

1. If 'summer is hot' is coded as 'de fe ba' and 'come cold summer' as 'ja ha ba' and 'winter is cold' as 'pa ja de' then 'come hot winter' is coded as _____.
(a) de ba ja (b) fe ba pa
(c) ba pa ha (d) pa ha fe
2. What is the minimum number to be subtracted from 6321, which makes it completely divisible by 14?
(a) 8 (b) 12
(c) 7 (d) 11
3. Jahangir was the _____ Mughal emperor of India.
(a) 3rd (b) 4th
(c) 5th (d) 6th
4. If P means '+', R means '×', Q means '+', and S means '-', the
48 P 8 Q 6 R 9 S 31 = ?
(a) 60 (b) 29
(c) 31 (d) 54
5. _____ granted charter to East India Company to establish trading posts in India in 1600.
(a) Queen Elizabeth I
(b) Queen Elizabeth II
(c) King George V
(d) King George VI
6. Ramdas invested Rs. 90000 in a cosmetic business. After few months, Shyamdas joined him with Rs. 30000. At the end of the year, the total profit was divided between them in ratio 4 : 1. After how many months did Shyamdas joined business?
(a) 4 (b) 3
(c) 1 (d) 6
7. Methane is known as _____.
(a) Laughing gas
(b) Tear gas
(c) Marsh gas
(d) Non-greenhouse gas
8. Hawa Mahal in Jaipur is constructed using
(a) White and green marble
(b) granite
(c) Red and Pink sandstone
(d) Normal rocks
9. If the angles of a triangle are in the ratio of 1 : 2 : 3, then find the value of the largest angle.
(a) 30° (b) 60°
(c) 90° (d) 120°
10. Read the given statements carefully and answer the question.
Statement: Though the school bags policy has been announced, it is not clear how many schools are following it. The state Government is also clueless whether schools have implemented the rules.
Which of the following is true according to the given statement?
(a) School bags policy has been implemented by the Government.
(b) Schools are not interested in following the rules.
(c) There is no monitoring system
(d) State Government is not interested in follow-up.
11. The concept of the game of _____ is eliminating an opponent by touching.
(a) Karate (b) Kabaddi
(c) Judo (d) Kalari
12. The mean of 22 observations is 10. Two more observations are included and the new mean becomes 11. The mean of two new observations is
(a) 19 (b) 20
(c) 21 (d) 22
13. An angle is 10° more than one third of its complement. Find the greater angle.
(a) 30° (b) 60°
(c) 45° (d) 75°
14. Neelam and Manisha starting from the same place run at a rate of 7 kmph and 9 kmph respectively. What time will they take to be 12 km apart. If they walk in the same direction?
(a) 3 hours (b) 6 hours
(c) 12 hours (d) 9 hours
15. Delhi metro covers a distance in 40 minutes, if it runs at a speed of 48 kmph on an average. Find the speed at which the train must run to reduce the time of journey to 32 minutes:
(a) 60 kmph (b) 50 kmph
(c) 70 kmph (d) 80 kmph
16. The mean of a distribution is 13 and the standard deviation is 7. What is the value of the coefficient variation?
(a) 50% (b) 76.77%
(c) 53.85% (d) 38.88%
17. A car stops on applying brakes mainly due to _____ force.
(a) Gravitational (b) Centripetal
(c) Frictional (d) Centrifugal
18. Statements followed by some conclusions are given below.
Statements:
1. Knowledge is not a skill. It is learning and experience.
2. The illiterate are not those who cannot read and write but those who cannot learn.
Conclusions:
I. Those who cannot read and write are literate.
II. Knowledge and skill are two different things.
Find which of the given conclusions logically follows from the given statements.
(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) Neither I nor II follows.
19. Statements followed by some conclusions are given below.
Statements:
1. Depleting natural resources is a major concern in our country.
2. Unless we go for renewable energy sources in a big way, increase in population being a heavy burden on the energy resources, will reduce the quality of life.
Conclusions:
I. Depleting resources impacts quality of life.
II. Use of renewable energy sources is a solution to counter increase in population.
Find which of the given conclusions logically follows from the given statements.
(a) Only conclusion I follows.
(b) Only conclusion II follows.
(c) Both I and II follow.
(d) Neither I nor II follows.
20. Quartz used in clocks is _____.
(a) Nitrogen silicate
(b) Silicon dioxide
(c) Sodium silicate
(d) Calcium silicate
21. The head of the state in India is the _____.
(a) Prime Minister
(b) President
(c) Parliament
(d) Chief Justice of India

