

S1. Ans.(d)

Sol. Earthquakes with magnitude of about 2.0 or less are usually called micro earthquakes. Although the Richter Scale has no upper limit, the largest known shocks have had magnitudes in the 8.8 to 8.9 range.

S2. Ans.(c)

Sol. Required = $(10+7)-(6+8)$

Difference = 3

S3. Ans.(b)

Sol. Modem stands for MOdulator/DEModulator. A modem converts digital signals generated by the computer into analog signals which can be transmitted over a telephone or cable line and transforms incoming analog signals into their digital equivalents.

S4. Ans.(d)

Sol. N: 38:: 3:57

$$\frac{N}{38} = \frac{3}{57}$$

$$\Rightarrow N=2$$

S5. Ans.(d)

Sol. Distance covered = speed \times time

$$= \left(50 \times \frac{11}{2}\right) \text{ km}$$

$$= 275 \text{ km}$$

$$\therefore \text{Time taken with new speed} = \frac{275}{55} = 5 \text{ h}$$

$$\therefore \text{Time saved} = 5\frac{1}{2} \text{ h} - 5 \text{ h} = 30 \text{ min}$$

S6. Ans.(c)

Sol. $x = 7 - 4\sqrt{3}$

$$x = (2)^2 + (\sqrt{3})^2 - 2 \times 2 \times \sqrt{3}$$

$$x = (2 - \sqrt{3})^2$$

$$\therefore \sqrt{x} + \frac{1}{\sqrt{x}} = 2 - \sqrt{3} + \frac{(2 + \sqrt{3})}{(2 - \sqrt{3}) \times (2 + \sqrt{3})}$$

$$= 2 - \sqrt{3} + 2 + \sqrt{3}$$

$$= 4$$

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S7. Ans.(b)

Sol. After passing Paonta Sahib, Yamuna flows along the boundary of Haryana and Uttar Pradesh and after exiting Haryana it continues to flow till it merges with the river Ganga (Ganges) at Sangam or Prayag in Allahbad (Uttar Pradesh). While Ganga, tapti and Kaveri flows to the respective sea.

S8. Ans.(d)

Sol. Rice is one of the chief grains of India. Moreover, this country has the largest area under rice cultivation, as it is one of the principal food crops.

S9. Ans.(d)

Sol. The value of GOLD is determined in London.

S10. Ans.(d)

Sol. The young ones of all of them i.e. Elephant, Camel, Buffalo, Giraffe are called calf.

S11. Ans.(a)

$$y = \frac{2x-1}{x+3}$$

$$\Rightarrow \text{Put } y=1$$

$$x+3=2x-1$$

$$\Rightarrow x=4$$

S12. Ans.(a)

Sol. Vitamin K, which is needed for blood clotting and also plays a role in bone metabolism, as well as in the renal reabsorption of Ca^{++} .

S13. Ans.(c)

Sol.

$$9 \div 5 \ominus 10 - 23 \otimes 2$$

$$= 9 \div 5 \times 10 - 23 + 2$$

$$= 18 - 23 + 2 = -3$$

S14. Ans.(b)

Sol. Length of the wire = Perimeter of rectangle = $2(l+b)$

$$= 2 \times (42.7 + 21.8)$$

$$= 129 \text{ m}$$

$$\text{Length of side of square} = \left(\frac{129}{4}\right) \text{ m} = 32.25 \text{ m}$$

S15. Ans.(d)

Sol. Mysore city in Karnataka has topped the Swachh Bharat Rankings(2015) of 476 cities in the country with three more from the State figuring in the top 10.

S16. Ans.(a)

Sol. The most peaceful country according to the 2015 Global Peace Index is Iceland.

S17. Ans.(a)

Sol. The Chipko movement had started in the early 18th century in Rajasthan. A local woman, Amrita Devi, risked her life along with 84 villagers to protect the forest trees from being cut on the order of the king

S18. Ans.(b)

Sol. ORIN → IRON

POPCER → COPPER

DLOG → GOLD

NADS → SAND (not an element like above three)

S19. Ans.(d)

Sol. 14/13

S20. Ans.(a)

Sol. Required difference = $(10+12+13) - (16+13) = 6$

S21. Ans.(b)

Sol. $13+16 = 29$

S22. Ans.(b)

Sol. Kampala is the capital and largest city of Uganda.

S23. Ans.(c)

Sol. Madhubani painting/Mithila painting originated in a small village, known as Maithili, of the Bihar state of India. Madhubani painting/Mithila painting was traditionally created by the women of various communities in Mithila region of India and Nepal.

