
 (a) Table tennis (b) Golf  
 (c) Volleyball (d) Basketball
66. What is the cultivation of woody plants called?  
 (a) Sericulture (b) Horticulture  
 (c) Viticulture (d) Arboriculture
67. Windmills primarily convert which type of energy into which other type of energy?  
 (a) Kinetic energy into Electrical energy  
 (b) Solar energy into Thermal energy

- (c) Mechanical energy into Chemical energy  
 (d) Potential energy into Nuclear energy
68. The 46th Antarctic Treaty Consultative Meeting (ATCM) was organised in which of the following countries?  
 (a) Greenland (b) Norway  
 (c) India (d) Switzerland
69. Which of the following books was not written by an Indian author?  
 (a) The God of Small Things  
 (b) The White Tiger  
 (c) To Kill a Mockingbird  
 (d) Midnight's Children
70. With reference to Ecosystem, consider the following statements:  
 1. Producer is a starting point of any Ecosystem.  
 2. Flow of nutrients in Ecosystem is cyclic.  
 Which of the statements given above is/are correct?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
71. Which is the first state in India to impose an agriculture tax?  
 (a) Uttar Pradesh (b) Bihar  
 (c) Madhya Pradesh (d) Maharashtra
72. What is the length of the Atal Setu bridge in Maharashtra in kilometers?  
 (a) 17.8 km (b) 18.8 km  
 (c) 19.8 km (d) 21.8 km
73. What are the core values of the Indian Air Force (IAF)?  
 (a) Mission, Integrity, Excellence  
 (b) Touch the Sky with Glory  
 (c) Strength, Honor, Valor  
 (d) Service Before Self
74. INS Garuda is an Indian naval air station located in which Indian state?  
 (a) Tamil Nadu (b) Kerala  
 (c) Karnataka (d) Andhra Pradesh
75. "Sangeet Natak Akademi recognised Sattriya Nritya as one of the classical dance forms of India", which among the following states represents the origin of the Sattriya Nritya dance form?  
 (a) Odisha (b) Manipur  
 (c) Assam (d) West Bengal

## Reasoning and Military Aptitude Test

76. Identify the figure which satisfies the same condition of placement of dots as in given figure.



77. In a certain code language, 'SWISS' is written as 'HDRHH', and 'TABOO' is written as 'GZYL'. How will 'REHAB' be written in that language?  
 (a) HHGAK (b) IGASH  
 (c) IVSZY (d) BAHRE
78. In a certain code language, "ADD" is written as "8" and "SUB" is written as "41". How is "MUL" written in that code language?  
 (a) 44 (b) 45  
 (c) 43 (d) 42
79. If  $23@5=56$ ;  $6@7=26$ ;  $5@2=14$ ; then what is the value of  $7@5$ ?  
 (a) 26 (b) 24  
 (c) 19 (d) 52
80. In a certain coded language, Red is called Blue, Blue is called Black, Black is called White, White is called Yellow, Yellow is called Pink, Pink is called Brown, and Brown is called Orange. What will be the name of the movie "Sky is Pink" in the same coded language?  
 (a) Sky is Yellow (b) Sky is Orange  
 (c) Sky is White (d) Sky is Brown
81. Between 2 and 3 o'clock, at what time will the hands of the clock coincide.  
 (a)  $2:10\frac{10}{11}$  (b)  $2:10\frac{9}{11}$   
 (c)  $2:10\frac{8}{11}$  (d)  $2:10\frac{7}{11}$
82. My parents' wedding anniversary was celebrated on 4th December 2021 on Saturday, so what day will their anniversary be next year?  
 (a) Sunday (b) Tuesday  
 (c) Thursday (d) Saturday

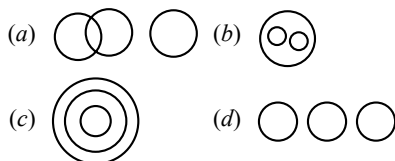
83. Kaliya is 13th from the left side and Gabbar is 20th from the right side in a row. They decided to interchange their positions, now Kaliya becomes 18th from the left side. What will Gabbar's position from the right?

(a) 22 (b) 24  
(c) 25 (d) 26

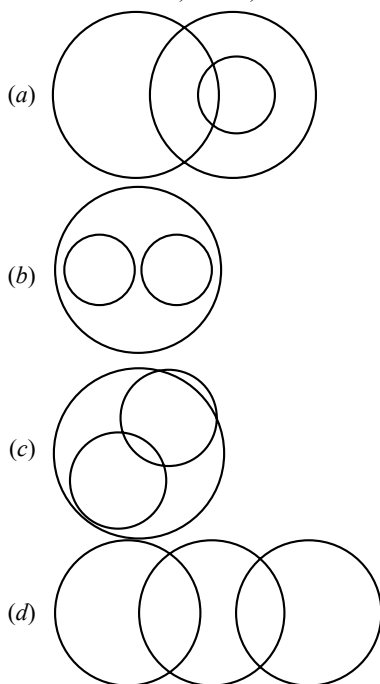
84. Showing a man, a woman said, "his brother's father is the only son of my grandfather". How is the woman related to the man?

(a) Aunt (b) Sister  
(c) Daughter (d) Mother

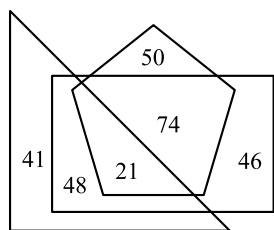
85. Select the Venn diagram that best illustrates the relationship between the following classes. Asia, India, Pakistan



86. Select the Venn diagram that best illustrates the relationship between the three given classes. Advocate, Males, Husband



87. In the given Venn diagram, the rectangle represents 'women', the pentagon represents 'entrepreneurs' and the triangle represents 'mothers'. The numbers given in the diagram represent the number of persons in that particular category.



