



1. Ans.(a):

Sol. The logo is the silhouette of a lion on the prowl, made entirely of cogs, symbolising manufacturing, strength and national pride.

2. Ans.(b):

Sol. Data is 0, 0, 1, 1, 2, 2, x, 3, 3, 4, 5, 7.

Here number of terms is 12 i.e. even

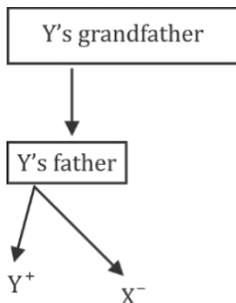
$$\text{Median} = \frac{2+x}{2} \quad 2.5 = \frac{2+x}{2} \quad x = 3$$

3. Ans.(b):

Sol. Holi is celebrated by throwing coloured powder and water on each other.

4. Ans.(b):

Sol.



5. Ans.(c):

Sol. The Hockey India League (HIL).

6. Ans.(b):

$$\begin{aligned} \text{Sol. Difference} &= (30 + 20 + 35 + 35) - (35 + 5 + 45) \\ &= 120 - 85 = 35 \end{aligned}$$

7. Ans.(c):

$$\begin{aligned} \text{Sol. Required number} &= 20 + 35 + 35 \\ &= 90 \end{aligned}$$

8. Ans.(d):

$$\text{Sol. Required number} = 35 + 5 = 40$$

9. Ans.(b):

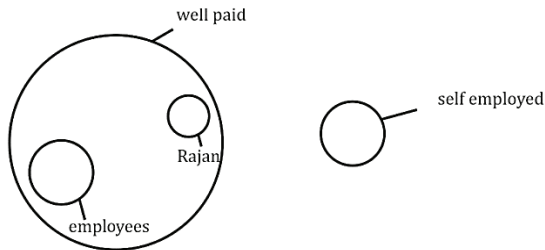
$$\begin{aligned} \text{Sol. The series follows } -0.5, -1.5, -2.5, -3.5, \dots \text{ pattern} \\ ? = 49.5 - 1.5 = 48 \end{aligned}$$

10. Ans.(c):

Sol. The book *Malgudi Days* is a collection of short stories written by R.K. Narayan and published by Indian Thought Publications in India in the year 1943. Outside India the book was republished by Penguin Classics in 1982.

11. Ans.(d):

Sol.



I. X

II. X

12. Ans.(c);

13. Ans.(b):

$$\text{Sol. Speed of train} = \frac{(500 + 1000) \text{ m}}{60 \text{ sec}} \times \frac{18}{5} \\ = 90 \text{ kmph}$$

14. Ans.(a):

Sol. Ballistics is the field of mechanics that deals with the launching, flight, behavior, and effects of projectiles.

15. Ans.(c):

Sol. All of them are colours.

16. Ans.(a):

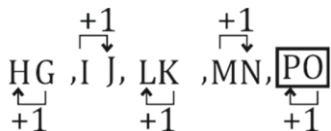
Sol. WLAN, which stands for Wireless Local Area Network, is when a mobile user connects to a local area network via a wireless connection.

17. Ans.(c):

Sol. A bicameral legislature simply refers to a particular body of government that consists of two legislative houses or chambers.

18. Ans.(b):

Sol.



19. Ans.(c):

Sol. On checking options, the combination of option (c) are not in the shop.

20. Ans.(b):

Sol. Common combustible gases include methane (natural gas), propane, butane, hydrogen. The most common combustible gas is Methane.

21. Ans.(d):

Sol. Wular Lake, One of the Largest Freshwater Lakes in India. Wular Lake, located in the state of Jammu and Kashmir, is often referred to as the largest freshwater lake in India.

22. Ans.(c):

Sol. Total s.p= 12×1454.64

Profit = 16%

$$C.p = \frac{12 \times 1454.64}{116} \times 100 = \text{Rs. } 15048$$

23. Ans.(d):

Sol. The annual fair of Rajasthan that is famous for its camel trading event is called Pushkar Mela.

24. Ans.(c):

Sol. The velocity of an object is the rate of change of its position with respect to a frame of reference and is a function of time. Velocity is equivalent to a specification of an object's speed and direction of motion.

25. Ans.(d):

Sol.

