

Previous Years Paper

23rd August 2022 (Shift - 1)

Q1. In which city Major Dhyan Chand Sports University is established?

- (a) New Delhi
- (b) Amritsar
- (c) Meerut
- (d) Ahmedabad

Q2. Match List-I with List-II.

List - I		List - II	
(A)	Abhijit Banerjee	(I)	Peace
(B)	Kailash Satyarthi	(II)	Literature
(C)	C.V. Raman	(III)	Economics
(D)	Rabindranath Tagore	(IV)	Physics

Choose the correct answer from the options given below:

- (a) (A)-(II), (B)- (III), (C)-(IV), (D)-(I)
- (b) (A)-(IV), (B)- (I), (C)- (III), (D)-(II)
- (c) (A)- (III), (B)- (I), (C)- (IV), (D)-(II)
- (d) (A)- (I), (B)- (II), (C)-(IV), (D) - (III)

Q3. The rate at which banks part short-term excess liquidity with RBI, is called.

- (a) Repo Rate
- (b) Reverse Repo Rate
- (c) Bank Rate
- (d) Cash Reserve Ratio

Q4. Who has designed the National Flag of India?

- (a) Sarojini Naidu
- (b) Subhash Chandra Bose
- (c) Pingali Venkayya
- (d) C. Rajagopalachari

Q5. Which among the following are considered as Vedangas?

- (A) Kalp
- (B) Ayurveda
- (C) Vyakaran
- (D) Manu Smriti
- (E) Jyotish

Choose the correct answer from the options given below:

- (a) (A), (B) and (D) only
- (b) (B), (D) and (E) only
- (c) (A), (C) and (E) only
- (d) (A), (C) and (D) only

Q6. Match List-I with List-II.

List-I		List-II	
(A)	Smriti Zubin Irani	(I)	India vs UK: The story of an Unprecedented Diplomatic Win
(B)	Dr. Shankar Acharya	(II)	An Economist at Home and Abroad: A Personal Journey

(C)	Syed Akbaruddin	(III)	Lal Salaam: A Novel
(D)	Brijinder Nath Goswamy	(IV)	Conversations: India's Leading Art Historian Engages with 101 themes, and More

Choose the correct answer from the options given below:

- (a) (A)-(II), (B)- (I), (C)-(IV), (D)-(III)
- (b) (A)-(III), (B)- (II), (C)- (I), (D)-(IV)
- (c) (A)- (III), (B)- (I), (C)- (IV), (D)-(II)
- (d) (A)- (I), (B)- (IV), (C)-(II), (D) - (III)

Q7. Match List-I with List-II.

List-I		List-II	
(A)	United Nations World Tourism Organization	(I)	Paris, France
(B)	UNESCO	(II)	Madrid, Spain
(C)	World Trade Organization	(III)	Washington D, C., U.S.
(D)	IMF	(IV)	Geneva, Switzerland

Choose the correct answer from the options given below:

- (a) (A)-(II), (B)- (I), (C)-(IV), (D)-(III)
- (b) (A)-(IV), (B)- (I), (C)- (III), (D)-(II)
- (c) (A)- (III), (B)- (I), (C)- (IV), (D)-(II)
- (d) (A)- (I), (B)- (IV), (C)-(II), (D) - (III)

Q8. Match List-I with List-II.

List-I		List-II	
(A)	World Lion Day	(I)	26 August
(B)	World Elephant Day	(II)	10 August
(C)	World Mosquito Day	(III)	12 August
(D)	World Dog Day	(IV)	20 August

Choose the correct answer from the options given below:

- (a) (A)-(III), (B)- (I), (C)-(II), (D)-(IV)
- (b) (A)-(IV), (B)- (II), (C)- (III), (D)-(I)
- (c) (A)- (II), (B)- (III), (C)- (IV), (D)-(I)
- (d) (A)- (III), (B)- (II), (C)-(I), (D) - (IV)

Q9. 2021 Yidan Prize for Education Development for improving learning outcomes in schools at scale has been given to:

- (A) Eric A. Hanushek
- (B) Angeline Murimirwa
- (C) Lucky Lake
- (D) Dr. Rukmini Banerji

Choose the correct answer from the option given

- (a) (A) and (B) only
- (b) (B) and (D) only
- (c) (A) and (D) only
- (d) (C) and (D) only