22. Name the type of government in Bangladesh.
 (a) Islamic Republic
 (b) Parliamentary Democracy
 (c) Federal Republic
 (d) Constitutional Monarchy
23. Which pair is not exactly similar to the other three pairs?
 (a) Principal : School
 (b) Pages : Note book
 (c) Letters : Word
 (d) Students : Class
24. Which Indian state shares its borders with the maximum number of other Indian states?
 (a) Manipur (b) West Bengal
 (c) Assam (d) Uttarakhand
25. _____ does not refer to the game of playing card.
 (a) Bridge (b) Blackjack
 (c) Squash (d) Solitaire
26. _____ was appointed as one of the Goodwill Ambassadors by UNDP in March 2016.
 (a) Ashley Judd (b) Michelle Yeoh
 (c) Merrick Garland (d) Hilary Clinton
27. _____ is the process of absorption of moisture from air.
 (a) Deliquescence (b) Capillary action
 (c) Absorption (d) Osmosis
28. The process of optimizing fat content in milk is called _____.
 (a) Vitamin fortification
 (b) Pasteurization
 (c) Standardization
 (d) Homogenization
29. Bird : Wings : Fish : ?
 (a) Gills (b) Head
 (c) Fins (d) Legs
30. An assertion (A) and a reason (R) are given below.
Assertion (A): Perennial rivers mostly originate from the Himalayas.
Reason (R): The fountains in the Himalayas feed the rivers.
 Choose the correct option.
 (a) Both A and R are true and R is the correct explanation of A
 (b) Both A and R are true, but R is not the correct explanation of A
 (c) A is true, but R is false
 (d) A is false, but R is true
31. Find the missing (?) in the series—
 3, 7, 13, 21, 31, ?
 (a) 41 (b) 42
 (c) 43 (d) 44
32. Which state has the second highest number of seats in the Lok Sabha?
 (a) Uttar Pradesh (b) Andhra Pradesh
 (c) West Bengal (d) Maharashtra
33. If TABLE = RYZJC, then CHAIR = _____.
 (a) AFZHQ (b) AFYGP
 (c) FAGYP (d) ZFAHQ
34. Find the odd pair out.
 (a) Nitrogen & oxygen : Air
 (b) Sulphur & Phosphorous : Match stick
 (c) Hydrogen & Oxygen : Water
 (d) Magnesium & Silver : Stainless steel
35. _____ was the first Geographical Indication (GI) tagged product in India.
 (a) Darjeeling Tea (b) Solapuri Chaddar
 (c) Nagpur Orange (d) Orissa Ikat
36. Freezing point of water is _____.
 (a) 40° F (b) 42° F
 (c) 34° F (d) 32° F
37. ADGJ, CFIL, EHKN, _____.
 (a) FILO (b) HKNQ
 (c) DGJM (d) GJMP
38. If the rate of interest is 8% per annum and Rs. 10000 lent at the compound interest half yearly then calculate the equivalent simple rate of interest for the first year?
 (a) 8.16% (b) 9%
 (c) 7% (d) 10%
39. '.docx' file is created with
 (a) Spreadsheet (b) Powerpoint
 (c) Word processor (d) Paint
40. Evaluate $\left(\frac{35}{2}\right)\%$ of 800 gm – $\left(\frac{45}{2}\right)\%$ of 400 gm
 (a) 50 gm (b) 150 gm
 (c) 100 gm (d) 80 gm
41. 12 men finished $\frac{1}{4}$ part of whole work in 6 days. Find the number of additional men required to complete the job in next 6 days.
 (a) 36 (b) 12
 (c) 18 (d) 24
42. B is the brother of C. D is the sister of B. F is the sister of E who is the son of C. K is the husband of C. How is D related to F?
 (a) Maternal Aunt (b) Mother
 (c) Sister (d) Niece
43. _____ does not belong to the twelve zodiac signs.
 (a) Ophiuchus (b) Aquarius
 (c) Libra (d) Pisces
44. Rearrange the jumbled letters to make meaningful words and then select the one which is different.
 (a) ENIMSAJ (b) DLOGIRAM
 (c) TORRAC (d) REWOLFNU
45. Taxonomy is basically related to _____.
 (a) Biodiversity
 (b) Tax structure
 (c) A branch of astronomy
 (d) Study of human behaviour
46. Ramesh purchased a memory card at a price of Rs. 625 including the sales tax. The rate of sales tax is 25%. If the seller has made a gain of 50%, then the cost price of the memory card is:
 (a) Rs. 333 (b) Rs. 310
 (c) Rs. 350 (d) Rs. 360
47. The shadow of a standing tower of height $25\sqrt{3}$ m is found to be 50 m longer when the sun's elevation changes from 60° to X°. Find the measure of X?
 (a) 45° (b) 30°
 (c) 75° (d) 90°
48. 30 persons can finish a job in 20 days. After 6 days how many persons should leave the job, so that work is completed in a total of 26 days?
 (a) 9 (b) 12
 (c) 8 (d) 7
49. An investor invested $\frac{1}{2}$ of his capital at 5%, $\frac{1}{4}$ at 10% and rest at 8%. If his income after 2 years is Rs. 2800, find the capital amount.
 (a) Rs. 10000 (b) Rs. 15000
 (c) Rs. 20000 (d) Rs. 12000
50. The distance between the two poles of length 16 m and 9 m, is X m. If two angles of elevation of their respective top from the bottom of the other are complementary to each other then the value X is:
 (a) 10m (b) 15m
 (c) 16m (d) 12m
51. _____ is not a constituent of tooth paste.
 (a) Abrasive (b) Fluoride
 (c) Lubricant (d) Surfactant
- Comprehension:** Consider the following information and answer questions based on it. Suresh is taller than Ramesh who is shorter than Rakesh. Jinesh is taller than the shortest person but shorter than Rakesh. Pritesh is taller than Suresh but shorter than Jinesh.
52. Who is the shortest?
 (a) Rakesh (b) Ramesh
 (c) Pritesh (d) Suresh
53. If Jayesh who is taller than Suresh joins the group, who will be fourth, if they are arranged in a descending order?
 (a) Jayesh
 (b) Jinesh
 (c) Pritesh
 (d) Cannot be determined
54. Which statement, among the following, is correct?
 (a) Suresh is taller than Jinesh.
 (b) Pritesh is shorter than Rakesh
 (c) Jinesh is taller than Rakesh.
 (d) Ramesh is taller than Pritesh.
55. If VOTER = 41352, HEATER = 743654, TEASER = 645834, which number represents S?
 (a) 1 (b) 5
 (c) 8 (d) 7
56. Pointing to a man, a woman said "he is the brother of the daughter of my husband's wife". What is the woman to the man?
 (a) Son (b) Mother
 (c) Father (d) Sister

