

CUET General Test Solved Paper-2022

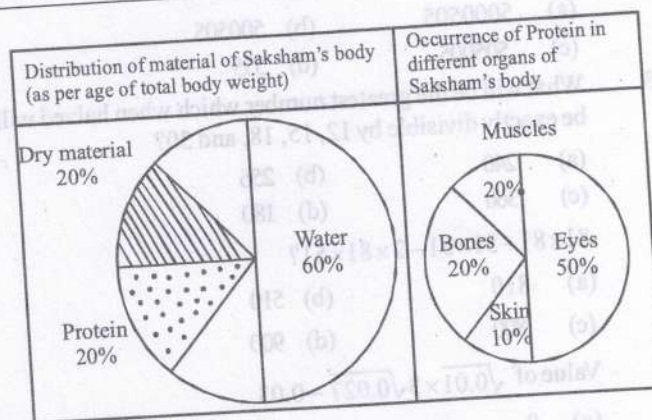
Held on 22 Aug. 2022

Numerical Ability & Quantitative Reasoning

1. Find the odd number in the series
2, 3, 5, 7, 9, 11, 13
(a) 5 (b) 7
(c) 11 (d) 9
2. The sum of the place values of five in the number 503535 is
(a) 5000505 (b) 500505
(c) 505005 (d) 555
3. What will be the greatest number which when halved will be exactly divisible by 12, 15, 18, and 30?
(a) 240 (b) 256
(c) 360 (d) 180
4. $81 \times 81 + 51 \times 51 - 2 \times 81 \times 51$?
(a) 810 (b) 510
(c) 800 (d) 900
5. Value of $\sqrt{0.01} \times 3\sqrt{0.027} - 0.03$
(a) 0 (b) 1
(c) 3 (d) 9
6. $a = 7, b = 5$ Then find the value of $ab^2 + 3a^2b$:
(a) 343 (b) 593
(c) 735 (d) 910
7. $y + \sqrt{256} = 2\sqrt{169}$, then, value of y is
(a) 10 (b) 12
(c) 13 (d) 14
8. $(0.04 \times 4 - 0.004 \times 4)$ equals
(a) 1.44 (b) 0.144
(c) 14.4 (d) 0.141
9. If $2^{x-1} + 2^{x+1} = 1280$, then find the value of x
(a) 4 (b) 6
(c) 8 (d) 9
10. If 50% of a number is equal to 1/5th of another number, what is the ratio of the number to the second number?
(a) 2:5 (b) 9:6
(c) 10:1 (d) 3:7
11. The average of the four consecutive odd number is 16. What is the difference between fourth and first?
(a) 4 (b) 2
(c) 5 (d) 6
12. x% of x is the same as 20% of
(a) 20x (b) x/20
(c) $x^2/20$ (d) $20x^2$
13. Hari sells 6 eggs at Rs. 24. He buys 10 eggs at Rs. 30. What is his profit or loss%?
(a) 33.33% (b) 55.33%
(c) 65.66% (d) 60.66%
14. A shopkeeper bought candy at 10 for a rupee. How many for a rupee must he sells to gain 25%?
(a) 5 (b) 6
(c) 7 (d) 8
15. A sum becomes its double in 15 years. Find the annual rate of simple interest:
(a) $6\frac{1}{3}\%$ PA (b) $6\frac{2}{3}\%$ PA
(c) $7\frac{2}{3}\%$ PA (d) $7\frac{1}{3}\%$ PA
16. Simple interest of Rs. 20000 for 8 years at 6% PA is equal to the simple interest on Rs. 16000 at 3% PA for a fixed period. The time period is
(a) 20 yrs (b) 19 yrs
(c) 21 yrs (d) 22 yrs
17. P can lay railway track between two given stations in 15 days and Q can do the same job in 10 days. With help of R, they did the job in 4 days only. Then, R alone can do the job in:
(a) 10 days (b) 12 days
(c) 8 day (d) 9 days
18. Mohan is on tour and he has Rs. 75 for his expenses. If he exceeds his tour by 4 days he must reduce daily expenses by Rs. 5. The number of days of Mohan's tour programme is-
(a) 3 days (b) 4 days
(c) 5 days (d) 6 days
19. A can do piece of work in 20 days, which B can do in 16 days, B worked at it for 8 days. A can finish the remaining work is.....
(a) 8 days (b) 10 days
(c) 6 days (d) 12 days
20. The speed of a boat upstream is 12 km/hr and speed of the stream is 2 km/hr. How much time will take to travel 48 km downstream?
(a) 3.5 hours (b) 2.5 hours
(c) 5.5 hours (d) 3 hours