- Q10.** Which actor (Drama) won the Best actor award of Golden Globe Awards 2022?
 (a) Will Smith
 (b) Andrew Garfield
 (c) Kodi Smit
 (d) Jane Campion
- Q11.** _____ of the total surface area of the Earth is covered with water?
 (a) 72.5%
 (b) 66.7%
 (c) 70.8%
 (d) 71.6%
- Q12.** PROM stands for
 (a) Programmable Read Only Memory
 (b) Programmed Random Only Memory
 (c) Programmable Random Objective Memory
 (d) Programmed Random Objective Memory
- Q13.** _____ is the structural and functional unit of kidneys.
 (a) Nucleon
 (b) Ribosome
 (c) Nephron
 (d) Urochrome
- Q14.** The speed of light is:
 (a) 3×10^8 m/s
 (b) 3×10^3 m/s
 (c) 8×10^3 m/s
 (d) 8×10^8 m/s
- Q15.** Who is the first man to climb to Mount Everest without Oxygen?
 (a) Sherpa Tenzing Norgay
 (b) Sir Edmund Hillary
 (c) Sir Everest
 (d) Messner and Habeler
- Q16.** A father said to his child, "I was as old as you are at the time of your birth". If the father's age is 48 years now, the child's age six years back was:
 (a) 15 years
 (b) 16 years
 (c) 17 years
 (d) 18 years
- Q17.** A town has population of 20,000 in 1980. In one year i.e. by 1981 it increased by 25%. Next year i.e. in 1982, it decreased by 20%. The next year in 1983 there was an increase of 30%. What is the population at end of 1983?
 (a) 28,000
 (b) 24,000
 (c) 26,000
 (d) 25,000
- Q18.** A man can row at 6 kmph in still water. If the velocity of current is 2 kmph and it takes him 3 hours to row to a place and come back, how far is the place?
 (a) 8 km
 (b) 5 km
 (c) 7 km
 (d) 4 km
- Q19.** A car is sold for ₹85,000 at a loss of 20%. What is the cost price (CP) of the car?
 (a) ₹1,07,250
 (b) ₹1,05,250
 (c) ₹1,04,250
 (d) ₹1,06,250
- Q20.** If I sell a cycle at ₹3,600, I make a profit of 20%. At what price I need to sell to make a profit of 10%.
 (a) ₹3,500
 (b) ₹3,000
 (c) ₹3,300
 (d) ₹3,600
- Q21.** A, B and C are in a cycle race of 1,500 meters. A cycle twice as fast as B, C cycles $\frac{1}{2}$ as fast as B, C completes the race in 40 minutes. Then, where was B from the finishing line when A finished the race?
 (a) 550 m from the finish line
 (b) 450 m from the finish line
 (c) 650 m from the finish line
 (d) 750 m from the finish line
- Q22.** Mohan asked 36 men to build his house in 30 days. 50% of the work got completed in just 10 days. So, Mohan removed some workers. Now, how many persons does he need to complete the remaining work in decided time?
 (a) 20
 (b) 18
 (c) 16
 (d) 14
- Q23.** P alone can do a piece of work in 5 days and Q alone in 4 days. P and Q undertook to do it for ₹3,000. With the help of R, they completed the work in 2 days. How much is to be paid to R?
 (a) ₹300
 (b) ₹400
 (c) ₹500
 (d) ₹600
- Q24.** A tyre has two punctures. The first puncture alone would have made the tyre flat in 6 minutes and the second alone would have done it in 9 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make it flat?
 (a) $3\frac{3}{5}$ minute
 (b) $4\frac{3}{5}$ minute
 (c) $5\frac{3}{5}$ minute
 (d) $2\frac{3}{5}$ minute
- Q25.** If length of diagonal of a square is $7\sqrt{2}$ m. The area of the square is
 (a) $46 m^2$
 (b) $49 m^2$
 (c) $39 m^2$
 (d) $48 m^2$
- Q26.** If A : B is 2 : 5. Then, the value of $2A + 3B : A + B$ is
 (a) 14:5
 (b) 19: 7
 (c) 3:11
 (d) 17: 15

Q27. Find the greatest number that will divide 38, 88 and 163 so as to leave the same remainder in each case
 (a) 18
 (b) 28
 (c) 25
 (d) 15

Q28. If principal = P, Rate, R = R% per annum, T = Time year, SI = Simple interest, then
 (A) $T = \frac{100 \times SI}{P \times R}$ (B) $SI = \frac{P \times R \times T}{100}$
 (C) $R = \frac{P \times SI \times T}{100}$ (D) $T = \frac{P \times SI \times T}{100}$
 (a) A and C only
 (b) B, C, and D only
 (c) A and B only
 (d) C and D only

Q29. Two numbers are in the ratio 4 : 3. If 2 is added to each of the number the new ratio becomes 5 : 4. Then, find the numbers
 (a) 20, 15
 (b) 16, 12
 (c) 8, 6
 (d) 12, 9

Q30. The average of first 99 positive integers is:
 (a) 45
 (b) 50
 (c) 55
 (d) 60

Q31. 27 : 729 :: 31 ?
 (a) 961
 (b) 916
 (c) 841
 (d) 814

Q32. Abundant : Scarce : Artificial : ?
 (a) Manmade
 (b) Sparse
 (c) Meager
 (d) Genuine

Q33. GFE : KJI :: ONM : ?
 (a) SRT
 (b) SRQ
 (c) TSR
 (d) RQP

Q34. Contaminated : Sinful : : Immense : ?
 (a) Tiny
 (b) Gigantic
 (c) Brave
 (d) Beautiful