DE L H I
+13
↓ ↓ ↓ ↓ ↓
Q R Y U V

BOMBAY
+13
↓ ↓ ↓ ↓ ↓
O B Z O N L

26. Ans.(d):

Sol. L 6

O 8

G 3

I 2

C 4

A 0

L 6

27. Ans.(a):

Sol. Time taken by Jenny = $\frac{1}{\frac{1}{12} - \frac{1}{16}} = \frac{1}{\frac{1}{48}} = 48 \text{ days}$

28. Ans.(a):

Sol. $10^9 \times 10^2 \div 10^3$

$$= 10^{(9+2-3)} = 10^8$$

29. Ans.(b):

Sol. Circumference of circle = $2 \pi r$

$$22 = 2 \times \frac{22}{7} \times r \quad r = 3.5 \text{ cm}$$

$$\begin{aligned} \text{Area of semicircle} &= \frac{\pi r^2}{2} = \frac{1}{2} \times \frac{22}{7} \times 3.5 \times 3.5 \\ &= 19.25 \text{ cm}^2 \end{aligned}$$

30. Ans.(c):

$$\begin{aligned}\text{Sol. Interest} &= 25000 \left[\left(1 + \frac{12}{100} \right)^3 - 1 \right] \\ &= 25000 \times \frac{404928}{100^3} \\ &= \text{Rs. } 10123.20\end{aligned}$$

31. Ans.(d):

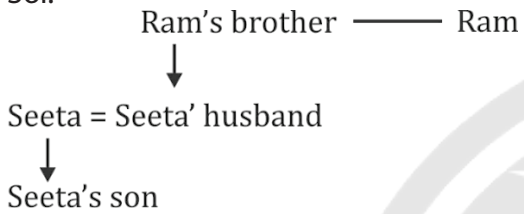
Sol. Product of two numbers = LCM $\times$ HCF

$$24 \times x = 168 \times 6$$

$$x = \frac{168 \times 6}{24} = 42$$

32. Ans.(b):

Sol.



33. Ans.(a):

Sol. HCF of (78-6), (114-6) and (141-6)

i.e 72, 108 and 135 is 9.

total children = 9.

34. Ans.(a):

Sol. A division of vertebrates that produce offspring that develop as embryos within the female parent and thus are born live.

35. Ans.(d):

$$\text{Sol. Percentage of U} = \frac{75+80}{200} \times 100 = 77.5\%$$

$$\text{Percentage of V} = \frac{63+87}{200} \times 100 = 75\%$$

$$\text{Percentage of W} = \frac{80+70}{200} \times 100 = 75\%$$

$$\text{Percentage of X} = \frac{72+75}{200} \times 100 = 73.5\%$$

36. Ans.(d):

Sol. Percentage of marks obtained by w=75%

37. Ans.(c):

$$\begin{aligned}\text{Sol. Average percentage in History} &= \frac{75+63+80+72}{4} \\ &= \frac{290}{4} = 72.5\%\end{aligned}$$

38. Ans.(d):

Sol. $x = y + 2$

$$a^{x+y} = a^6 \quad x + y = 6$$

$$\text{also, } x - y = 2 \quad y = 2$$

$$x = 4$$

39. Ans.(b):

Sol. A limerick is a humorous poem consisting of five lines. The first, second, and fifth lines must have seven to ten syllables while rhyming and having the same verbal rhythm. The third and fourth lines only have to have five to seven syllables and have to rhyme with each other and have the same rhythm.

40. Ans.(a);

41. Ans.(a):

Sol. The Andromeda Galaxy also known as Messier 31, M31, or NGC 224, is a spiral galaxy approximately 780 kiloparsecs (2.5 million light-years) from Earth, and the nearest major galaxy to the Milky Way.

42. Ans.(d):

Sol. The Dalai Lama quote is “In practice of tolerance, one’s enemy is the best teacher”?

43. Ans.(a):

Sol. Shigmo or Shishirotsava is a spring festival celebrated in the Indian state of Goa, where it is one of the major festivals of the Hindu community.

44. Ans.(a):

Sol. In computers, Yosemite, Mavericks, Mountain Lion, Lion, Snow Leopard, Leopard, Tiger, Panther, Jaguar, Puma and Cheetah stand for versions of Mac OS X.