How many women are entrepreneurs but NOT mothers?

(a) 21 (b) 74  
(c) 50 (d) 46

88. Arrange these letters of each group to make a meaningful word and then find the odd one out.

(a) RDAUSNO (b) EMOMCOROD  
(c) ANCEDOG (d) LARHSAM

89. If you arrange the following options, it will give you a meaningful word. Select the odd word from the given alternatives.

(a) EEWRTSA (b) KCTAEJ  
(c) EECFEL (d) ENBIAE

90. 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.

(a) MN (b) GT  
(c) KP (d) L

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

8	6	15	2	?	5
96	2	60	2	120	6

(a) 3 (b) 4  
(c) 8 (d) 14

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

2	8	6
5	4	9
7	5	4
14	17	?

(a) 20 (b) 19  
(c) 16 (d) 18

93. Select the option that is related to the third number in the same way as the second number is related to the first number and the sixth number is related to the fifth number.

21 : 112 :: 36 : ? :: 51 : 272

(a) 192 (b) 252  
(c) 72 (d) 198

94. Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term.

LOGO : PHPM :: MOCK : LDPN :: DEAR : ?

(a) EFBS (b) SBFE  
(c) SCFE (d) SBEF

95. Select the related letter cluster from the given alternative.

CFIL : ABCD :: ? : WXYZ

(a) YBEH (b) DCBA  
(c) JHPS (d) XURO

96. Vilas went from his home to his college. He started his journey facing east. First, he went 2 km straight; then he turned to his right and went 3 km: finally, he turned left and walked 4 km to reach his college. To which direction is Vilas's home located in relation to his college?

(a) South-west  
(b) North-east  
(c) South-East  
(d) North-west

97. Select the number from among the given options that can replace the question mark (?) in the following series.

1, 6, 25, 76, ?, 154

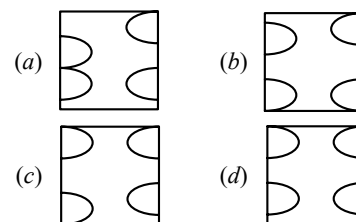
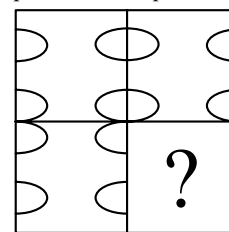
(a) 153 (b) 134  
(c) 164 (d) 123

98. Select the number from the given alternatives that can replace the question mark (?) in the following series.

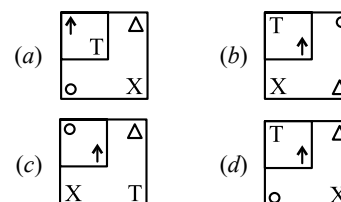
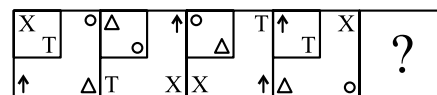
20, 21, 25, 34, ?, 75

(a) 45 (b) 21  
(c) 55 (d) 50

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



100. Which figure should replace the question mark (?) if the series were to be continued?



# Answer Key and Solutions



1. (b) The phrase "Neither of the" is followed by a plural noun and singular verb when referring to two people or things.

"are" should be corrected to "is," as "Neither" is singular and requires a singular verb.

2. (b) The phrase "awaiting for" should be corrected to "awaiting."

The verb "await" means "wait for," so using "for" after "await" is redundant.

The correct form should simply be "awaiting."

3. (a) "Childrens" should be corrected to "Children."

"Children" is already the plural form of "child," so adding an "s" is incorrect.

4. (b) "A scissors" should be corrected to "a pair of scissors".

"Scissors" is a plural noun and is always referred to as "a pair of scissors" when using the indefinite article "a."

5. (d) Lets look into the meaning of all the option given:

"Keeping on"- means to persist or to continue doing something despite challenges or difficulties.

"Getting up"- means to rise from a lying or sitting position, usually in the morning.

"Going on"- means to be happening or to be in progress.

"Carrying on"- means to continue or to keep doing something.

The correct answer is "carrying on" as it means to continue or to keep doing something.

Hence, the correct answer is Option (d), i.e., "Carrying on".

6. (a) "If" introduces a conditional clause, indicating that the speaker's desire to go to the concert depends on finding a babysitter. This creates a logical connection between the two parts of the sentence.

"May" expresses possibility.

"Unless" suggests the opposite condition which is not stated in this sentence.

"Because" implies a reason for the desire to go to the concert.

7. (a) The given sentence refers to an unlikely situation. The present perfect tense is used to express the idea that something has never happened i.e.

'have always wondered'.

'have always wonder' and 'have always wondering' are incorrect because the 'have' always takes the 3rd form of the verb.

'Am always wonder' is also incorrect because of the incorrect grammar.

8. (a) The correct answer is option (a).

A. Callous refers to showing or having an insensitive and cruel disregard for others. Hence this word is contextually correct.

B. Compassionate refers to feeling or showing sympathy and concern for others.

C. Benevolent refers to well-meaning and kindly.

D. Indurate refers to harden.

9. (d) A "dilemma" is a situation in which a difficult choice has to be made between two or more alternatives, often equally undesirable. The word "quandary" also means a state of uncertainty or perplexity, which closely matches the meaning of "dilemma." The other options do not convey the same meaning:

"Blessing" refers to something beneficial.