Q35. Ganga : Kanpur :: Narmada : ?
 (a) Bhopal
 (b) Amarkantak
 (c) Ahmedabad
 (d) Jodhpur

Q36. Arrange the following words in the sequence they will appear in a dictionary:
 A. Mechanics
 B. Mathematics
 C. Monuments
 D. Measurement

E. Magnitude

Choose the correct answer from the option given below:

- (a) B, C, A, E, D
 (b) A, C, D, E, B
 (c) D, A, C, E, B
 (d) E, B, D, A, C

Q37. If 'BHARAT' stands for 'B-8-A-18-A-20' and 'ENGLAND' stands for E-14-G-12-A-14-D then how will you code the SRILANKA?
 (a) S-18-I-12-A-14-11-A
 (b) S-15-I-9-A-11-10-A
 (c) S-17-I-11-A-13-K-1
 (d) S-18-I-12-A-14-K-1

Q38. Arpit travelled 3 km east from his home, then 2 km north followed by 3 km to east. He took a 90° right turn and walked 5 km straight, then he again took a right turn and walked 6 km more. How far is he now his home?
 (a) 5 km
 (b) 3 km
 (c) 6 km
 (d) 2 km

Q39. Complete the series: 29, 31, 37, 41, 43 _____
 (a) 45
 (b) 47
 (c) 49
 (d) 51

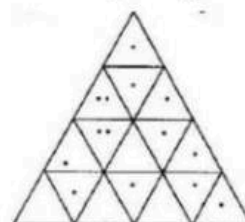
Q40. Today is Friday : After 91 days, it will be:
 (a) Wednesday
 (b) Thursday
 (c) Friday
 (d) Saturday

Q41. Complete the series. 15, 24, 35, 48, 63 _____
 (a) 80
 (b) 89
 (c) 94
 (d) 99

Q42. Complete the series: 76, 62,, 34, 20, 6
 (a) 56
 (b) 48
 (c) 43
 (d) 36

Q43. In this question, four words have been given of which three are alike in some way and one is different. Find the odd one out.
 (a) Motorcycle
 (b) Metro
 (c) Bus
 (d) Car

Q44. How many triangles are in the given shape?



- (a) 21
- (b) 23
- (c) 27
- (d) 29

Q45. Anita, Baby and Charu are sisters. D is the brother of E and E is the daughter of Baby. How is Anita related to D?

- (a) Niece
- (b) Sister
- (c) Cousin
- (d) Aunt

Q46. Find the value of $\frac{5^{2/3} \times \sqrt[3]{5^7}}{\sqrt[3]{5^6}}$

- (a) 5
- (b) 1
- (c) $\sqrt{5}$
- (d) $3\sqrt{5}$

Q47. The angle of depression of a point situated at a distance 100 m from the base of a pole is 30° . The height of the pole is:

- (a) $100(\sqrt{3} + 1)m$
- (b) $\frac{100}{3}m$
- (c) $\frac{100}{3}\sqrt{3}m$
- (d) $100\sqrt{3}m$

Q48. The value of $13.7 \times 12.7 \times 0.8$ is _____

- (a) 13.9193
- (b) 13.9192
- (c) 139.192
- (d) 139.191

Q49. The sum of greatest five and lowest/smallest four digits number is:

- (a) 91,999
- (b) 19,999
- (c) 10,999
- (d) 1,00,999

Q50. If $\sqrt[3]{x} = 2y$. Then, the value of $\frac{y^3}{x}$ is _____

- (a) 1
- (b) $\frac{2}{5}$
- (c) $\frac{1}{8}$
- (d) 8

Q51. When seen through a mirror, a clock shown 8 : 30. What is the correct time?

- (a) 2:30
- (b) 3:30
- (c) 5:30
- (d) 8:30

Q52. The value of $\sqrt{0.01} \times \sqrt[3]{0.027} - 0.3$ is

- (a) -0.1
- (b) -0.27
- (c) 0.027
- (d) 0.1

Q53. 2 women and 3 men can do a piece of work in 10 days while 3 women and 2 men can do the same work in 8 days. In how many days can 2 women and 1 man do the work?

- (a) $12\frac{1}{4}$ days

- (b) 15 days
- (c) 25 days
- (d) $12\frac{1}{2}$ days

Q54. On 7th March, 2005 Monday falls. What was the day of the week on 7th March 2004?

- (a) Monday
- (b) Saturday
- (c) Sunday
- (d) Friday

Q55. The value of $\frac{(793-232)^2 - (793-232)^2}{793 \times 232}$ is

- (a) 7930
- (b) 4
- (c) 2
- (d) 2320

Q56. The simple interest as a sum of money is $\frac{4}{5}$ th of the principal. Find the rate of interest if both the rate of interest and time are numerically equal.