57. Triangle PQR is such that PR = 7.5 cm and triangle PQR is similar to triangle XYZ. If XY = 18 and YZ = 12 cm then find the ratio of PQ : QR
(a) 1 : 2 (b) 3 : 2
(c) 4 : 5 (d) 5 : 2
58. The planet Pluto was discovered in the year...
(a) 1925 (b) 1930
(c) 1935 (d) 1940
59. Two number are in the ratio 3 : 5. If each number is increased by 10, the ratio becomes 5 : 7. The smaller number is:
(a) 8 (b) 12
(c) 15 (d) 18
60. In 1955, _____ was renamed as State Bank of India.
(a) Bank of Bengal
(b) Bank of Bombay
(c) Bank of Madras
(d) Imperial Bank of India
61. Two vessels contain milk and water in the ratio 2 : 3 and 7 : 3. Find the ratio in which the contents of the two vessels have to be mixed so that the ratio of milk and water in the new mixture is equal.
(a) 2 : 1 (b) 1 : 2
(c) 3 : 2 (d) 2 : 3
62. Find the value of $335 \times 335 - 165 \times 165$?
(a) 20000 (b) 85000
(c) 85500 (d) 2750
63. Which one is not generally used as a fruit?
(a) Strawberry (b) grapes
(c) Pear (d) Tomato
64. 'Make in India Week' was launched in _____ from 13th to 18th February 2016.
(a) Bhubaneswar (b) Udaipur
(c) Mysuru (d) Mumbai
65. If Chennai : Tamil Nadu, then _____ : Jharkhand
(a) Raipur (b) Ranchi
(c) Dhanbad (d) Durgapur
66. Read the given statements carefully and answer the question.
Most people get their own cars to office. The number of vehicles on road is increasing day by day. It leads to traffic congestion and adds to the ever-increasing air pollution issues. As a result, respiratory problems are on a rise. People should, as far as possible, take public transport or do carpooling. Which of the following situations better fits the above statement?
(a) People are becoming rich day by day and hence buying more cars.
(b) People can go to the shopping malls in cars but not to office.
(c) Respiratory problems doesn't affect the people who use public transport
(d) More number of vehicles on road leads to traffic congestion.
67. The famous forbidden city is in _____.
(a) France (b) Italy
(c) China (d) USA
68. Rate of heat conduction in solids does not depend on _____.
(a) Density of the material
(b) Dimensions of the material
(c) Friction
(d) Electronic configuration
69. As per tiger census of 2014, tiger population in India was estimated at _____.
(a) 1411 (b) 1706
(c) 2226 (d) 1906
70. _____ was the theme for World Wetland Day in 2016.
(a) Sustainable Livelihoods
(b) Wetlands take care of water
(c) Wetlands for our future
(d) Wetlands and Agriculture
71. L is K's sister. M is the father of K. N and O are brothers. L is the mother of O. How is K related to N?
(a) Maternal Uncle
(b) Brother
(c) Nephew
(d) Cannot be determined
72. _____ is used in refrigeration.
(a) Chlorofluorocarbon
(b) Carbon dioxide
(c) Nitrogen peroxide
(d) Ammonium oxide
73. If $\left(x^2 + \frac{1}{x^2}\right) = 6$, then find the value of $\left(10x - \frac{10}{x}\right)$
(a) ± 15 (b) ± 20
(c) ± 30 (d) ± 40
74. Halley's comet is expected to return to the vicinity of earth in the year.....
(a) 2086 (b) 2061
(c) 2041 (d) 2026
75. Asymmetric Digital Subscriber Line (ADSL) is _____ technology.
(a) a wireless data communication
(b) a wired data communication
(c) amateur radio communication
(d) satellite communication
76. Who was appointed as the Defense Minister when the 16th Lok Sabha was formed in 2014?
(a) Venkaiah Naidu
(b) Ravi Shankar Prasad
(c) Manohar Parikkar
(d) Suresh Prabhu
77. If '÷' means '+', '+' means '÷', and '-' means '×', then $25 \div 25 + 5 \div 2 - 15 = ?$
(a) 0 (b) -12
(c) 60 (d) 45
78. If SMART = 31524, MARBLE = 428376 and EAT = 537, then STABLE=?
(a) 618537 (b) 253678
(c) 453678 (d) 243678
79. Choose the odd one out
(a) Optical disc
(b) Magnetic Storage
(c) Solid State Drive
(d) Petabyte
80. Which one is not true with 'backup'?
(a) Exact copy of computer files.
(b) It is part of business continuity plan.
(c) PCs do not require regular back up.
(d) Offsite and on-site backup are more beneficial.
81. If the standard deviation of a population is 9.5, what would be the population variance?
(a) 19 (b) 90.25
(c) 81.25 (d) 93.25
82. Find the largest 6 digit number which is completely divided by 71?
(a) 999965 (b) 999954
(c) 999964 (d) 999974
83. The first, all women two wheeler public transportation service in India was started in
(a) Gurgaon (b) Noida
(c) Chennai (d) Bengaluru
84. If $\left(a - \frac{1}{a}\right) = \frac{3}{4}$, Find the value of $\left(a^3 - \frac{1}{a^3}\right)$
(a) $\frac{164}{31}$ (b) $\frac{171}{64}$
(c) $\frac{171}{32}$ (d) $\frac{164}{37}$
85. Find the greatest number which on dividing 3050 and 5200 leaves remainders 7 and 9 respectively.
(a) 149 (b) 111
(c) 153 (d) 179
- Direction (86–88):** The following table represents the human resource profile of a global company. Consider the table and answer questions based on it.
- | Country | No. of offices | Male | | Female | | Total |
|---------|----------------|---------|----------|---------|----------|-------|
| | | Class I | Class II | Class I | Class II | |
| US | 20 | 150 | 50 | 70 | 35 | 305 |
| UK | 15 | 115 | 40 | 65 | 20 | 240 |
| India | 10 | 125 | 25 | 45 | 90 | 285 |
| Canada | 10 | 80 | 30 | 50 | 10 | 170 |
86. The percentage of male employees in India to the total number of employees of the company is
(a) 11% (b) 15.5%
(c) 15% (d) 20%
87. Total number of employees in the company is
(a) 950 (b) 960
(c) 995 (d) 1000
88. The ratio of female employees of US to Canada is
(a) 4 : 7 (b) 7 : 4
(c) 21 : 17 (d) 21 : 29