"Benefit" is an advantage.

"Agreement" refers to harmony or a mutual understanding.

10. (b) "Blare" means a loud, harsh sound, which is similar to a "roar." The other options do not match this meaning:

"Gurgle" refers to a bubbling sound.

"Plash" refers to the sound of liquid, such as splashing.

"Hum" refers to a low, continuous sound.

11. (b) "Decrepit" means old and worn out, often referring to something that is in a state of disrepair. "Dilapidated" is the closest synonym, meaning something that is decayed or in a state of ruin. The other options do not convey this meaning:

"Sturdy" means strong and well-built.

"Uninterrupted" refers to something that is continuous without a break.

"Stout" means strong, thick, or resolute.

12. (a) **Tyranny:** cruel and oppressive government or rule

**Autonomy:** the right or condition of self-government

**Oppression:** prolonged cruel or unjust treatment or control

**Hatred:** intense or passionate dislike.

**Mystery:** something that is difficult or impossible to understand or explain

13. (c) **Entice:** attract or tempt by offering pleasure or advantage.

**Repulse:** to drive back by force or cause to feel intense distaste and aversion.

**Authorize:** give official permission for or approval to (an undertaking or agent).

**Baffle:** to confuse or perplex someone

**Misplace:** to lose something temporarily by forgetting where you have put it

Hence, option (c) is the correct answer.

14. (d) **Scuffle:** A brief and disorderly struggle or fight; a skirmish.

**Battle:** A prolonged and intense fight between armed forces or opposing groups.

**Combat:** An active struggle between competing entities; a fight or conflict.

**Conflict:** A serious disagreement or argument, typically a prolonged one.

**Truce:** An agreement between enemies or opponents to temporarily stop fighting; a ceasefire.

Hence, the correct answer is "Truce".

15. (b) Hipparchus is credited with cataloging over 800 stars using the naked eye and developing the brightness scale that is still in use today. This systematic and quantitative approach is a key contribution to the empirical methods in modern astronomy.

16. (c) Ancient astronomy viewed the sky as a static array, while modern astronomy reveals dynamic phenomena like black holes and galaxies.

The passage highlights that ancient astronomers saw the sky as a two-dimensional array of constellations. In contrast, modern astronomy, with advanced technology, reveals a dynamic universe filled with complex phenomena such as black holes and galaxies.

17. (c) All three statements are supported by the passage. The Greeks applied mathematical and observational methods, modern astronomy has expanded to include subfields like astrophysics and cosmology, and ancient monuments like Stonehenge reflect the significance of sky-watching in ancient cultures.

18. (b) The first-generation small modular reactors are expected to use lowenriched uranium in facilities assembled on-site with factory-made parts, to produce waste that can be handled using existing technologies and power that can be sold at economical rates.

19. (a) Between the eighth and eleventh centuries A. D., the Byzantine Empire staged an almost unparalleled economic and cultural revival, a recovery that is all the more striking because it followed a long period of severe internal decline.

20. (b) In the two decades between 1910 and 1930, over ten percent of the Black population of the United States left the South, where the preponderance of the Black population had been located, and migrated to northern states, with the largest number moving, it is claimed, between 1916 and 1918.

21. (b) Hollow : without real value/Without significance. So (b) is the right option.

Momentary victory is worthless/meaningless.  
consequential : important; that will have important results.  
void - completely without something.  
spatial - relating to space and the position, size, shape, etc. of things in it.

22. (b) Without - not having.

'Without' is itself a negative preposition so it has got a negative meaning. In negative sentences, non assertive words are used.

So 'anything' is the right option.

23. (b) 'It' is a singular subject so it will take a singular verb. On this basis option A got eliminated.

Main clause is in the present tense so it will use the present tense.

**Has had - present perfect.**

Had had - past perfect.

Had - past simple

24. (b) "Paint the town red" means to go out and enjoy yourself by drinking alcohol, dancing, laughing with friends, etc.

25. (c) Cool one's heels – **to be kept waiting**

26. (b) **cut someone some slack-** to give someone additional freedom

The idiom "cut us some slack" means **to be lenient or give someone a break**. Given that it was the last day of class, it makes sense that the teachers might have been more lenient with the students.

The other options do not fit the context or convey the correct meaning:

"Cut us down to size" means to humble someone.

"Cut us out of the class" suggests exclusion.

"Cut us short" implies to stop someone from talking before they have finished what they were saying

27. (d) The relationship between "Window" and "Pane" is that a window typically has panes (a framed sheet of glass in a window or door). Similarly, a book consists of "pages," which is the primary component of a book.

28. (b) Both Pernicious and Malignant carry a sense of extreme harm or evil; they describe something extremely detrimental or dangerous.

Likewise, Noxious and Nasty are words that denote extreme unpleasantness or harmfulness.

Noxious signifies something physically harmful or poisonous, while Poisonous implies causing or capable of causing death.

Let's see the other given options:

**Option (a) (Harmful : Helpful):** These words represent direct opposites, but they don't reflect the extreme, malevolent nature that Pernicious and Malignant carry.

**Option (c) (Destructive : Constructive):** These words represent opposite actions or qualities, but they don't capture the malevolent and extremely harmful sense of Pernicious and Malignant.

**Option (d) (Detrimental : Advantageous):** These words represent opposing effects, but they don't mirror the strong negative connotations and extreme harm indicated by Pernicious and Malignant.