- (a) 46% P.A.
- (b) $4\sqrt{2}$ & P.A.
- (c) 43% P.A.
- (d) $4\sqrt{5}$ % P.A.

Q57. Find the odd number in the series 63, 48, 34, 24, 15, 8, 3

- (a) 24
- (b) 34
- (c) 15
- (d) 8

Q58. The average of the four consecutive odd numbers is 16. What is the third number in the descending order?

- (a) 13
- (b) 15
- (c) 17
- (d) 19

Q59. A train running at a speed of 54 km/hr crosses a platform which is double of the length of the train in 18 seconds. What is the length of the platform and train?

- (a) 180m and 90 m
- (b) 90 m and 180m
- (c) 70 m and 140 m
- (d) 140 m and 70 m

Q60. Find the largest size of a bamboo that can be placed in a square of area 333 m^2 ?

- (a) 13 m
- (b) $13\sqrt{2}$ m
- (c) 26 m
- (d) $26\sqrt{2}$ m

Q61. Arrange the following in a logical order:

- (A) Frog
- (B) Eagle
- (C) Grasshopper
- (D) Snake
- (E) Grass

Choose the correct answer from the option given below:

- (a) A, C, E, B, D
(b) C, D, B, E, A
(c) E, C, A, D, B
(d) E, C, D, B, A

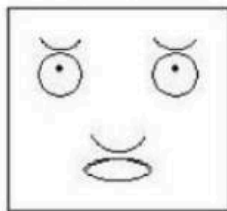
Q62. Which of the following collection of letters will look the same in the simple mirror?

- (a) HIMOSTA
(b) HIMOVTA
(c) AOSVMTA
(d) HVHRTAM

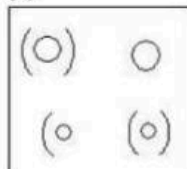
Q63. If 'book' is called 'watch', watch is called 'bag'; 'bag' is called 'dictionary' and 'dictionary' is called door: which is used to carry the books?

- (a) Watch
(b) Bag
(c) Dictionary
(d) Door

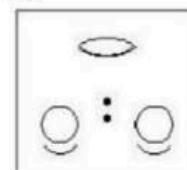
Q64. Find out the figure which will be exactly make up from the sum collection of symbols:



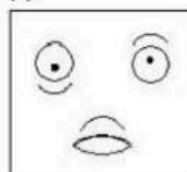
(a)



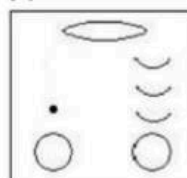
(b)



(c)



(d)



Q65. Match List-I with List-II.

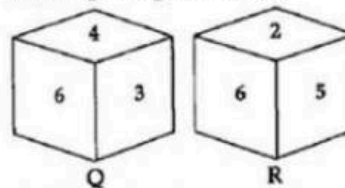
List-I		List-II	
(A)	Book	(I)	Editor
(B)	Film	(II)	Dramatist

(C)	Play	(III)	Author
(D)	Newspaper	(IV)	Producer

Choose the correct answer from the options given below:

- (a) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
(b) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
(c) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
(d) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Q66. Two different positions Q and R of dice are shown in the figures given below.



Which number lies opposite to number 6?

- (a) 1
(b) 3
(c) 4
(d) 5

Q67. Choose the essential word from the options given below.

- (a) Tractor
(b) Plough
(c) Land
(d) Spade

Q68. Statements:

Some Icon are Image

All Image are File

Some Folder are Icon

Conclusions:

I: Some Folder are not File

II: All Folder are File

(a) If only conclusion I follows.

(b) If only conclusion II follows.

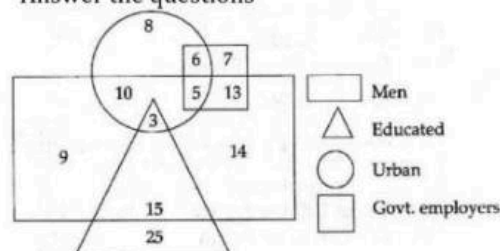
(c) If either conclusion I or II follows.

(d) If neither conclusion I nor II follows.

Direction for questions (69 - 71):

In the following diagram, rectangle represent man, triangle represents educated, circle represents urban and square represents government employees.

Answer the questions



Q69. Which of the following numbers represent Educated man who are not urban?

- (a) 14
(b) 3
(c) 15
(d) 25

- Q70.** Which one of the following represent Urban educated man?
(a) 3
(b) 15
(c) 5
(d) 25

- Q71.** Which of the following number represents urban men who are government employee?
(a) 10
(b) 3
(c) 5
(d) 13

Direction for questions (72 - 75):

Study the following table carefully to answer the question.

Marks obtained by the students in different subject at board examination.