21. Ramnaresh complete a journey in 10 hours. He travels first half of the journey at the rate of 20 km/hr and second half at the rate of 25 km/hr. Find the total journey in km.
 (a) 111.11 km (b) 222.22 km
 (c) 333.33 km (d) 444.44 km
22. Excluding stoppage, the speed of a train is 120 kmph and including stoppages it is 100 kmph. For how many minutes does the train stop per hour?
 (a) 10 min (b) 15 min
 (c) 20 min (d) 12 min
23. A train passes two bridges of lengths 1 km and 500 m in 120 seconds and 80 second respectively. The length of the train is-
 (a) 400 m (b) 300 m
 (c) 750 m (d) 500 m
24. The time taken by train 720 m long travelling at 28 km/hr in passing a boy walking 10 km/hr in same direction will be.
 (a) 146 sec (b) 144 sec
 (c) 145 sec (d) 147 sec
25. The minute arm of a clock is 20 cm long. The number of minutes taken by the tip of the arm to travel a length of 20 cm is nearly equal to.
 (a) 4.77 min (b) 9.54 min
 (c) 19.18 min (d) 14.31 min
26. If February 01, 2013 was Friday, what will be day on February 01, 2024?
 (a) Saturday (b) Monday
 (c) Tuesday (d) Thursday
27. How many times in a day, the hands of a clock are straight?
 (a) 22 (b) 24
 (c) 44 (d) 46
28. Looking into the mirror the clock shows 9 : 30 as the time. The actual time is
 (a) 3 : 30 (b) 4 : 30
 (c) 2 : 30 (d) 6 : 30
29. If the radius of a circle is 22 cm then
 A. Area of the circle = 31.04 cm²
 B. Area of the circle = 41.04 cm²
 C. Circumference of the circle = 19.75 cm
 D. Circumference of the circle = 29.75 cm
 E. Area of the circle = 21.04 cm²
 Choose the correct answer from the options given below:
 (a) A, B and E only (b) A, D and E only
 (c) A and D only (d) A and C only
30. If the height of cylinder is halved and radius is doubled, then what will happen to the curved surface area?
 (a) Increase by 1 (b) double
 (c) triple (d) the same
31. The perimeter of a square is 40 cm. Find the area of given square.
 (a) 40 cm (b) 40 cm²
 (c) 100 cm (d) 100 cm²
32. A man standing on the top of a tower standing on the sea shore, finds that a boat coming towards him takes 10 minutes for the angle to change from 45° to 60°. Find the time taken by the boat to reach the shore from this position.
 (a) 17.32 min (b) 8.66 min
 (c) 7.32 min (d) 13.66 min

DIRECTIONS (Qs. 33-36): Study the given pie chart carefully to answer the following question from

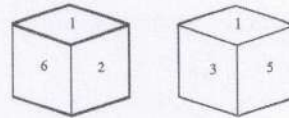


33. What fraction of Saksham's weight consist of muscles and skin protein?
 (a) $\frac{1}{50}$ (b) $\frac{3}{50}$
 (c) $\frac{2}{25}$ (d) $\frac{1}{25}$
34. Ratio of distribution of Protein in muscles to the distribution of Protein in eye is
 (a) 2 : 25 (b) 2 : 5
 (c) 3 : 111 (d) 3 : 5
35. What percentage of Saksham's body weight is made of bones?
 (a) 0.15%
 (b) 10%
 (c) 1.5%
 (d) Cannot determined
36. In terms of total body weight the portion of material other than water and protein is closed to
 (a) $\frac{1}{5}$ (b) $\frac{85}{100}$
 (c) $\frac{1}{15}$ (d) $\frac{1}{25}$

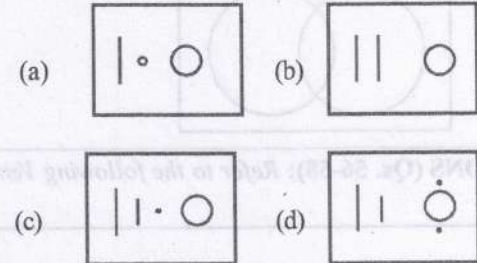
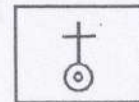
General Mental Ability & Logical and Analytical Reasoning