89. The period of Dominion of India refers to
(a) Pre-partition day
(b) Pre-Independence day
(c) Post Republic day
(d) Independence day to Republic day
90. Who won the man of the match award in the final of 2016 Asia Cup T20 held in Bangladesh?
(a) Bhuvaneshwar Kumar
(b) Virat Kohli
(c) Shikhar Dhawan
(d) R Ashwin
91. What is the average of first 25 multiples of 11?
(a) 152 (b) 147
(c) 143 (d) 134
92. If $2x(x + y + z) = 250$, $2y(x + y + z) = 100$, $2z(x + y + z) = 100$, then find the value of $(3x + 6y + 15z)$.
(a) 110 (b) 95
(c) 85 (d) 69
93. Kakori train robbery took place in the year
(a) 1923 (b) 1924
(c) 1925 (d) 1926
94. By selling an article for Rs. 979, a shopkeeper bears a loss of 11%. If shopkeeper sells that article for Rs. 1232, then the profit % is:
(a) 12% (b) 21%
(c) 11% (d) 14%
95. The HCF and LCM of two numbers are 45 and 270 respectively. If the ratio of the two numbers is 2:3 and smaller of the two numbers is X, then find X^2
(a) 2025 (b) 4225
(c) 8100 (d) 18225
96. Inflammation of the mucous membrane is called _____.
(a) Bronchitis (b) Hepatitis
(c) Iritis (d) Gastritis
- Direction (97-99):** Consider the following information and answer the questions based on it.
Out of 200 kids, 20 wanted to see only the galaxy, 25 wanted to see only stars, 30 wanted to see only plantes, 50 wanted to see stars, planets and moon, 25 wanted to see both moon and galaxy, 25 wanted to see only moon and the remaining did not want to see anything.
97. In all, how many kids did not want to see the galaxy?
(a) 130 (b) 100
(c) 155 (d) 125
98. In all, how many kids wanted to see the moon?
(a) 50 (b) 75
(c) 100 (d) 120
99. How many kids wanted to see at least 2 objects?
(a) 50 (b) 25
(c) 75 (d) 55
100. Manish purchased mobile phone and got 50% concession on the marked price of the phone and sold it for Rs. 8100 with 35% profit on the price he bought. What was the marked price?
(a) Rs. 8000 (b) Rs. 12000
(c) Rs. 10000 (d) Rs. 90000

Answers with Explanations

1. (d) Summer is hot \rightarrow de fe ba ... (i)
Come cold summer \rightarrow ja ha ba ... (ii)
Winter is cold \rightarrow pa ja de ... (iii)
Come hot winter \rightarrow ?
from (i) and (ii), summer \rightarrow ba
from (ii) and (iii), cold \rightarrow ja
from (i) and (iii), is \rightarrow de
from (iii) winter \rightarrow pa
from (ii) Come \rightarrow ha
from (i), hot \rightarrow fe
 \therefore come hot winter \rightarrow pa ha fe
2. (c) $6321 = 14 \times 451 + 7$
Therefore 7 must be subtract from 6321.
3. (b) Jahangir was the 4th Mughal emperor, succeeding Akbar.
His birth name was Nur-ud-din Muhammad Salim, and he ascended to the throne in 1605 after the death of Akbar.
Jahangir ruled from 1605 to 1627 and is known for his patronage of the arts and his keen interest in painting.
4. (b) After replacing Alphabets with signs
 $48 \div 8 + 6 \times 9 - 31 = ? = 6 + 54 - 31 = 29$
5. (a) The charter to establish the East India Company was granted by Queen Elizabeth I of England in 1600.
The East India Company played a significant role in British colonial expansion in India and the broader East Indies.
Queen Elizabeth I's grant laid the foundation for British influence in India.
6. (b) Let Shyamdas investment for x months.
According to the question,
$$\frac{90000 \times 12}{30000 \times x} = \frac{4}{1}$$

Required months = $12 - 9 = 3$ month
Hence Shyamdas joined after 3 months.
7. (c) Methane is commonly referred to as "Marsh gas" due to its association with marshy areas where it is often produced.
It is a colorless and odorless gas that can be found in natural gas and is a significant component of biogas.
Methane is a greenhouse gas, and its sources include natural processes, livestock digestion, and the production and transport of fossil fuels.
8. (c) The Hawa Mahal in Jaipur is constructed primarily using red and pink sandstone, which gives the palace its distinctive color and appearance.
The design of the Hawa Mahal, with its numerous small windows (jharokhas), was meant to allow royal ladies to observe everyday life in the street below without being seen.
9. (c) Let the angles be x , $2x$ and $3x$
As per the question,
 $x + 2x + 3x = 180^\circ$
 $\Rightarrow 6x = 180^\circ$
 $\Rightarrow x = 30^\circ$
Largest angle = $3x = 90^\circ$
10. (c) According to the given statements there is not monitoring system.
11. (b) Kabaddi is a traditional Indian sport where the concept is to eliminate an opponent by touching them and returning to one's own half of the field.
It is a contact sport that requires both strength and agility.
The game involves a raider entering the opponent's half, tagging as many defenders as possible, and returning to their half without being tackled.
12. (d) Sum of 22 observations = $22 \times 10 = 220$
Sum of 24 observations = $24 \times 11 = 264$
Mean of two new observations =
$$\frac{264 - 220}{2} = \frac{44}{2} = 22$$
13. (b) Let the angle = x
$$x = 10 + \frac{1}{3}(90 - x)$$

$$\Rightarrow x = 10 + 30 - \frac{x}{3}$$

$$\Rightarrow \frac{4x}{3} = 40^\circ$$

$$\Rightarrow x = 30^\circ$$

Greater angle = $90 - x = 60^\circ$
14. (b) Speed of Neelam = 7 km/h
Speed of Manisha = 9 km/h
Let the time be t hrs for 12 km difference.
Distance travelled by Neelam = $7 \times t = 7t$ km

Distance travelled by Manisha = $9 \times t = 9t$ km

$$9t - 7t = 12 \Rightarrow 2t = 12$$

$$\Rightarrow t = 6$$

15. (a) Distance covered by Delhi Metro at 48 km/h.

$$= \frac{48 \times 40}{60} = \frac{48 \times 2}{3} = 32 \text{ km}$$

Now,

Let x be the reduced speed =

$$= 32 = \frac{x \times 32}{60} \Rightarrow x = 60 \text{ kmph}$$

Hence (a) is correct answer.

16. (c) Coefficient of variation =

$$\frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

$$\frac{7}{13} \times 100 = 53.85\%$$

17. (c) The force that primarily causes a car to stop when brakes are applied is frictional force.

Friction between the brake pads and the wheels creates a resistance force, converting the kinetic energy of the moving car into heat energy, leading to a decrease in speed.