Subject Marks/Student	Math (75)	Science (75)	English (80)	Hindi (60)	Computer (10)
PK	60	62	70	50	90
QS	48	56	70	55	90
RP	70	68	72	40	80
SG	62	69	75	45	95
GP	66	60	62	30	85
FA	54	70	50	56	100

- Q72.** What is the average of marks obtained by the all students in computer?
(a) 80
(b) 90
(c) 85
(d) 95

- Q73.** What is the overall percentage of marks obtained by GP in all subjects?
(a) 72.88%
(b) 76.75
(c) 74.50%
(d) 75.75%

- Q74.** What is average marks obtained by the all students in Hindi?
(a) 46
(b) 48
(c) 47.8
(d) 45.8

- Q75.** What is the ratio between total marks obtained in all subjects by RP and FA?
(a) 84: 89
(b) 50 :51
(c) 1:1
(d) 10:11

SOLUTIONS

S1. Ans. (c)

Sol. Prime Minister Narendra Modi Has laid the foundation stone for Major Dhyan Chand Sports University in Meerut, Uttar Pradesh. This sports university is being established at an estimated cost of ₹700 crore at the Salawa and Kaili villages of the Sardhana town in Meerut. It will have the capacity of training 1,080 sportspersons, including 540 women and 540 men.

S2. Ans. (c)

Sol.

Sl.	List-I (Noble Prize winners)		List-II(Areas)
A.	Abhijit Banerjee	III	Economics
B.	Kailash Satyarthi	I	Peace
C.	C.v. Raman	IV	Physics
D.	Rabindranath Tagore	II	Literature

S3. Ans. (b)

Sol. Reverse Repo Rate is the rate the central bank of a country apays its commercial banks to park their excess funds in the central bank. It is the rate at which banks earn inter when they park surplus funds with the RBI. It helps to control inflation, and increases liquidity in the economy. The repo rate set by the RBI is always higher than the reverse repo.

S4. Ans. (c)

Sol. Pingali Venkayya designed the National Flag of India. The design of the flag of India that was first presented in 1921 to Mahatma Gandhi, leader of the All-India Congress, was created by Pingali Venkayya. He was also as a lecturer author, geologist, Educationalist, agriculturist, and a polyglot.

S5. Ans. (c)

Sol. Vedangas, are six auxiliaries' disciplines associated with the study understanding Of the Vedas. These are Shiksha, Chhandas, Vyakarana, Nirukta, Kalpa and Jyotisha. The Vedangas are the last treatises of the Vedic Literature.

S6. Ans. (b)

Sol.

Sl.	List-I (Author)		List-II (Book)
A.	Smriti Zubin Irani	III	Lal Salaam: A Novel
B.	Dr. Shankar Acharya	II	An Economist at Home and Abroad: A Personal Journey
C.	Syed Akbaruddin	I	India vs UK: The story of an Unprecedented Diplomatic Win
D.	Brijinder Nath Goswamy	IV	Conversations India's Leading Art Historian Engages with 101 themes, and more

S7. Ans. (a)

Sol.

	List-I (Agency)		List-II (Headquarters)
(A)	United Nations World Tourism Organization	II	Madrid, Spain
(B)	UNESCO	I	Paris, France.
(C)	World Trade Organization	IV	Ganeva, Switzerland
(D)	IMF	III	Washington, D.C

S8. Ans. (c)

Sol.

	List-I		List-II
(A)	World Lion Day	II	10 August
(B)	World Elephant Day	III	12 August
(C)	World Mosquito Day	IV	20 August
(D)	World Dog Day	I	26 August

S9. Ans. (c)

Sol. Yidan Prize Foundation is a global Philanthropic education foundation, inspiring progress and change in education. Professor Eric A. Hanushek and Dr. Rukmini Banerji have been awarded the 2021 Yidan Prize for Education Development for improving learning outcomes in schools at scale.

S10. Ans. (a)

Sol. The 79th Golden Globe Awards honored the best in film and American television of 2021, as chosen by the Hollywood Foreign Press Association. The ceremony took place on January 9, 2022. Will Smith won the Best actor award of Golden Globe Awards 2022.

S11. Ans. (c)

Sol. About 70.8 % of surface is. water-covered. This is in various forms such as oceans, rivers, lakes, glaciers and ice sheets. The oceans hold about 96.5 percent of all Earth's water.

S12. Ans. (a)

Sol. PROM Stands for Programmable Read Only Memory. It a of digital of digital memory where the contents can be changed once after manufacture of the device. It can be modified once by a use PROM is a way of allowing a user to tailor a microcode program using a special machine called a PROM programmer.

S13. Ans. (c)

Sol. Nephron is the structural and functional unit of kidneys.

S14. Ans. (a)

Sol. Speed of light is 3×10^8 m/s.

S15. Ans. (d)

Sol. Sometime between 1 and 2 in the afternoon on May 8, 1978, Messner and Habeler achieved what was believed to be impossible—the first ascent of Mt. Everest without oxygen.