29. (b) **Gerascophobia is the fear of aging.**

**Claustrophobia** is the fear of confined spaces.

**Thanatophobia** is the fear of death.

**Acrophobia** is the fear of heights.

Hence, the correct term for the fear of aging is "Gerascophobia."

30. (b) **Altruist** means A lover of mankind.

Synonym: Philanthropist

Antonym: Misanthrope

31. (a) Let the two numbers be  $x$  and  $y$ .

Here

$$(x + y)^2 = 90 \quad \dots (i)$$

$$(x - y)^2 = 46 \quad \dots (ii)$$

Subtracting eq. (ii) from eq. (i)

$$(x + y)^2 - (x - y)^2 = 90 - 46$$

$$\Rightarrow 4xy = 44$$

$$\Rightarrow xy = 11$$

32. (b) Let the rate of interest be  $R$ .

$$\Rightarrow 1348.32 = 1200 \left(1 + \frac{R}{100}\right)^2$$

$$\Rightarrow \left(1 + \frac{R}{100}\right)^2 = \frac{1348.32}{1200}$$

$$\Rightarrow \left(1 + \frac{R}{100}\right)^2 = \frac{11236}{10000}$$

$$\Rightarrow 1 + \frac{R}{100} = \frac{106}{100}$$

$$\Rightarrow R = 6\%$$

33. (d) Let CP be 100.

Profit = 30%

$$\therefore SP = 130$$

$$\text{Now, profit on selling price} = \left(\frac{30}{130}\right) \times 100$$

$$= 23.07\%$$

34. (c) Let the distance be  $D$  km.

$$\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{D}{\left(\frac{45}{60}\right)} = \frac{60D}{45}$$

$$= \frac{4D}{3} \text{ km/h}$$

$$\text{New speed} = \left(\frac{4D}{3}\right) - 5 = \frac{(4D - 15)}{3} \text{ km/h}$$

$$\text{New time} = 45 \text{ min} + 3 \text{ min} = 48 \text{ min}$$

$$\frac{48}{60} \times \frac{(4D - 15)}{3} = D$$

$$\Rightarrow 16(4D - 15) = 60D$$

$$\Rightarrow 4(4D - 15) = 15D$$

$$\Rightarrow 16D - 60 = 15D$$

$$\Rightarrow D = 60$$

$$35. (c) \frac{a}{b} = \frac{3}{5}$$

$$\Rightarrow a = \frac{3b}{5}$$

$$\Rightarrow 2a = \frac{6b}{5} \quad \dots (i)$$

$$\frac{b}{c} = \frac{7}{8}$$

$$\Rightarrow 7c = 8b \quad \dots (ii)$$

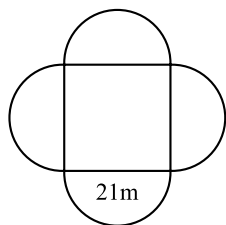
Using eqn. (i) and (ii) in  $(2a : 3b : 7c)$

$$\Rightarrow \frac{6b}{5} : 3b : 8b$$

$$\Rightarrow 6 : 15 : 40$$

36. (a) Length of the fence

$$= 4\pi R \text{ where, } R = \frac{21}{2} m$$



$$\Rightarrow 4\pi R \Rightarrow 4 \times \frac{22}{7} \times \frac{21}{2} m$$

$$= 132 m$$

$$\text{Cost of fencing} = ₹ \left( 132 \times \frac{25}{2} \right) = ₹ 1650$$

37. (d) Sum of ages of five persons =  $28 \times 5 = 140$

Sum of ages of four persons =  $26 \times 4 = 104$

The age of the excluded person

$$= 140 - 104 = 36 \text{ years.}$$

38. (a)  $CP = 30 \times \frac{100}{150} = ₹ 20$  per kg

$$\frac{\text{Quantity of cheaper}}{\text{Quantity of dearer}}$$

$$= \frac{\text{Dearer price} - \text{Mean price}}{\text{Mean price} - \text{Cheaper price}}$$

$$\text{Required ratio} = \frac{24.8 - 20}{20 - 18} = \frac{12}{5} = 12 : 5$$

39. (a) Let SP of 1 kg rice = ₹ 1

$$\text{CP of 80 kg rice} = 80 \times \frac{90}{100} = ₹ 72$$

$$\text{Rice got free on 80 kg} = \frac{80}{20} = 4 \text{ kg}$$

$$\text{Total rice} = 80 + 4 = 84 \text{ kg}$$

$$\text{Total SP of total rice} = ₹ 84$$

$$\text{Profit} = 84 - 72 = ₹ 12$$

$$\text{Profit percentage} = \left[ \frac{12}{72} \right] \times 100 = 16 \frac{2}{3} \%$$