37. Copy : Pen :: Wall : ?
 (a) Color (b) Paint
 (c) Brush (d) Clock
38. XU : RO :: LI : ?
 (a) JG (b) HE
 (c) GD (d) FC
39. Crooked : Bent :: Twisted : ?
 (a) Straight (b) Brave
 (c) Zigzag (d) Fighter
40. Find the missing terms:
 69 : 23 :: 87 : ?
 (a) 25 (b) 26
 (c) 27 (d) 29
41. Dismal : Cheerful :: Despair : ?
 (a) Offer (b) Inferior
 (c) Hope (d) Bright
42. 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) Moon (b) Mars
 (c) Mercury (d) Venus
43. Complete the series:
 153, 144, 135, ? 117, 108, 99
 (a) 130 (b) 125
 (c) 126 (d) 121
44. Complete the series:
 1, 8, 27, 64, ? 216, 243
 (a) 81 (b) 100
 (c) 125 (d) 169
45. Complete the series
 23, 31, 41, 47, 59, ?
 (a) 61 (b) 63
 (c) 67 (d) 71
46. If FASHION is coded as 6119891514 and DESIGNER as 45199714518, what will the code for CATWALK?
 (a) 31232011211 (b) 31202311112
 (c) 31202311211 (d) 31212311201
47. If 'Rail' is called 'Truck'. 'Truck' is called 'Tractor' 'Tractor' is called 'Car', 'Car' is called 'Scooter', 'Scooter' is called 'Bicycle', 'Bicycle' is called 'Moped'. Which is used to plough a field?
 (a) Car (b) Tractor
 (c) Truck (d) Moped

48. P is Q's father. Q is T's father. T is S' brother. S is R' daughter. Then, how is P related to S
 (a) Brother (b) Uncle
 (c) Father (d) Grandfather
49. One day, Saurabh cycled 40 km southwards from his home, then he turned right and cycled 20 km and turned right again and cycled 40 km. From there, he turned left and cycled 40 km. How many kilometres will he have to cycle to reach his home straight?
 (a) 20km (b) 30km
 (c) 40km (d) 60km
50. Which number is just opposite to 1 ?



- (a) 3 (b) 4
 (c) 5 (d) 6
51. Find out the symbols which makes given figure:



52. Rohit is as much younger than Arun as He is older than Neena. The sum of ages of Arun and Neena is 110 years. What is the age of Rohit?
 (a) 50 years (b) 55 years
 (c) 60 years (d) 65 years
53. Arrange the following words in the sequence they will appear in dictionary:
 A. Distraction
 B. Distribution
 C. Desperation
 D. District
 E. Documentation
 Choose the correct answer from the options given below:
 (a) D, C, A, E, B (b) B, A, C, D, E
 (c) C, A, B, D, E (d) C, D, B, E, E
54. Arrange the following in a meaningful sequence:
 A. Agra
 B. Taj Mahal

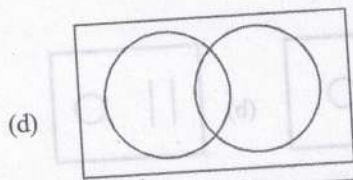
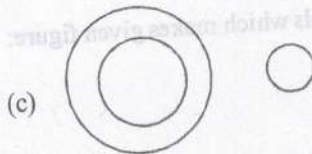
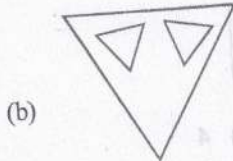
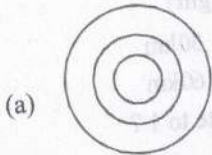
- C. India
D. Uttar Pradesh
E. North India

Choose the correct answer from the option given below:

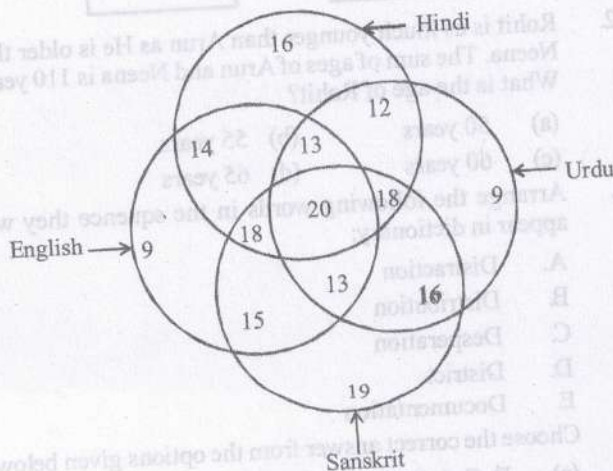
- (a) ABCED (b) BADEC
(c) BADCE (d) ABDEC