S24. Ans.(d)

Sol. Planet Nine is a hypothetical planet in the outer region of the Solar System.

S25. Ans.(d)

Sol. C++ is a general-purpose programming language not an Operating System.

S26. Ans.(d)

Sol. LCM of 12, 24, 48, 60, 96 = 480

Smallest 5 digit multiple of 480 = 10080

S27. Ans.(a)

Sol. Total area to be carpented = $(65 \times 30) \times 10^{-2} \text{ m}^2$

∴ Cost = Rs $(65 \times 30 \times 10^{-2} \times 45)$

= Rs 877.50

S28. Ans.(c)

Sol. Antibiotics is the most common treatment for bacterial infections in humans. Antibiotics can only treat bacterial infections. This includes strep throat and urinary infections

S29. Ans.(b)**Sol.**

$$\frac{\text{Jai}}{\text{Joy}} = \frac{5x}{2x} \begin{matrix} \nearrow 45y \\ \searrow 18y \end{matrix}$$

ATQ, $7x=63$

$x=9$

 \therefore After 9 years.

$$\frac{\text{Jai}}{\text{Joy}} = \frac{45+9}{18+9} = \frac{54}{27} = \frac{2}{1}$$

S30. Ans.(b)**Sol.**

$$\text{SP of 1 chocolate} = \frac{160}{90} = \text{Rs } \frac{16}{9}$$

$$\therefore \text{C P of 1 chocolate} = \frac{16}{9} \times \frac{5}{4} = \frac{20}{9}$$

For profit of 20%

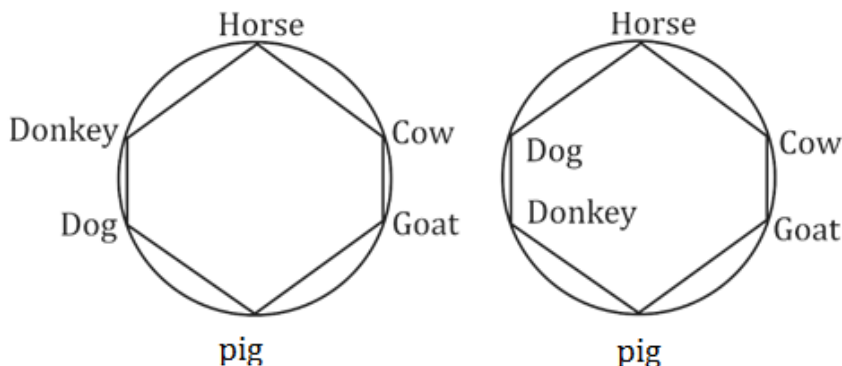
SP of n no. of chocolates

$$\Rightarrow \frac{20}{9} \times \frac{6}{5} \times n = 96$$

$$\Rightarrow n = \frac{96}{20 \times 6} \times 9 \times 5 = 36$$

S31. Ans.(a)

Sol. An archipelago is a chain, cluster or collection of islands, or sometimes a sea containing a small number of scattered islands.

Direction (32-34):**S32. Ans.(c)****Sol.** Two possibilities

S33. Ans.(d)

S34. Ans. (d)

S35. Ans.(a)

Sol. Sabari Karthik is an Indian karate player. He represents India in various Karate tournaments, across the globe.

S36. Ans.(c)

Sol. Nitrous oxide, commonly known as laughing gas or nitrous, is a chemical compound, an oxide of nitrogen with the formula N_2O .

S37. Ans.(a)

Sol. 60th anniversary is called diamond jubilee.

S38. Ans.(c)

Sol. She will get

Tomato → Rs 42 / kg

Grapes → Rs 86 / kg

Milk → Rs 23 / lt

S39. Ans.(c)

Sol. MS Swaminathan, known as the 'Father of Green Revolution' was born on August 7, 1925.

S40 Ans. (a)

Sol. Mean = $\frac{41+39+52+48+54+62+46+52+40+96+42+40+98+60+52}{15} = 54.8$

S41. Ans.(a)

Sol. $\frac{-4.6 \times -4.6}{-4} = -5.29$

S42. Ans.(c)

Sol. Currency notes are printed at the Currency Note Press in Nashik, the Bank Note Press in Dewas, the Bharatiya Reserve Bank Note Mudran (P) Ltd at Salboni and Mysore and at the Watermark Paper Manufacturing Mill in Hoshangabad.