40. (c) Rate = 4% per annum which is 2% per half-yearly

$$\text{Time} = 1 \text{ year} = 2 \text{ half-years}$$

$$A = P \left( 1 + \frac{R}{100} \right)^t$$

$$A = 8000 \left( 1 + \frac{2}{100} \right)^2$$

$$= 8000 \left( \frac{51}{50} \right)^2$$

$$= ₹ 8323.20$$

$$\text{Interest} = A - P = 8323.20 - 8000$$

$$= ₹ 323.20$$

41. (c) Let the amount borrowed =  $p$

$$\text{Then, } 405 = \frac{p \times 5 \times 4}{100} + \frac{p \times 4 \times 4}{100}$$

$$\Rightarrow 40500 = 36p$$

$$\Rightarrow p = ₹ 1125$$

42. (d) Smallest 5-digit number = 10000

$$\text{On dividing 10000 by 243, we get}$$

$$\text{Remainder} = 37$$

$$\text{So, } 243 - 37 = 206$$

$$206 \text{ should be added to 10000 to get the smallest 5-digit number divisible by 243.}$$

$$\text{Required number} = 10000 + 206 = 10206$$

43. (b) Let the initial price of cooking gas be ₹ 100

$$\text{Price after increase} = ₹ 115$$

$$\text{On ₹ 115 he should reduce ₹ 15.}$$

$$\text{Percentage decrease in consumption}$$

$$= \frac{15}{115} \times 100 = 13 \frac{1}{23} \%$$

#### Short method:

If price of a commodity is increased (or decreased) by  $x\%$ , then the decrease (or increase) in consumption, so as not to increase (or decrease) the expenditure is

$$\left( \frac{x}{100 \pm x} \times 100 \right) \%$$

$$\text{Here } x = 15\%$$

$$\text{Reduction in consumption}$$

$$= \left( \frac{x}{100 + x} \times 100 \right) \%$$

$$= \frac{15}{115} \times 100\% = 13 \frac{1}{23} \%$$

44. (c) (A's one day's work) : (B's one day's work)

$$= 150 : 100 = 3 : 2$$

$$\text{Let A's one day's work be } 3x \text{ and B's one day's work be } 2x.$$

$$\therefore \text{C's one day's work} = \frac{(3x + 2x)}{2} = \frac{5x}{2}$$

$$\text{Now, } \frac{5x}{2} = \frac{1}{40}$$

$$\Rightarrow x = \left( \frac{1}{40} \right) \times \frac{2}{5}$$

$$\Rightarrow x = \frac{1}{100}$$

$$\therefore (A + B + C)'s \text{ one day's work:}$$

$$\Rightarrow \frac{3}{100} + \frac{1}{50} + \frac{1}{40}$$

$$\Rightarrow \frac{15}{200}$$

$$\Rightarrow \frac{3}{40} = (A + B + C)'s \text{ one day work}$$

$$A, B, C \text{ can complete the whole work in } \frac{40}{3} \text{ days.}$$

45. (a) Interest rate for 8 monthly =  $15 \times \frac{8}{12}$

$$= 10\%$$

$$\text{Let the share of Anuj be } x.$$

$$\text{As per the question,}$$

$$x \left( 1 + \frac{10}{100} \right)^3 = (8400 - x) \left( 1 + \frac{10}{100} \right)^4$$

$$\Rightarrow x = (8400 - x) \times \frac{11}{10}$$

$$10x = 11 \times 8400 - 11x$$

$$\Rightarrow 21x = 11 \times 8400$$

$$\Rightarrow ₹ 4400$$

$$\text{Anuj's share in the given sum is ₹ 4400}$$

46. (b) Total number of events =  ${}^{12}C_2$

$$\frac{(12!)}{(2! \times 10!)}$$

$$= 6 \times 11 = 66$$

$$\text{Number of favourable events}$$

$$= {}^4C_2 = \frac{(4!)}{(2! \times 2!)}$$

$$= \frac{(4 \times 3)}{2} = 6$$

$$\text{Probability of getting exactly two rotten apples}$$

$$= \frac{6}{66} = \frac{1}{11}$$

47. (a) Revenue = price  $\times$  sales

$$\text{Let the original price per item be ₹ 100.}$$

$$\text{and the number of items sold be 100.}$$

$$\text{Then, original revenue} = 100 \times 100$$

$$= ₹ 10000.$$

$$\text{New price} = (100 - 20) \% \text{ of } 100 = ₹ 80$$

$$\text{New revenue} = (100 + 25) \% \text{ of } 10000$$

$$= ₹ 12500$$

$$\text{New number of items sold}$$

$$= \frac{12500}{80} = 156.25 = 156.25$$

$$\text{Percentage increase in the number of items sold}$$

$$= \frac{156.25 - 100}{100} \times 100 = 56.25\%$$

$$\text{Hence, the value of } x = 56.25$$

48. (b) A can finish the work in 25 days.

$$\text{So, in one day A can do } \left( \frac{100}{25} \right) \% = 4\% \text{ of the work.}$$



∴ In 5 days, working alone he can finish  
 $5 \times 4 = 20\%$  of the work.

B can finish the work in 16 days.

So, in one day he can finish

$$\left(\frac{100}{16}\right)\% = 6.25\% \text{ of the work.}$$

Now, remaining work =  $(100 - 20)\% = 80\%$

A and B together can do =  $(4\% + 6.25\%)$

= 10.25%

Hence, time taken days

$$= \left(\frac{80}{10.25}\right) = 7.8 \approx 8 \text{ days (approx).}$$

So, total time taken =  $5 + 8 = 13$  days.

49. (c) Area of field =  $\pi r^2$

$$= \frac{22}{7} \times 42 \times 42 = 5544 \text{ ft}^2$$

$$\text{Number of days required} = \frac{5544}{154}$$

= 36 days

50. (b) Let the marked price of the machine be ₹100x.

S.P after a discount of 10% =  $(100 - 10)\%$  of  $100x = 90x$

$$\text{S.P after gain } 10\% = \frac{90x \times 110}{100} = 99x$$

If 99 is the S.P the marked

$$\text{price} = \frac{100x}{99x} \times 5940 = ₹6000$$

Amount of discount received by the retailer  
 10% of 6000

$$= \frac{6000 \times 10}{100} = ₹600$$

51. (b) Indian Army's 'Major' rank is equivalent to 'Squadron Leader' of Indian Air Force.