This frictional force is crucial for controlling and stopping the vehicle safely.

18. (b) Only conclusion II follows according to given statements.

19. (c) Both conclusion I and II follow according to given statements.

20. (b) Quartz used in clocks is primarily composed of silicon dioxide.

Silicon dioxide, commonly known as quartz, is a crystalline mineral that exhibits piezoelectric properties, making it useful for timekeeping in quartz clocks.

The precise vibrations of quartz crystals, triggered by an electric current, help maintain accurate timekeeping in clocks.

21. (b) In India, the head of the state is the President.

The President is the ceremonial head and represents the unity of the nation.

The Prime Minister is the head of the government, while the President's role is more symbolic and constitutional.

22. (b) Bangladesh has a parliamentary democracy.

The political system involves a representative democracy where the Prime Minister is the head of government, and the President is the head of state.

It is not an Islamic Republic, federal republic, or constitutional monarchy.

23. (a) Principal is singular, and all other options are plural.

24. (c) Assam and Chhattisgarh share borders with seven Indian states.

Assam shares borders with seven Indian states: Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, and West Bengal.

Additionally, Assam has international borders with Bhutan and Bangladesh.

25. (c) Squash does not refer to the game of playing cards.

Bridge, Blackjack, and Solitaire are card games, but squash is a racquet sport played by two players in a four-walled court.

26. (b) Michelle Yeoh was appointed as one of the Goodwill Ambassadors by UNDP (United Nations Development Programme) in March 2016.

In her role, she likely undertook responsibilities to advocate for and support the UNDP's initiatives and campaigns focused on development, poverty alleviation, and sustainable practices.

27. (a) Deliquescence is the process of absorption of moisture from the air.

It refers to the ability of a substance to absorb water vapor from the atmosphere until it dissolves in the absorbed water.

28. (c) The process of optimizing fat content in milk is called standardization.

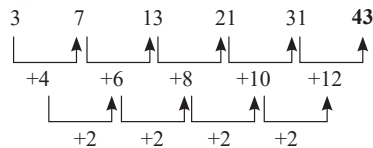
Standardization involves adjusting the fat content of milk to a specific level by adding or removing cream.

Vitamin fortification, pasteurization, and homogenization are different processes related to milk but not specifically about optimizing fat content.

29. (c) As, Birds fly with wings similarly fish swim with fins.

30. (c) A is true but R is false as perennial rivers originate from Himalayas and rain and snow feed the river.

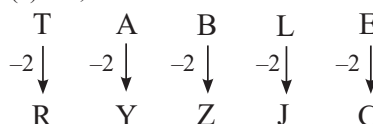
31. (c) Series is as follow:



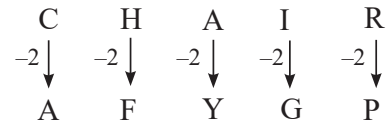
32. (d) Maharashtra has the second-highest number of seats in the Lok Sabha, the lower house of India's Parliament.

Andhra Pradesh, West Bengal, and Uttar Pradesh do not have the second-highest number of seats in the Lok Sabha.

33. (b) As,



Similarly,



34. (d) All other options represent elements that are naturally occurring in the mentioned items.

Stainless steel is an alloy, and while it may contain elements like chromium and nickel, it doesn't typically contain magnesium and silver in significant proportions.

Nitrogen & oxygen constitute air, Sulphur & Phosphorous are components of matchsticks, and Hydrogen & Oxygen combine to form water.

35. (a) Darjeeling Tea was the first Geographical Indication (GI) tagged product in India.

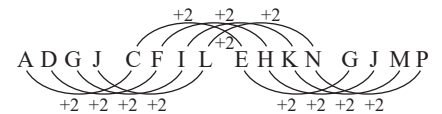
GI tagging indicates that a product has a specific geographical origin and possesses qualities, reputation, or characteristics that are essentially attributable to that place of origin.

36. (d) The freezing point of water is 32°F (0°C).

This is the temperature at which water changes from a liquid to a solid state (ice) under normal atmospheric pressure.

Options 40°F , 42°F , and 34°F are not correct freezing points for water.

37. (d)



38. (a) Rate compound interest half yearly

$$R = \frac{8}{2} = 4\%$$

$$T = 2$$

$$P = 10000$$

$$\text{Amount} = 10000 \left(1 + \frac{4}{100} \right)^2$$

$$= 10000 \times \left(\frac{676}{625} \right)$$

$$= 16 \times 676 = \text{Rs. } 10816$$

$$\text{Simple Interest} = 10816 - 10000 = \text{Rs. } 816$$

$$\text{Equivalent rate} = R$$

$$816 = \frac{10000 \times R \times 1}{100} \Rightarrow R = 8.16\%$$

39. (c) '.docx' files are created using word processing software like Microsoft Word.

They primarily contain formatted text with options for fonts, styles, and formatting.

The format is standard for text documents and supports the inclusion of images and tables.

$$40. (a) \frac{35}{2} \times \frac{1}{100} \times 800 - \frac{45}{2} \times \frac{1}{100} \times 400$$

$$= 35 \times 4 - 45 \times 2 = 140 - 90 = 50$$

$$41. (d) 12 \text{ men can do } \frac{1}{4} \text{ work in } = 6 \times 4 = 24 \text{ days}$$

$$\text{Total work} = 12 \times 24 = 288 \text{ units}$$

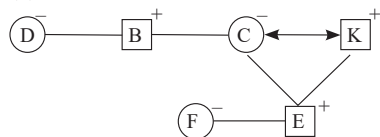
$$\text{Remaning work} = 288 \times \frac{3}{4} = 216 \text{ units}$$

$$\text{To complete 216 units of work in 6 days}$$

$$\text{Men required} = \frac{216}{6} = 36$$

$$\text{Hence extra men required} = 36 - 12 = 24$$

42. (a)



D, is maternal aunt of F.

43. (a) Ophiuchus does not belong to the traditional twelve zodiac signs.

The traditional zodiac signs include Aquarius, Libra, Pisces, and others, but Ophiuchus is not part of the standard zodiac.

44. (c) After rearranging options.