S43. Ans.(b)

Sol. Cost per meter = $\frac{243}{4 \times 9} \times 2 = 13\frac{1}{2}$

S44. Ans.(c)

Sol. In January 1610, Italian astronomer Galileo Galilei discovered four of Jupiter's moons — now called Io, Europa, Ganymede and Callisto

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S45. Ans.(c)

Sol. Important mica bearing pegmatite occurs in Andhra Pradesh, Jharkhand, Bihar and Rajasthan.

S46. Ans.(c)

Sol. $x = 24$

$BE = 2+5=7$

$RING = 18+9+14+7=48$

S47. Ans.(b)

Sol. Let the two consecutive numbers be x & $(x+2)$

$\therefore x(x+2)=399$

$\Rightarrow x^2+2x=399$

$\Rightarrow x^2+2x-399=0$

$\Rightarrow x^2+21x-19x-399=0$

$\Rightarrow x=19 \quad x=21$

$\therefore x=19$

S48. Ans.(c)

Sol. The longest train route in the Indian Subcontinent joins Dibrugarh in Assam, North-East India to Kanyakumari, Tamil Nadu which is the southernmost tip of Mainland India.

S49. Ans.(c)

Sol. DPSPs are not enforceable in a court of law. They were made non-justiciable keeping in view that the state may not have resources to implement them. All of them are novel principles which call upon the state to provide a welfare government which can bring live ideals of the constitution.

S50. Ans.(b)

Sol. Siberian ibex is a type of wild goat. It can be found in the North and Central Asia. Siberian ibex inhabits steep mountain terrains, rocky areas with scarce vegetation and alpine meadows, on the altitude from 1.600 to 16.000 feet.

S51. Ans.(c)

Sol. $25 \text{ CP} = 20 \text{ SP}$

$$\frac{\text{CP}}{\text{SP}} = \frac{4}{5}$$

$$\therefore \text{Profit}\% = \frac{1}{4} \times 100 = 25\%$$

S52. Ans.(b)

Sol. Let $\text{CP} = 100$

$\text{MP} = 120$

$$\text{SP} = 120 \times \frac{95}{100} = 114$$

$$\therefore \text{Profit}\% = \frac{114-100}{100} \times 100 = 14\%$$

S53. Ans.(a)

Sol. Swadeshi means 'of our country'. Any product produced or manufactured in our country is known as swadeshi.

S54. Ans.(b)

Sol. The molecule that is oxidized loses an electron and the molecule that is reduced gains the electron that was lost by the oxidized molecule.

S55. Ans.(b)

Sol. Maasai Mara National Reserve is an area of preserved savannah wilderness in southwestern Kenya, along the Tanzanian border.

S56. Ans.(a)

Sol. Calculating compound interest using the Tree method

I → 900

II → 900 108

III → 900 216 12.96

Compound Interest for 2 years & 4 months = $900 + 900 + 108 + \frac{1}{3} \times (900 + 216 + 12.96)$
= Rs 2284 (approx.)

S57. Ans.(c)

Sol. Ave marks of geography = $\frac{68+65+69+70}{4} = 68$

Avg marks of History = $\frac{65+75+70+65}{4} = 68.75$

S58. Ans.(c)

Sol. Avg marks of Science = $\frac{80+85+88+87}{4} = 85$

Avg marks of maths = $\frac{75+80+82+78}{4} = 78.75$

Difference = $85 - 78.75 = 6.25$

S59. Ans.(c)

Sol. Shilpa = 450 Sheela = 449

Shamita = 428 Smita = 445

Hence, Shilpa

S60. Ans.(b)

Sol. $\Rightarrow \cos \theta + \sin \theta = m$ _____(i)

& $\sec \theta + \cos \theta = n$

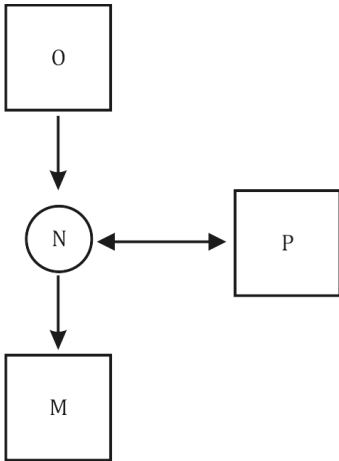
$\Rightarrow \sin \theta + \cos \theta = n \sin \theta \cos \theta$

$\Rightarrow m = n \sin \theta \cos \theta$ (from (i))

$\Rightarrow \frac{m}{n} = \sin \theta \cdot \cos \theta$

S61. Ans.(a)

Sol.