S16. Ans. (d)

Sol. Let child's age = x years

As per the question,

$$2x = 48$$

$$x = 24 \text{ years}$$

$$\text{So, six years back, child's age} = 24 - 6 = 18 \text{ years}$$

S17. Ans. (c)

Sol. Population in year 1980 = 20,000

So,

$$\text{Population in year 1981} = 20,000 \times \frac{125}{100} = 25,000$$

$$\text{Population in year 1982} = 25,000 \times \frac{80}{100} = 20,000$$

$$\text{Population in year 1983} = 20,000 \times \frac{130}{100} = 26,000$$

S18. Ans. (a)

Sol. Let the distance = x km

As we know that, $\frac{\text{Distance}}{\text{Speed}} = \text{Time}$

$$\text{So, } \frac{x}{8} + \frac{x}{4} = 3$$

$$x = 8 \text{ km}$$

S19. Ans. (d)

Sol. Let the C.P. of the car = ₹ x

$$\text{Then } x = 85,00 \times \frac{100}{80} = ₹1,06,250$$

S20. Ans. (c)

Sol. Let the C.P. of the cycle = ₹ x

$$\text{Then } x = 3,600 \times \frac{100}{120} = 3,000$$

$$\text{Now, required sale price} = 3,000 \times \frac{110}{100} = ₹3,300$$

S21. Ans. (d)

Sol. Let the speed of $C = x$ m/s

Then, speed of $B = 2x$ m/s

And speed of $A = 4x$ m/s

So, time taken by A to finish the race

$$= \frac{1}{4} \times 40 = 10 \text{ min or } 600 \text{ sec}$$

$$\text{Hence, speed of } A = 1,500/600 = 2.5 \text{ m/s}$$

$$\text{Now speed of } B = 2.5 = 1.25 \text{ m/s}$$

$$\text{So, required distance} = 1.25 \times 600 = 750 \text{ m}$$

S22. Ans. (b)

Sol. Given that, 36 men can build 50% of the house in 10 days.

Let x men can complete the same in 20 days.

As we know that,

$$M_1 D_1 = M_2 D_2$$

$$36 \times 10 = x \times 20$$

$$= 18 \text{ men}$$

S23. Ans. (a)

Sol. Time taken by P to finish the task = 5 days

Time taken by Q to finish the task = 4 days

Time taken by P , Q and R to finish the task = 2 days

$$\text{Total work} = \text{LCM}(5, 4, 2) = 20$$

$$\text{So, Efficiency of } P = 20/5 = 4$$

$$\text{Efficiency of } Q = 20/4 = 5$$

And combined efficiency of P , Q and $R = 10$

So, efficiency of $R = 1$

$$\text{So, amount paid to } R = \frac{1}{10} \times 3,000 = ₹300$$

S24. Ans. (a)

Sol. Time taken by 1st puncture = 6 min

Time taken by 2nd puncture = 9 min

So, time taken by both puncture

$$= \frac{1}{\frac{1}{6} + \frac{1}{9}} = \frac{18}{5} = 3\frac{3}{5} \text{ min}$$

S25. Ans. (b)

Sol. Given that,

$$\text{Length of diagonal} = 7\sqrt{2} \text{ m}$$

So, length of sides = 7 m

$$\text{So, area} = 7^2 = 49 \text{ m}^2$$

S26. Ans. (b)

Sol. Given that,

$$A : B = 2 : 5$$

$$\text{So, } 2A + 3B : A + B = 2 \times 2 + 3 \times 5 : 2 + 5$$

$$= 19 : 7$$

S27. Ans. (c)

Sol. Required number = HCF of the differences of the given numbers

$$= \text{HCF}(88 - 38, 163 - 88, 16 - -38)$$

$$= \text{HCF}(50, 75, 125)$$

$$= 25$$

S28. Ans. (c)

Sol. As we know that,

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

From given choices options A, and B are correct.

S29. Ans. (c)

Sol. Given that the ratio between the numbers = 4 : 3

Let the numbers are $4x$ and $3x$.

As per the question,

$$\frac{4x+2}{3x+2} = \frac{5}{4}$$

$$\text{So, } 16x + 8 = 15x + 10$$

$$x = 2$$

$$\text{Numbers} = 8 \text{ and } 6$$

S30. Ans. (b)

Sol. Sum of 99 positive integers

$$= \frac{99(99+1)}{2} = \frac{99 \times 100}{2} = 4,950$$

$$\text{So, required average} = \frac{4,950}{99} = 50$$

S31. Ans. (a)

Sol. As 729 is the square of 27. So, the missing number will be the square of 31.

Hence, the required number = 961

So, option A is correct option.

S32. Ans. (d)

Sol. Antonyms of each other, so the correct word is as follows: Abundant : Scarce :: Artificial : Genuine

S33. Sol. (b)

Sol. Given that

$$G + 4 \quad K$$

$$F + 4 \quad J$$

$$E + 4 \quad I$$

$$\text{So, ONM} \quad \text{SRQ}$$

So, option B is correct option.