This equivalence is part of the structured ranking system across the Indian Armed Forces, which ensures that ranks reflect similar levels of responsibility and authority across different branches

52. (c) **Lord Dalhousie:** Known for the Doctrine of Lapse.

**Lord Ripon:** Known for the Introduction of local self-government.

**Lord Curzon:** Known for the Partition of Bengal.

**Lord William Bentinck:** Known for the Abolition of sati system.

53. (c) A **stellar day**, also known as a **sidereal day**, is the **time it takes for the Earth to complete one full rotation on its axis relative to distant stars.**

It is approximately **23 hours, 56 minutes, and 4 seconds.**

This period is slightly shorter than a solar day, which is about 24 hours, because the Earth is also moving along its orbit around the Sun, requiring a little extra rotation to face the Sun again.

54. (b) The 17th edition of Joint Military Exercise SURYA KIRAN was conducted in Pithoragarh, Uttarakhand, from November 24th to December 7th, 2023.

It is a joint military exercise between the **Indian army and the Nepali army.**

It is an annual event and is conducted alternately in the two countries.

55. (c) Naval Detachment Minicoy has commissioned as **INS Jatayu**, an upgraded naval base by the **Indian Navy** to resolve to incrementally augment security infrastructure at the strategic Lakshadweep Islands.

**INS Jatayu is the country's second naval base in Lakshadweep.**

It will **enhance the operational reach of the Navy in the Indian Ocean**, a vital strategic imperative as China seeks to increase its footprint in the region.

The **Navy's first base on the islands, INS Dweep prakshak in Kavaratti, was commissioned in 2012.**

56. (d) **K P Sharma Oli was appointed Nepal's Prime Minister** for the third time on to lead the new coalition government.

K P Sharma Oli, 72, succeeds Pushpa Kamal Dahal Prachanda **who lost the vote of confidence in the House of Representatives**, leading to the formation of the new government process as per Article 76 (2) of the Constitution.

President Ram Chandra Paudel appointed **K P Sharma Oli as the new Prime Minister of the Communist Party of Nepal-Unified Marxist Leninist (CPN-UML)-Nepali Congress (NC) coalition.**

57. (a) **Nalanda University** was founded by the **Gupta Dynasty in the 5th century CE** during the reign of **Kumaragupta I.**

The university flourished under the patronage of the Gupta Empire in the **5th and 6th centuries CE.**

It attracted scholars and students from near and far, including **Tibet, China, Korea, and Central Asia.**

The Gupta Dynasty is known for its **cultural achievements and the liberal traditions** that resulted in a period of growth and prosperity for Nalanda until the 9th century CE.

58. (b) The Dead Sea has an **extremely high salinity level**, approximately **240 parts per thousand (ppt)**, making it one of the saltiest bodies of water in the world.

**Red Sea:** While it has high salinity, it is not as high as that of the Dead Sea.

**Mediterranean Sea:** The Mediterranean Sea has a salinity of about **38 ppt**, which is significantly lower than that of the Dead Sea.

**Black Sea:** The Black Sea has a much lower salinity, averaging around **15-18 ppt**, due to the influx of freshwater from rivers.

59. (b) The **Nagi and Nakti Bird sanctuaries situated in Jamui district in Bihar** are human-made wetlands and provide a natural habitat for a wide variety of flora and fauna, especially birds.

The sanctuaries are spread across 791 and 333 hectares and were developed primarily for irrigation through the construction of Nakti Dam.

60. (c) According to the recent Supreme Court directive, the percentage of posts in the Supreme Court Bar Association (SCBA) that must be reserved for women is **33%.**

The **Supreme Court mandated** that at least **one-third** of the posts in the executive committee of the SCBA should be reserved for women, which translates to a **minimum of 33%.**

61. (d) The **Namami Gange Programme** is implemented under the **Ministry of Jal Shakti**, specifically through the Department of Water Resources, River Development, and Ganga Rejuvenation.

This integrated conservation mission was launched to address pollution and promote the rejuvenation of the Ganga River.

62. (b) There are **5 players** in a basketball team.

It is played between two teams of **five players each on a rectangular court, usually indoors.**

Each team tries to score by tossing the ball through the opponent's goal, an elevated horizontal hoop and net called a basket.

63. (a) The **Indian Air Force's Rafale fighter jets** has participated in a military exercise in **France called Orion 23**, which involves thousands of **NATO** troops.

The exercise aims to enhance military cooperation and interoperability among participating nations.

64. (b) The sector that includes the industries where finished products are made from natural materials is known as the **Secondary Sector.**

The economic sectors are typically classified into three main categories:

**Primary Sector:** Involves the extraction and production of raw materials from the natural environment, such as agriculture, mining, forestry, and fishing.

**Secondary Sector:** Involves the processing and manufacturing of raw materials into finished goods. This sector includes industries like manufacturing, construction, and utilities.

**Tertiary Sector:** Involves the provision of services, such as retail, education, healthcare, and entertainment.

65. (d) A slam dunk, also simply known as **dunk**, is a type of basketball shot that is performed when a player jumps in the air, controls the ball above the horizontal plane of the rim, and scores by shoving the ball directly through the basket with one or both hands.

66. (d) **Arboriculture is the cultivation, management, and study of individual trees, shrubs, vines, and other perennial woody plants.**

It focuses on the care of trees and shrubs primarily for landscape and ornamental purposes.