45. Ans.(c):

Sol. ENNI NINE

NEO ONE

EPPI PIPE

REETH THREE

Except pipe, rest are numbers

46. Ans.(b):

$$\begin{aligned}\text{Sol. } & \frac{12}{13} \times \frac{285}{96} \div \frac{171}{169} \\ & = \frac{12}{13} \times \frac{285}{96} \times \frac{169}{171} = \frac{65}{24}\end{aligned}$$

47. Ans.(c):

Sol. The Laser Interferometer Gravitational-Wave Observatory (LIGO) is detection of Gravitational waves.

48. Ans.(c):

Sol. Portuguese conquering Goa from Adil Shah of Bijapur and his Ottomon empire allies in 1510.

49. Ans.(c):

Sol. Prime Minister Nawaz Sharif appointed him head of the armed forces in October 1998. Musharraf is believed to have played a key role in the invasion of the Indian-administered portion of the disputed Kashmir region in the summer of 1999.

50. Ans.(c):

Sol. Benzene is an organic chemical compound with the chemical formula C_6H_6 .

51. Ans.(b):

Sol. Oneirology is the scientific study of dreams.

52. Ans.(a):

Sol. On April 6, 1896, the first modern Olympic Games are held in Athens, Greece, with athletes from 14 countries participating.

53. Ans.(d):

Sol. Total days required to complete the book

$$= \frac{378}{14 \times 3} = 9 \text{ days}$$

Extra days for which book to be renewed
= 2 days

54. Ans.(a):

Sol. Carl Edward Sagan was an American astronomer, cosmologist, astrophysicist, astrobiologist, author, science popularizer, and science communicator in astronomy and other natural sciences. He is best known for his work as a science popularizer and communicator.

55. Ans.(b):

Sol. Earning on Monday = $12 \times 2.5 \times 12 = 360$

Earning on Friday = $12 \times 10 \times 2.5 = 300$

Required difference = $360 - 300 = \text{Rs.}60$

56. Ans.(a):

Sol. Combined mean = $\frac{12 \times 67.4 + 15 \times 72.3}{12 + 15}$

$$= \frac{810 + 1084.5}{27} \approx 70.12$$

57. Ans.(b):

Sol. +1, -1, +1, -1 series

58. Ans.(b):

Sol. speed in 1st case = $\frac{6}{\frac{5}{3}} = 3.6 \text{ kmph}$

Speed in 2nd case = $\frac{6}{\frac{4}{3}} = 4.5 \text{ kmph}$

Difference in speed = $4.5 - 3.6 = 0.9 \text{ kmph}$

59. Ans.(a):

Sol. Eric Stemme created the first Swedish electronic computer called the Binary Electronic Sequence Calculator, or BESK for short, which was completed in Stockholm in 1953.

60. Ans.(d):

Sol. $\sin(90^\circ - \theta) = \cos \theta$

61. Ans.(b):

Sol. Anant Pai was an Indian educationalist and a pioneer in India's famous comic series Amar Chitra Katha.

62. Ans.(b); $(x + y)^2 - (x - y)^2$
 $= (x + y + x - y) (x + y - x + y)$
 $= (2x) \times (2y) = 4 xy$

63. Ans.(c):

Sol. Breadth = $\frac{42}{7} = 6 \text{ cm}$

Perimeter = $2(7+6) = 26 \text{ cm}$

64. Ans.(d):

Sol. Let s.p of each cycle be Rs. X

Total s.p = $20x$

Loss = $2x$

And c.p = $20x + 2x = 22x$

Loss % = $\frac{2x}{22x} \times 100 = 9\frac{1}{11} \%$

65. Ans.(b):

Sol. Proteins are required by the body in adequate quantities.

66. Ans.(d):

Sol.



Between Tomato jar and Mango jar there are two jars.

67. Ans.(a):

Sol.

68. Ans.(c):

Sol.

69. Ans.(c):

Sol. Nebulae is an interstellar cloud of dust, hydrogen, helium and other ionized gases.

70. Ans.(b):

Sol. Adhai Din Ka Jhonpra is a large and imposing structure in the city of Ajmer in Rajasthan, India.

71. Ans.(c):

Sol. Dzongkha, or is a Sino-Tibetan language spoken by over half a million people in Bhutan; it is the sole official and national language of the Kingdom of Bhutan.

72. Ans.(b):

Sol. $1 \times 2 + 6 - 2 \div 7$

$= 1 \div 2 \times 6 + 2 - 7 = 5 - 7 = -2$

73. Ans.(a):

Sol. On May 16, 1975 Sikkim formally became the 22nd state of the Indian Republic. Simultaneously, Sikkim became part of India, whereas the rule of the Namgyal dynasty ended forever.