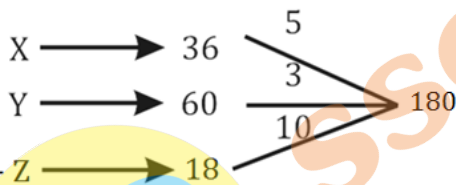
N is wife of P

S62. Ans.(c)

Sol. Sepak takraw or kick volleyball, is a sport native to Southeast Asia. Sepak takraw differs from the similar sport of footvolley in its use of a rattan ball and only allowing players to use their feet, knee, chest and head to touch the ball.

S63. Ans.(b)

Sol.



Efficiency of Z = 10-5-3

Z=2

∴ Time = $\frac{180}{2} = 90$ days

S64. Ans.(c)

Sol. The capital of Sri Lanka is Jayawardenepura Kotte while commercial capital is Colombo.

S65. Ans.(c)

Sol. $\frac{\sin\theta}{1+\cos\theta} + \frac{1+\cos\theta}{\sin\theta} = 0$
 $= \frac{\sin^2\theta + \cos^2\theta + 1 + 2\cos\theta}{\sin\theta(1+\cos\theta)} = \frac{2}{\sin\theta}$

S66. Ans.(b)

Sol. The Panchatantra collection of short stories was written in Sanskrit by Indian scholar and author, Vishnu Sharma.

S67. Ans.(c)

Sol. Many names have been assigned to these tests; originally these were collectively called Operation Shakti-98, and the five nuclear bombs were designated Shakti-I through to Shakti-V. More recently, the operation as a whole has come to be known as Pokhran II, and the 1974 explosion as Pokhran-I

S68. Ans.(d)

S69. Ans.(d)

Sol. Anjolie Ela Menon is one of India's leading contemporary artists. Her paintings are in several major collections. In 2006 her work "Yatra" was acquired by the Asian Art Museum of San Francisco, California.

S70. Ans.(b)

Sol. $x \rightarrow$ tens place, $y \rightarrow$ unit place

$$\Rightarrow x + y = 9 \text{ ----- (1)}$$

$$\Rightarrow 10x + y + 27 = 10y + x$$

$$\Rightarrow 9y - 9x = 27$$

$$\Rightarrow y - x = 3 \text{ -----(2)}$$

$$(1) + (2)$$

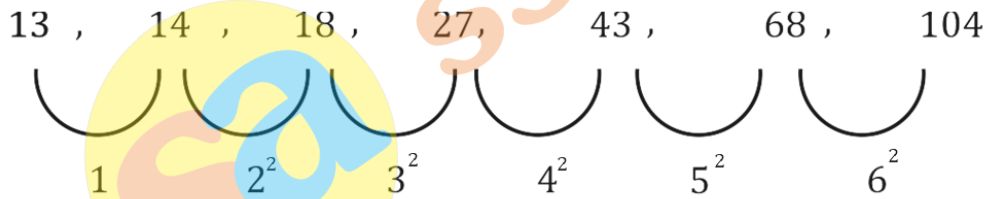
$$\Rightarrow 2y = 12$$

$$y = 6$$

\therefore The number = 36

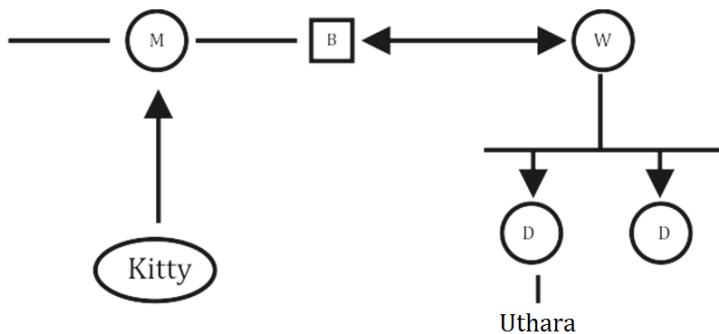
S71. Ans.(c)

Sol. The difference is square of numbers increasing from 1



S72. Ans.(a)

Sol.



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S73. Ans.(d)

Sol. $55+9x+16x=180^\circ$

$\Rightarrow x=5^\circ$

\therefore Angles = 45° & 80°

S74. Ans.(d)

Sol. Born in 1959 in Mumbai, Atul Dodiya is widely considered as one of India's most significant artists. Trained in both Mumbai and Paris, he became known in the 90s for hyperrealist paintings depicting middle-class Indian life and for his watercolour series on Mahatma Gandhi.

S75. Ans.(b)

Sol. Earning is 2nd week = $\frac{120}{360} \times 360000 = 120,000$

S76. Ans.(c)

Sol.