**Sericulture** is related to the rearing of silkworms for silk production.

**Horticulture** involves the cultivation of fruits, vegetables, flowers, and ornamental plants.

**Viticulture** refers to the cultivation and harvesting of grapes, primarily for winemaking.

67. (a) Windmills are devices that convert kinetic energy (the energy of motion) from the wind into electrical energy.

Windmills do not directly convert solar, thermal, chemical, or nuclear energy into another form; they specifically harness the kinetic energy of the wind to produce electricity.

68. (c) **India successfully concluded hosting of the 46th Antarctic Treaty Consultative Meeting (ATCM-46) and the 26th Committee on Environmental Protection (CEP26) in Kochi, Kerala.**

The ATCM-46 was held with the overarching theme of *Vasudhaiva Kutumbakam*, a Sanskrit phrase that means one Earth, one family, one future.

69. (c) **"The God of Small Things"** was written by **Arundhati Roy**, an Indian author.

**"The White Tiger"** was written by **Aravind Adiga**, also an Indian author.

**"Midnight's Children"** was written by **Salman Rushdie**, an author of Indian descent.

**"To Kill a Mockingbird"** was written by **Harper Lee**, an **American author**, making it the book not written by an Indian author.

70. (c) **Statement 1 is correct: Every food web in every ecosystem is built on producers, who occupy what is known as the first trophic level of the food web.** Primary consumers, also known as herbivores, or animals that consume plants, make up the second trophic level.

**Statement 2 is correct: Flow of nutrients in Ecosystem is cyclic.** The biogeochemical cycle is the term used to describe the periodic flow of nutrients through an ecosystem. In an ecosystem, nutrients that are required for organism growth are continuously transferred from abiotic to biotic factors and from biotic to abiotic factors.

Hence both 1 and 2 statements are correct.

71. (b) **Bihar** was the first state in India to impose an **agricultural tax**.

This tax was introduced to generate revenue from agricultural produce, given that agriculture is a significant part of the state's economy.

72. (d) The Mumbai Trans Harbour Link, officially named as **Atal Bihari Vajpayee Sewri-Nhava Sheva Atal Setu** and colloquially known as **Atal Setu**, is a 21.8 km (13.5 mi) 6-lane grade separated expressway bridge, which connects **Mumbai with Navi Mumbai**, its satellite city.

73. (a) **Mission, Integrity, Excellence** is the core values of IAF, which state that the IAF is guided by these three core values that form the foundation of its operational philosophy and organizational culture.

74. (b) **INS Garuda** is a **naval air station of the Indian Navy**.

It is located in **Kochi, in the state of Kerala**.

It serves as a base for various naval aircraft and is one of the major air stations under the Southern Naval Command of the Indian Navy.

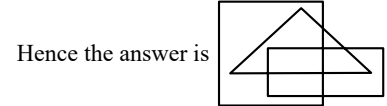
75. (c) **Sattriya Nritya** is a classical dance form that originated in **Assam, India**.

It was initially created as part of the **Sattras, the Vaishnavite monasteries**, as a cultural expression within the context of the **Bhaona performances**.

Sankardev, the 15th-16th century polymath from Assam, played a key role in developing **Sattriya Nritya** as a form of artistic expression within the region's broader cultural and religious practices.

76. (d) Here, in the given figure, first dot lies in square region only and second dot lies

in rectangle and square region and the third dot lies in the region common to triangle and rectangle. So, the option which consists of these regions is the answers.



77. (c)

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

'SWISS' → opposite letters ← 'HRRHH'

'TABOO' → opposite letters ← 'GZYLL'

Similarly, 'REHAB' → opposite letters ← 'IVSZY'.

78. (b) "ADD" is written as "8"

Place value of A = 1, D = 4, D = 4

ADD →  $(1 + 4 + 4) - 1 = 9 - 1 = 8$

Place value of S = 19, U = 21, B = 2

SUB →  $(19 + 21 + 2) - 1 = 42 - 1 = 41$

Similarly,

Place value of M = 13, U = 21, L = 12

MUL →  $(13 + 21 + 12) - 1 = 46 - 1 = 45$

79. (b)  $(23 + 5) \times 2 = 56$

$= (6 + 7) \times 2 = 26$

$= (5 + 2) \times 2 = 14$

Similarly,

$= (7 + 5) \times 2 = 24$

80. (d) As in the coded language, Pink is called Brown. Therefore, Sky is Pink will be written as Sky is Brown.

81. (a) In the event of coincidence, the angle between the two needles will be zero degree.

$$\text{Angle} = \frac{60H - 11M}{2}$$

$$\therefore 0 = \frac{60 \times 2 - 11M}{2}$$

$$\Rightarrow 0 = 120 - 11M = 120$$

$$M = \frac{120}{11} = 10\frac{10}{11}$$

$\therefore$  The hands of the clock will coincide at  $2 : 10\frac{10}{11}$ .

82. (a) We know that in any two consecutive non-leap years, the exact date of the year will be one day ahead of the exact date of the previous year. If 4 December 2021 is on Saturday

Then, 4 December 2022 will be on: Saturday + 1 = Sunday.

83. (c) After interchanging position, Kaliya becomes 18th from left side.