74. Ans.(b):

Sol. A passenger name record (PNR) is a record in the database of a computer reservation system (CRS)

75. Ans.(c):

Sol. Required amount = $\frac{285}{1487} = 0.191 \text{ kg}$

76. Ans.(a):

Sol. $S.I = \frac{P \times r \times t}{100}$
 $\frac{1}{3} P = \frac{P \times 6 \times x}{100} \quad x = \frac{100}{18} = 5 \frac{5}{9}$

77. Ans.(c):

Sol. The India country code 91 will allow you to call India from another country.

78. Ans.(a):

Sol. Solanum tuberosum - annual native to South America having underground stolons bearing edible starchy tubers; widely cultivated as a garden vegetable; vines are poisonous. white potato, white potato vine, potato.

79. Ans.(c):

Sol. By checking options, for option (c).

L.H.S = $2 - 16 \div 2 + 6 \times 1$
 $= 2 - 8 + 6 = 0 = \text{R.H.S}$

80. Ans.(a):

Sol. The name of that child is Akrit Jaswal, an Indian child surgeon who performed his first surgery at the age of seven. Akrit Pran Jaswal was born on April 23, 1993, at Nurpur, Himachal Pradesh.

81. Ans.(b):

Sol. C.P per kg = $\frac{40}{90} \times 100 = \frac{400}{9}$

Loss per kg = $\frac{400}{9} - 40 = \frac{40}{9}$

For loss of Rs. $\frac{40}{9}$, quantity sold = 1 kg

for loss of Rs. 144, quantity sold
 $= \frac{9}{40} \times 144 = 32.4 \text{ kg}$

82. Ans.(b):

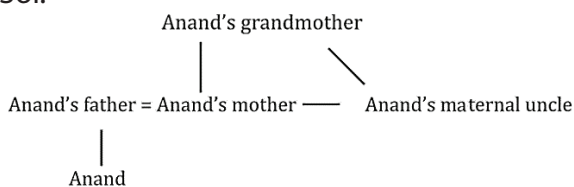
Sol. United Nation is the inter-governmental organization to promote international co-operation.

83. Ans.(c):

Sol. $1.08 \text{ tonne} = 1.08 \times 1000 \text{ kg} = 1080 \text{ kg}$

84. Ans.(d):

Sol.



85. Ans.(a):

Sol.

86. Ans.(a):

Sol. Adharma is derived from combining "a" with "dharma", which literally implies "not-dharma".

87. Ans.(d):

Sol.

88. Ans.(b):

Sol. A P J Abdul Kalam has never been a Vice President of India.

89. Ans.(b):

Sol. $1 + \tan^2 \theta = \sec^2 \theta$

90. Ans.(b):

Sol.

91. Ans.(a):

Sol. Except option (a) remaining are antonyms.

92. Ans.(d):

Sol. Except option (d), others are body parts and their respective function.

93. Ans.(c):

Sol. C #

I @

S *

T \$

E !

R ?

S *

94. Ans.(b):

Sol. Volume of tank = $1 \times \frac{1}{2} \times \frac{1}{2} = 0.25 \text{ m}^3$

Quantity of water that tank can hold
= $0.25 \times 1000 = 250 \text{ l}$

95. Ans.(c):

Sol. Scientists have discovered three vast canyons hidden below hundreds of feet of ice in the Antarctic. What's more, the canyons could play a crucial role in the continent's shifting future.

96. Ans.(d):

Sol. Let total lottery amount be x

$$\frac{1}{6} \times \frac{1}{3} \times x = 6000$$

$$x = \text{Rs. } 108000$$

97. Ans.(b):

Sol. Required difference = $9000 - 9 = 8991$

98. Ans.(c):

Sol. $a + b = 437$ and $ab = 21982$

On breaking 21982 in two factors and checking for their sum,
 $a = 58$ and $b = 379$.

99. Ans.(c):

Sol. The gravitational force exerted on an object near the earth's surface is called the object's weight.

100. Ans.(a):

Sol. Let total requirement for starting business be x

83 % of $x = 23875697$

17% of x

$$= 23875697 \times \frac{17}{83}$$

= Rs. 4890203