H	O	U	S	E	S
8	15	21	19	5	19
7	14	1	25	4	18
G	N	A	Y	D	R

\therefore	D	I	A	R	Y
	4	9	1	18	25
	↓	↓	↓	↓	↓
	-1	-1	+6	+6	-1
	3	8	7	24	24
	C	H	G	X	X

S77. Ans.(a)

Sol. "Satyameva Jayate" (lit. "Truth alone triumphs.") is a mantra from the ancient Indian scripture Mundaka Upanishad.

S78. Ans.(c)

Sol. Malé is the densely populated capital of the Maldives, an island nation in the Indian Ocean

S79. Ans.(c)

Sol. Given Relationship \rightarrow Antonym

\therefore Anger & Wrath \rightarrow Not an antonym

S80. Ans.(a)

S81. Ans.(c)

Sol. Potassium hydroxide is an inorganic compound with the formula KOH, and is commonly called caustic potash.

S82. Ans.(c)

$$\text{Sol. } \frac{9}{13} \times \frac{26}{18} \times \frac{52}{90} = \frac{26}{45}$$

S83. Ans.(d)

Sol. 0 degrees Celsius ($^{\circ}\text{C}$) is equal to 32 degrees Fahrenheit ($^{\circ}\text{F}$)

S84. Ans.(d)

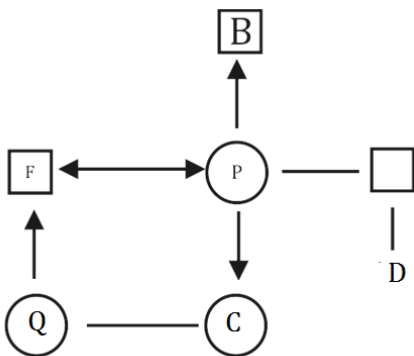
Sol. + 13 series.

S85. Ans.(a)

Sol. A normal resting heart rate for adults ranges from 60 to 100 beats per minute. Generally, a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness. For example, a well-trained athlete might have a normal resting heart rate closer to 40 beats per minute.

S86. Ans.(b)

Sol.



S87. Ans.(b)

Sol. Junko Tabei was a Japanese mountaineer. She was the first woman to reach the summit of Mount Everest, and the first woman to ascend all Seven Summits by climbing the highest peak on every continent.

S88. Ans.(d)

$$\text{Sol. } \left(\frac{\text{MHD}}{W}\right)_1 = \left(\frac{\text{MHD}}{W_2}\right)$$

$$\Rightarrow \frac{6 \times 16}{96} = \frac{8 \times 4}{n}$$

$$\Rightarrow n = 32$$

S89. Ans.(c)

Sol. Total production = 18,509 + 18,66,132 + 1840,294 = 55,64,935

S90. Ans.(c)

Sol. Makar Sankranti is also known as Uttarayan or Festival of Kites in Gujarat and Rajasthan. This is a full kite-flying day, colorful kites in the sky convert Sankranti into the beautiful colors of kites.

S91. Ans.(b)

Sol.

S92. Ans.(a)

Sol. Clearly Melon → 5

S93. Ans.(d)

Sol. Increasing by +1

S94. Ans.(a)

Sol. Distance = Relative speed × time

$$= 12 \times 42 \times 60$$

$$= 30240 \text{ m}$$

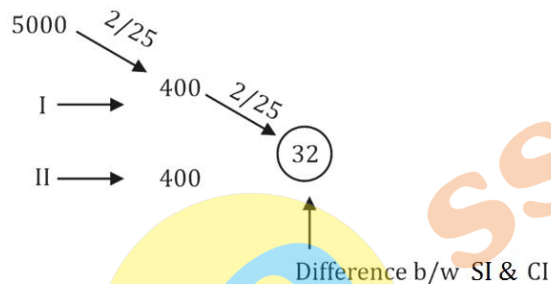
$$= 30.24 \text{ km}$$

S95. Ans.(d)

Sol. Afghanistan has become 164th member nation of the World Trade Organisation (WTO), global trade body after 11 years of negotiations in 2016.

S96. Ans.(b)

Sol. $8\% = \frac{2}{25}$



S97. Ans.(b)

Sol. $12 - [26 - \{2 + 5 \times 3\}]$

$$= 12 - [26 - 17]$$

$$= 12 - 9 = 3$$

S98. Ans.(c)

Sol. Number of bottles = $\frac{42 \times 1000}{280} = 150$

S99. Ans.(a)

Sol. LCM of 16 & 18 = 144

S100. Ans.(b)

Sol. The Dibru-Saikhowa, Nameri and Orang National Park are all found in Assam.

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