- (a) Jasmine (b) Marigold
(c) Carrot (d) Sunflower

Expect carrot all other are flowers.

45. (a) Taxonomy is the branch of biology that is concerned with the classification, identification, naming, and categorization of organisms.

It is primarily related to biodiversity as it involves organizing and naming the vast diversity of living organisms.

46. (a) Let the SP be Rs. x .

As 625 is including tax of 25%

$$625 = \left(\frac{100 + 25}{100} \right) x$$

$$\Rightarrow x = 500$$

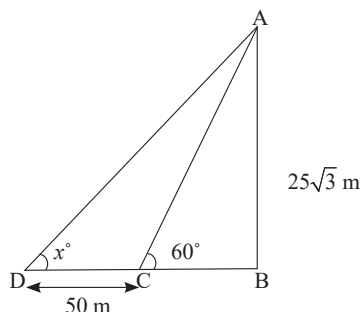
As per the question,

$$500 = \left(\frac{100 + 50}{50} \right) \text{CP}$$

$$\Rightarrow \text{CP} = \frac{500 \times 2}{3} \approx 333 \text{ (approx.)}$$

47. (b) AB is the height of the tows = $25\sqrt{3}$ m

New shadow = BD



$$\frac{25\sqrt{3}}{BC} = \tan 60^\circ = \sqrt{3}$$

$$\Rightarrow BC = 25 \text{ m}$$

$$\text{Now, } \frac{AB}{BD} = \tan x$$

$$\frac{25\sqrt{3}}{75} = \tan X \Rightarrow \frac{1}{\sqrt{3}} = \tan X$$

$$\Rightarrow X = 30^\circ$$

48. (a) Total work = $20 \times 30 = 600$ units
Work done in 6 days = $6 \times 30 = 180$ units
Remaining work = $600 - 180 = 420$ units
Remaning days = $26 - 6 = 20$ days
So, number of men required to complete 420 work in 20 days

$$= \frac{420}{20} = 21$$

$$\text{Hence, required answer} = 30 - 21 = 9 \text{ men}$$

49. (c) Let capital be Rs. x

$$\frac{x}{2} \times \frac{5}{100} \times 2 = \frac{x}{20} \quad \dots (i)$$

$$\frac{x}{4} \times \frac{10}{100} \times 2 = \frac{x}{20} \quad \dots (ii)$$

$$\text{Rest} = x - \frac{x}{2} - \frac{x}{4}$$

$$= \frac{4x - 2x - x}{4} = \frac{x}{4}$$

$$\frac{x}{4} \times \frac{8}{100} \times 2 = \frac{x}{25} \quad \dots (iii)$$

As per the question,

$$(i) + (ii) + (iii) = 2800$$

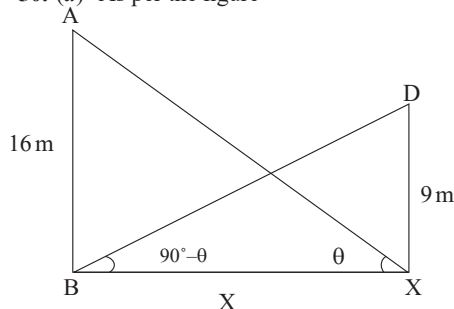
$$\Rightarrow \frac{x}{20} + \frac{x}{20} + \frac{x}{25} = 2800$$

$$\Rightarrow \frac{5x + 5x + 4x}{100} = \frac{14x}{100} = 2800$$

$$\Rightarrow x = 20000$$

Hence, capital amount is Rs. 20000.

50. (d) As per the figure



In $\triangle ABC$

$$\frac{16}{X} = \tan \theta \dots\dots (1)$$

In $\triangle DCB$

$$\frac{9}{X} = \tan(90^\circ - \theta) = \cot \theta = \frac{1}{\tan \theta}$$

$$\Rightarrow \frac{16}{X} = \frac{1}{\frac{9}{X}}$$

$$\Rightarrow \frac{16}{x} = \frac{x}{9} \Rightarrow X = 12$$

Hence, the distance between 2 poles is 12 m.

51. (c) Lubricant is not a typical constituent of toothpaste.

Abrasive, fluoride, and surfactant are common components found in toothpaste for cleaning, strengthening teeth, and providing a foaming action, respectively.

52. (b) According to question,

Rakesh > Jinesh > Pritish > Suresh > Remesh
 \therefore Remesh is the shortest.

53. (d) Can not be determined since no exact relation is given.

54. (b) Pritesh is shorter than Rakesh is correct statement.

55. (c) V O T E R \rightarrow 4 3 5 2 ... (i)

H E A T E R \rightarrow 7 4 3 6 5 4 ... (ii)

T E A S E R \rightarrow 6 4 5 8 3 4 ... (iii)

From (i) and (ii)

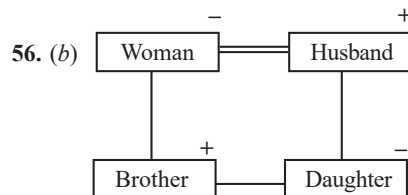
$$E = 4 = \frac{T}{R} = \frac{3}{5}$$

From (ii) and (iii)

$$A = 6$$

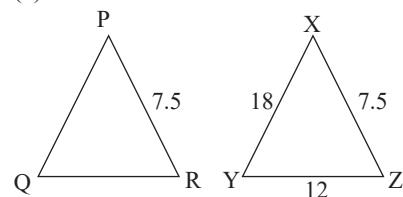
Now, form (iii)

$$S = 8$$



Hence the women is mother of the man.

57. (b)



As both of the triangles are similar.

In $\triangle PQR$ & $\triangle XYZ$

$$\text{Hence, } \frac{PQ}{QR} = \frac{XY}{YZ} = \frac{18}{12} = \frac{3}{2}$$

58. (b) Pluto was discovered in the year 1930 by astronomer Clyde Tombaugh.

It was considered the ninth planet in our solar system until its reclassification as a dwarf planet by the International Astronomical Union (IAU) in 2006.

59. (c) Let the two numbers be $3x$ and $5x$.