S34. Ans. (b)

Sol. Synonyms of each other, so the correct word is as follows: Contaminated : Sinful :: Immense : Gigantic

S35. Ans. (b)

Sol. The town Kanpur is situated on the south bank of river Ganga. Similarly, the Narmada River rises from the Amarkantak Plateau in Anuppur district Madhya Pradesh.

S36. Ans. (d)

Sol. According to arrangement of words in alphabetically order the sequence will be Magnitude, Mathematics, Measurement, Mechanics and Monuments.

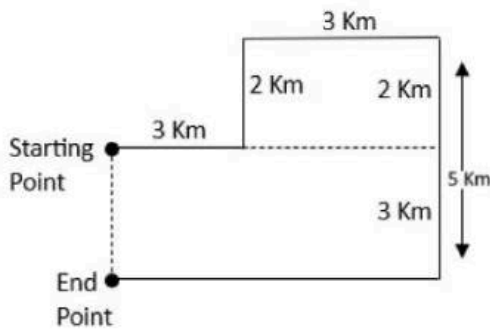
S37. Ans. (d)

Sol. In code every alternate alphabet is replaced by its numeric value as written below.

BHARAT B-8-A-18-A20
ENGLAND E-14-G-12-A-14-D
So, SRILANKA S-18-I-12-A-14-K-1

S38. Ans. (b)

Sol.



S39. Ans. (b)

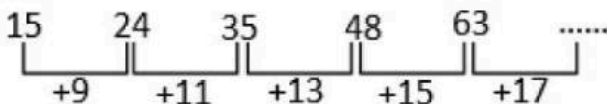
Sol. Given Series is a series of prime numbers.
So, missing number = 47

S40. Ans. (c)

Sol. 91 is completely divisible by 7. So, same day will repeat.

S41. Ans. (a)

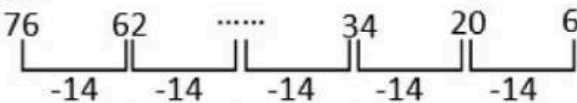
Sol.



So, Last number = $63 + 17 = 80$.
Hence, option A is correct option.

S42. Ans. (a)

Sol.



So, Missing number = $62 - 14 = 48$
Hence option B is correct option.

S43. Ans. (b)

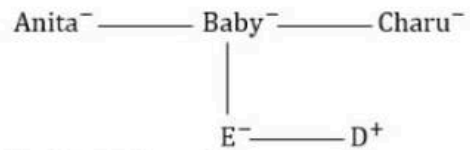
Sol. Motorcycle, Bus and Car run on road but Metro runs on rail track.

S44. Ans. (b)

Sol. Total number of triangles
 $= \frac{n(n+2)(2n+1)}{8} = \frac{4 \times 6 \times 9}{8} = 27$

S45. Ans. (d)

Sol.



So, Anita is Aunt of D.

Hence, option D is correct option.

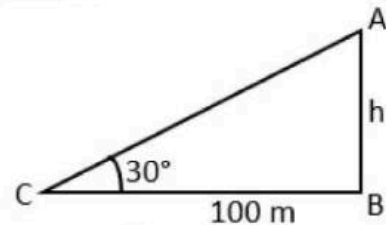
S46. Ans. (a)

$$\text{Sol. } \frac{5^{2/3} \times \sqrt[3]{5^7}}{\sqrt[3]{5^6}} = \frac{5^{2/3} \times 5^{7/3}}{5^{6/3}} \\ = \frac{5^{9/3}}{5^2} = \frac{5^3}{5^2} = 5$$

Hence, option A is correct option.

S47. Ans. (c)

Sol. In $\triangle ABC$



$$\tan 30^\circ = \frac{h}{100}$$

$$\frac{1}{\sqrt{3}} = \frac{h}{100}$$

$$h = \frac{100 \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}}$$

$$h = \frac{100\sqrt{3}}{3} \text{ m}$$

Hence, option C is correct option.

S48. Ans. (c)

Sol. $13.7 \times 12.7 \times 0.8 = 139.192$

S49. Ans. (d)

Sol. Required sum = $99,999 + 1,000$
 $= 1,00,999$

S50. Ans. (c)

Sol. Given that, $\sqrt[3]{x} = 2y$

$$x = 8y^3$$

$$\text{So, } \frac{y^3}{x} = \frac{1}{8}$$

So, option C is correct option.

S51. Ans. (b)

Sol. Correct time = $11:60 - 8:30$
 $= 3:30$

S52. Ans. (b)

Sol. Given that,

$$\sqrt{0.01} \times \sqrt[3]{0.027} - 0.3 = 0.1 \times 0.3 - 0.3 \\ = 0.03 - 0.3 = -0.27$$

S53. Ans. (d)

Sol. As given in the question,

$$\frac{2}{W} + \frac{3}{M} = \frac{1}{10}$$

$$\frac{3}{W} + \frac{2}{M} = \frac{1}{8}$$

From above equations,

$$\frac{1}{W} = \frac{7}{200} \text{ And } \frac{1}{M} = \frac{1}{100}$$

$$\text{So, now } \frac{2}{W} + \frac{1}{M} = \frac{14}{200} + \frac{1}{100}$$

$$= \frac{16}{200}$$

So, required days = $\frac{200}{16} = 12\frac{1}{2}$ days

S54. Ans. (c)

Sol. As there is 1 odd day. So, 1 year before the day was Sunday.