Now from formula,

Total number of people = (Position from Left + Position from Right) - 1

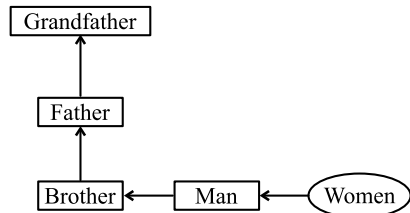
$$(18 + 20) - 1 = 37.$$

Let Gabbar's position from the right side be  $x$ .

$$\text{Then, } 37 = (13 + x) - 1$$

$$\Rightarrow 38 = 13 + x \Rightarrow 25 = x$$

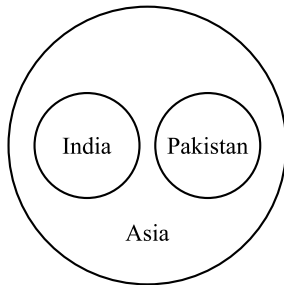
84. (b) According to the given instructions, the following diagram can be drawn:



We can see that, father of the man is father of the woman. So, the woman will be the sister of the man.

85. (b) We can see that India and Pakistan are independent countries in Asia.

Thus, the best representation of the scenario is:

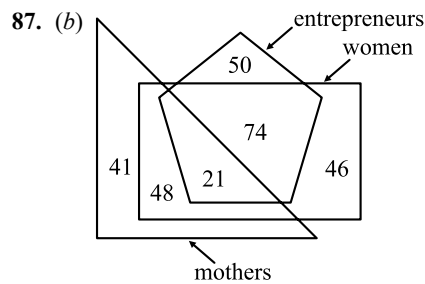
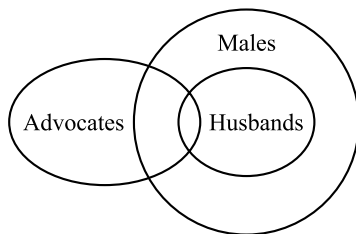


86. (a) All husbands are male. Husbands may or may not be

Advocates. So, some husbands are advocates.

Advocates can be male or female. So, some advocates are male.

So, the correct venn diagram illustrating their relationship is as follows:



The number in the intersection of the rectangle and pentagon which is outside of the triangle is 74.

88. (c) Given Words  $\rightarrow$  Meaningful Words  
RDQUSNO  $\rightarrow$  SQUADRON  
EMOMCOROD  $\rightarrow$  COMMODORE  
ANCEDOG  $\rightarrow$  DECAGON  
LARHSAM  $\rightarrow$  MARSHAL

Except Decagon, all others are related to Indian Air Force. So, "ANCEDOG" is the odd one out.

89. (c) 1. EEWSTA  $\rightarrow$  SWEATER  
2. KCTAEJ  $\rightarrow$  JACKET  
3. EECFEL  $\rightarrow$  FLEECE  
4. ENBIAE  $\rightarrow$  BEANIE

Sweater, Jacket and Beanie are woollen clothes whereas Fleece is a warm fabric.

90. (d) MN  $\Rightarrow$  M is the opposite letter of N.  
GT  $\Rightarrow$  G is the opposite letter of T.  
KP  $\Rightarrow$  K is the opposite letter of P.  
QL  $\Rightarrow$  Q is the opposite letter of J and L is the opposite letter of O.

91. (b) As,  $8 \times 6 \times 2 = 96$

$$\text{And } 15 \times 2 \times 2 = 60$$

Similarly,

$$? \times 5 \times 6 = 120$$

$$\Rightarrow ? = \frac{120}{30} = 4$$

92. (b) In the first column:  $2 + 5 + 7 = 14$

$$\text{In the second column: } 8 + 4 + 5 = 17$$

Similarly,

$$\text{In the third column: } 6 + 9 + 4 = 19$$

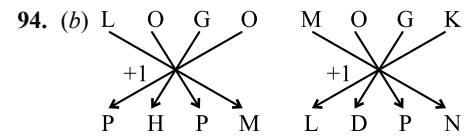
93. (a) The logic followed here is as follows:

$$\text{As, } 21 \times 5 + (21 \div 3) = 105 + 7 = 112$$

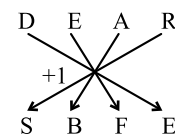
$$51 \times 5 + (51 \div 3) = 255 + 17 = 272$$

Similarly,

$$36 \times 5 + (36 \div 3) = 180 + 12 = 192$$

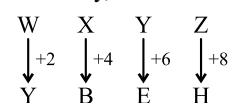


Similarly,

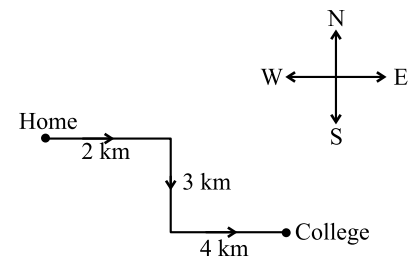


95. (a) A  $\downarrow +2$  C  
B  $\downarrow +4$  F  
C  $\downarrow +6$  I  
D  $\downarrow +8$  L

Similarly,



96. (d) According to the question, the instruction given can be plotted as follows.



So it's clear that Vilas's home is in the North-West direction from the college.

97. (a) The pattern followed is:

$$1 \times 5 + 1 = 6$$

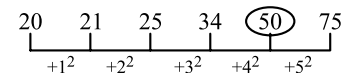
$$6 \times 4 + 1 = 25$$

$$25 \times 3 + 1 = 76$$

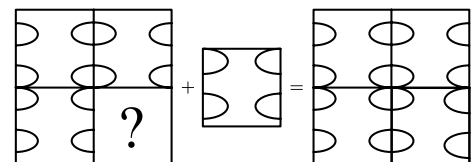
$$76 \times 2 + 1 = 153$$

$$153 \times 1 + 1 = 154$$

98. (d) The pattern is as follows:



99. (d)



100. (d)