As per the question,

$$\frac{3x + 10}{5x + 10} = \frac{5}{7}$$

$$\Rightarrow 21x + 70 = 25x + 50$$

$$\Rightarrow 4x = 20 \Rightarrow x = 5$$

$$\text{Hence smaller number} = 3x = 15$$

60. (d) In 1955, the Imperial Bank of India was renamed as the State Bank of India (SBI).

The Imperial Bank of India was the central bank of the Indian princely states and became the State Bank of India after the nationalization of banks in 1955.

61. (a) Let m litres from first vessel and n litres from second vessel are mixed.

Therefore,

$$\frac{\frac{2}{5} \times m + \frac{7}{10} \times n}{\frac{3}{5} \times m + \frac{3}{10} \times n} = \frac{1}{1} \quad (\text{assume})$$

$$\Rightarrow \frac{\frac{4m}{10} + \frac{7n}{10}}{\frac{6m}{10} + \frac{3n}{10}} = \frac{1}{1}$$

$$\Rightarrow 4m + 7n = 6m + 3n$$

$$\Rightarrow 2m = 4n \Rightarrow m : n = 2 : 1$$

62. (b) $335 \times 335 - 165 \times 165$

$$= (335)^2 - (165)^2$$

$$[(a^2 - b^2) = (a - b)(a + b)]$$

$$(335 - 165)(500)$$

$$170 \times 500 = 85000$$

63. (d) Tomatoes, scientifically fruits, are often treated as vegetables in culinary contexts.

Unlike traditional fruits such as strawberries, grapes, and pears, tomatoes are commonly used in savory dishes.

The culinary distinction arises from the flavor profile and typical use of tomatoes in salads, sauces, and main courses.

64. (d) The 'Make in India Week' aimed to showcase India's manufacturing capabilities and attract investments.

Mumbai served as the launch location for the event from 13th to 18th February 2016.

The initiative highlighted opportunities for domestic and international businesses to contribute to India's manufacturing sector.

65. (b) Applying the city-to-state analogy, where Chennai is the capital of Tamil Nadu, Ranchi is the capital of Jharkhand.

The relationship reflects the capital city's association with its respective state.

Understanding geographical connections between capitals and states is essential for solving such analogies.

66. (d) "More number of Vehicles on road lead to traffic congestion". This statements better fits given statement.

67. (c) The Forbidden City, a UNESCO World Heritage Site, is located in Beijing, China.

It served as the imperial palace for Chinese emperors for around 500 years.

The site is renowned for its historical and architectural significance.

68. (c) The rate of heat conduction in solids is influenced by factors such as density, dimensions, and electronic configuration.

Friction is not a significant factor in heat conduction in solids.

Understanding the principles of heat conduction helps in recognizing the key factors involved.

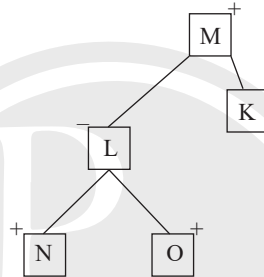
69. (c) The tiger population in India, according to the 2014 census, was estimated at 2226.

The tiger census is a crucial conservation effort to monitor and protect the endangered tiger species in the country.

70. (a) The theme "Wetlands for our future" was adopted for World Wetland Day in 2016.

World Wetland Day emphasizes the importance of wetlands for biodiversity, water conservation, and sustainable development.

71. (d) Relation of K to N can not be determine, Since gender of K is not known.



72. (a) Chlorofluorocarbons (CFCs) are commonly used in refrigeration.

While their use has been reduced due to environmental concerns, CFCs were historically popular as refrigerants in various cooling systems.

73. (b) As per the question,

$$x^2 + \frac{1}{x^2} = 6$$

Subtract 2 from both sides

$$x^2 + \frac{1}{x^2} - 2 = 6 - 2$$

$$\Rightarrow \left(x - \frac{1}{x}\right)^2 = 4$$

$$\Rightarrow x - \frac{1}{x} = \pm 2$$

$$\Rightarrow 10x - \frac{10}{x} = \pm 20$$

74. (b) Halley's Comet is expected to return to the vicinity of Earth approximately every 76 years.

The last perihelion passage was in 1986, so the next expected return is around 2061.

The periodic return of Halley's Comet is a well-documented astronomical event.

75. (b) Asymmetric Digital Subscriber Line (ADSL) is a wired data communication technology.

It is a type of digital subscriber line technology that enables high-speed data transmission over traditional copper telephone lines.

ADSL is commonly used for broadband internet access.

76. (c) Manohar Parrikar was appointed as the Defense Minister when the 16th Lok Sabha was formed in 2014.

He served as the Defense Minister of India from November 2014 to March 2017.

77. (c) After replacing signs,

$$25 + 25 \div 5 + 2 \times 15 = 25 + 5 + 30 = 60$$

78. (a) SMART \rightarrow 31524 ... (i)

$$\text{MARBLE} \rightarrow 428376 \quad \dots \text{(ii)}$$

$$\text{EAT} \rightarrow 537 \quad \dots \text{(iii)}$$

$$\text{From (i) \& (ii) 'A/R/M} = 3/2/4 \quad \dots \text{(iv)}$$

$$\text{From (iii) \& (iv)}$$

$$\text{A} \rightarrow 3$$

$$\therefore \text{From (i) and (iii)}$$

$$\text{T} \rightarrow 5$$

$$\text{So, S} \rightarrow 1$$

$$\text{Now, from (ii) and (iii)}$$

$$\text{E} \rightarrow 7$$

$$\text{So, B/L} \rightarrow 8/6$$

$$\therefore \text{STABLE} \rightarrow 618537$$

79. (d) Petabyte is the odd one out because it represents a unit of digital storage capacity, whereas the other options (Optical disc, Magnetic Storage, Solid State Drive) refer to different types of storage technologies.

80. (c) This statement is not true. Regular backups are essential for data protection and recovery, even for personal computers.

Backups are part of a comprehensive data management strategy and contribute to business continuity plans.