S55. Ans. (b)

Sol. Given that, $\frac{(793+232)^2 - (793-232)^2}{793 \times 232}$
 $= \frac{4 \times 793 \times 232}{793 \times 232} = 4$

S56. Ans. (d)

Sol. Let the rate of interest and time = T
 And Principal amount = P

As we know that,

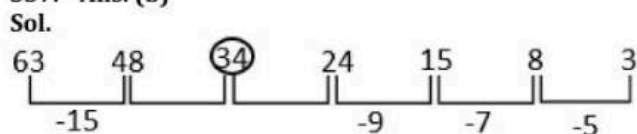
$$SI = \frac{P \times R \times T}{100}$$

$$\text{So, } \frac{4}{5}P = \frac{P \times R \times T}{100} \quad (\text{Since, } R=T)$$

$$T = 4\sqrt{5}$$

So, rate of interest = $4\sqrt{5}\%$ P.A.

S57. Ans. (b)



In given series, 34 is the odd number as it is not following the odd number difference.

Difference of 5, 7, 9, 11, 13, 15 should be there from last.

S58. Ans. (b)

Sol. Let the numbers = X, X + 2, X + 4, X + 6

$$\text{So, Average} = \frac{X+X+2+X+4+X+6}{4} = 16$$

$$X = 13$$

$$\text{So, Require number} = X + 2 = 15$$

S59. Ans. (a)

Sol. Let the length of train = L

So, the length of platform = 2 L

$$\text{Speed of the train} = 54 \text{ kmph} = 54 \times \frac{5}{18} = 15 \text{ m/s}$$

As we know that,

$$\text{Distance} = \text{Speed} \times \text{Time}$$

$$3L = 15 \times 18$$

$$L = 90 \text{ m}$$

So, the length of train = 90 m

And the length of platform = 180 m

S60. Ans. (c)

Sol. Area of square = 333m^2

Let the side of square = a

$$\text{So, } a = \sqrt{333} \text{ m}$$

So, largest size of the bamboo = $a\sqrt{2}$

$$= \sqrt{2}\sqrt{333} = \sqrt{666} \approx 26 \text{ m}$$

S61. Ans. (c)

Sol. $e \rightarrow c \rightarrow a \rightarrow d \rightarrow b$

The logical order is Grass – Grasshopper – Frog – Snake – Eagle

S62. Ans. (b)

Sol. All characters of option B will look same in the mirror.

S63. Ans. (c)

Sol. Bag is called dictionary.

So, as per the question 'Dictionary' is used to carry the books.

S64. Ans. (c)

Sol. Option C will be exactly make up from the sum collection of symbols.

S65. Ans. (d)

Sol. A-III, B-IV, C-II, D-I

- Book is associated with Author.
- Film is associated with Producer.
- Play is associated with Dramatist.
- Newspaper is associated with Editor.

S66. Ans. (a)

Sol. Numbers 3, 2, 4 and 5 lie adjacent to number 6. So, 1 will be opposite to 6.

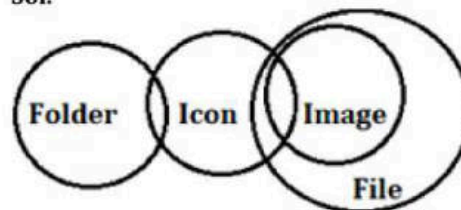
S67. Ans. (c)

Sol. Farming always comprises land.

So, land is the essential part of farming.

S68. Ans. (c)

Sol.



S69. Ans. (c)

Sol. The numbers represent Educated men who are not urban = 15

S70. Ans. (a)

Sol. Number of Urban educated man = 3

S71. Ans. (c)

Sol. The numbers represent urban, men who are government employee = 5

S72. Ans. (d)

$$\text{Sol. Average marks} = \frac{90+90+80+95+85+100}{6} = 90$$

S73. Ans. (d)

$$\text{Sol. Percentage marks} = \frac{(66+60+62+30+85) \times 100}{75-75+80+60+110} = 75.75\%$$

S74. Ans. (a)

$$\text{Sol. Average marks obtained by the all students in Hindi} = \frac{50+55+40+45+30+56}{6} = 46$$

S75. Ans. (c)

Sol. Marks obtained by RP in all subject = $70 + 68 + 72 + 40 + 80 = 330$

Marks obtained by RP in all subjects = $54 + 70 + 50 + 56 + 100 = 330$

So, required ratio = $330 : 330 = 1:1$