81. (b) Population variance = (standard deviation)² = (9.5)² = 90.25

82. (c) Largest 6 digit number = 999999

$$\text{So, } 999999 \div 71 = 71 \times 14084 + 35$$

$$\text{Required number} = 999999 - 35 = 999964$$

83. (a) The first all-women two-wheeler public transportation service in India was started in Gurgaon.

Launched to empower women and provide safe transport options, this initiative gained attention for its positive impact on women's mobility.

84. (b) $a - \frac{1}{a} = \frac{3}{4}$

$$\Rightarrow \left(a - \frac{1}{a}\right)^3 = \left(\frac{3}{4}\right)^3$$

$$\Rightarrow a^3 - \frac{1}{a^3} - 3 \times a \times \frac{1}{a} \times \left(a - \frac{1}{a}\right) = \frac{27}{64}$$

$$\Rightarrow a^3 - \frac{1}{a^3} - 3 \times \frac{3}{4} = \frac{27}{64}$$

$$\Rightarrow a^3 - \frac{1}{a^3} = \frac{27}{64} + \frac{9}{4} = \frac{27+144}{64} = \frac{171}{64}$$

85. (d) As per the question,

Required number = HCF { (3050 - 7),
(5200 - 9) }

= HCF of {3043, 5191}

$$3043 = 1 \times 17 \times 179$$

$$5191 = 1 \times 29 \times 179$$

Hence, 179 is the required number.

86. (c) Total employee in company globally

$$= 305 + 240 + 285 + 170 = 1000$$

Therefore, required percentage

$$= \frac{150}{1000} \times 100 = 15\%$$

87. (d) Total employees in the company

$$= 305 + 240 + 285 + 170 = 1000$$

88. (b) Female employees of US

$$= 70 + 35 = 105$$

$$\text{Female of employees Canada} = 50 + 10 = 60$$

$$\text{Ratio} = \frac{105}{60} = 7 : 4$$

89. (d) The period of Dominion of India refers to the time between Independence Day (August 15, 1947) and Republic Day (January 26, 1950).

During this period, India was a dominion within the British Commonwealth before becoming a republic.

90. (c) Shikhar Dhawan won the Man of the Match award in the final of the 2016 Asia Cup T20 held in Bangladesh.

91. (c) As per the question

$$a = 11$$

$$\ell = 11 \times 25 = 275$$

$$S_n = \frac{n}{2}(a + \ell)$$

$$\frac{S_n}{n} = \frac{(a + \ell)}{2}$$

$$\therefore \text{Required average} = \frac{11 + 275}{2} = \frac{286}{2} = 143$$

$$92. (b) \quad x + y + z = \frac{250}{2x} = \frac{125}{x} \quad \dots (1)$$

$$x + y + z = \frac{50}{y} \quad \dots (2)$$

$$x + y + z = \frac{50}{z} \quad \dots (3)$$

From (1) and (2) and (3)

$$\frac{125}{x} = \frac{50}{y} = \frac{50}{z} = k \text{ (let)}$$

$$\Rightarrow \frac{5}{x} = \frac{2}{y} = \frac{2}{z} = k$$

$$\Rightarrow x : y : z = \frac{5}{k} : \frac{2}{k} : \frac{2}{k}$$

$$= 5 : 2 : 2$$

$$\text{Let } x = 5a, y = 2a, z = 2a$$

Now, from (1)

$$2 \times 5a(9a) = 250$$

$$\Rightarrow 90a^2 = 250 \Rightarrow a = \frac{5}{3}$$

Now,

$$\Rightarrow 3x + 6y + 15z$$

$$= 3 \times \frac{5 \times 5}{3} + 6 \times 2 \times \frac{5}{3} + 15 \times 2 \times \frac{5}{3}$$

$$= 25 + 20 + 50 = 95$$

93. (c) The Kakori train robbery occurred on August 9, 1925.

Members of the Hindustan Republican Association (HRA), led by Ram Prasad Bismil, executed the revolutionary act.

The target was a train carrying money meant for British government employee salaries, serving as a source of funds for HRA's revolutionary activities.

94. (a) As we know $S.P = \left(\frac{100 - L\%}{100} \right) \times C.P$

$$\therefore 979 = \frac{(100 - 11)}{100} \times CP$$

$$\Rightarrow CP = \frac{979 \times 100}{89} = 1100$$

$$\text{If, SP} = 1232, \text{ then } P\% = \frac{S.P - CP}{CP} \times 100$$

$$= \frac{1232 - 1100}{1100} \times 100 = \frac{132}{1100} \times 100 = 12\%$$

95. (c) Let the two number be $2y$ & $3y$

HCF \times LCM = Products of two numbers

$$\therefore 45 \times 270 = 2y \times 3y$$

$$\Rightarrow 6y^2 = 45 \times 270$$

$$\Rightarrow y^2 = 45 \times 45$$

$$\Rightarrow y = 45$$

$$\text{Smaller number} = 2y = 2 \times 45 = 90$$

$$\Rightarrow X = 90$$

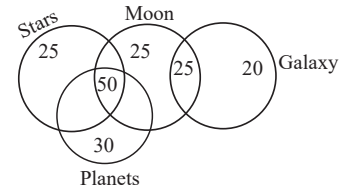
$$\Rightarrow X^2 = 8100$$

96. (d) The medical term for inflammation of the mucous membrane is gastritis.

Gastritis can happen due to factors like infection, stress, or alcohol, causing symptoms like abdominal pain and nausea.

The mucous membrane protects the stomach from acidic juices.

Solution (97-99):



97. (c) Kids who don't want to see Galaxy

= Total kids - kids who want to see galaxy

$$200 - (20 + 25) = 200 - 45 = 155$$

98. (c) Kids who want to see the moon two objects

$$= 25 + 25 + 50 = 100$$

99. (c) Kids who want to see at least two objects

$$= 25 + 50 = 75$$

100. (b) Let the cost price of phone for Manish be x .

$$\text{Then, } \frac{135}{100} \times x = 8100 \Rightarrow x = \text{Rs. } 6000$$

$$8100 = \frac{x}{2}$$

Now, 50% of market price = Rs. 6000

$$\Rightarrow \text{Market price} = 6000 \times 2 = \text{Rs. } 12000$$

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