55. Choose the right interpretation from the figures.

Chair : Furniture: Table



DIRECTIONS (Qs. 56-58): Refer to the following Venn diagram



56. The number of students who took any three of the above language was
(a) 62 (b) 64
(c) 63 (d) 82

57. The number of students who took both Hindi and Urdu among other languages was
(a) 62 (b) 63
(c) 65 (d) 66
58. The number of students in total who took Hindi or English or Sanskrit was
(a) 183 (b) 190
(c) 424 (d) 430

General Knowledge & Current Affairs

59. Who among the following was an illiterate?
(a) Jahangir (b) Shah Jahan
(c) Akbar (d) Aurangzeb
60. Which Governor General is associated with Doctrine of Lapse?
(a) Lord Ripon (b) Lord Dalhousie
(c) Lord Bentinck (d) Lord Curzon
61. The Greek ambassador sent to Chandragupta Maurya's Court was:
(a) Kautilya (b) Seleucus Nicator
(c) Megasthenes (d) Justin
62. Identify the European power from whom Shivaji obtained cannons and ammunition:
(a) The French (b) The Portuguese
(c) The Dutch (d) The English
63. The call of "Back to the Vedas" was given by:
(a) Swami Vivekananda
(b) Swami Dayanand Saraswati
(c) Aurobindo Ghosh
(d) Raja Ram Mohan Roy
64. Relative Humidity is measured by:
(a) Hygrometer
(b) Barometer
(c) Pressure gauge
(d) Hydrometer
65. Arrange the given layers of earth's atmosphere (from lowest to highest)
A. Exosphere
B. Stratosphere
C. Troposphere
D. Ionosphere
E. Mesosphere
- Choose the correct answer from the options given below:
(a) BECAD (b) EDCAB
(c) CADEB (d) CBEDA
66. First women speaker of Lok sabha was:
(a) Sushma Swaraj
(b) Smriti Irani
(c) Pratibha Devi Singh Patil
(d) Meira Kumar
67. Arrange these states/UT according to literacy rates (from the bottom)
A. Goa
B. Lakshadweep
C. Kerala
D. Mizoram
E. Tripura
- Choose the correct answer from the option given below:
(a) DAEB C (b) BDECA
(c) CBDEA (d) CBDAE

68. Who is known as the honorary title 'The Nightingale of Kashmir'?

- (a) Habba Khatoon (b) Laileshwari
(c) Arnimal (d) Rupa Bhawani

69. Match List I with List II

List I

- A. Leela Sanson
B. Birju Maharaj
C. Savita Mehta
D. Mathour
Govindan Kutty

List II

- I. Kathak
II. Kathakali
III. Bharatnatyam
IV. Manipur

Choose the correct answer from the options given below:

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

70. An evacuation mission by government of India to evacuate Indian nationals from Ukraine due to the Russia-Ukraine tension is named as:

- (a) Operation safehorncoming
(b) Operation maitri
(c) Operation Raahat
(d) Operation Ganga

71. Match the List I with List II

List I

- A. Noble Peace Prize 2021
B. Noble Prize in Literature 2021
C. Noble Prize in Physics 2021
D. Noble Prize in Chemistry 2021

List II

- I. Syukuro Manabe, Klaus Hasseimann, Giorgio Parisi
II. Maria Ressa and Dmitry Muratov
III. Abdulrazak Gurnah
IV. Benjamin List and David MacMillan

Choose the correct answer from the options given below:

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

72. The pictorial comic book is a tribute to the forgotten women freedom fighters of the country:

- (a) Everyday Real Heronies
(b) Unsung Heroes of History
(c) Unsung Hero: Indian History
(d) India's women Unsung Heroes

73. Who won the world Athletes of the year by world Athletics at the world Athletics Awards 2021:

- (a) Elaine Thompson-Herah and Karsten Warholm
(b) Mutaz Barshim and Gianmarco Tamberi
(c) Arthing Mu
(d) Erriyan Kington

74. Who won a gold medal in the 91 kg weight category at the ASBC Asian Boxing Championship?

- (a) Hawa Sing (b) Mohammed Ali Qamar
(c) Akhil Kumar (d) Sanjeet Kumar

75. In the IIFL wealth Hurun India Rich List, in which order following Indians appear:

- A. Shiv Nadar & the family
B. Gautam Adani
C. Mukesh Ambani
D. SP Hinduja & family

Choose the correct answer from the options given below:

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

Hints & Explanations

1. (d) 2, 3, 5, 7, 9, 11, 13
9 is not a prime number.
2. (b) $500000 + 500 + 5$
 $\Rightarrow 500505$.
3. (c) L.C.M. of 12, 15, 18 and 30 = 180.
Now using options.
Half of option (a) = $\frac{240}{2} = 120$, not divisible by 180
half of option (b) = $\frac{256}{2} = 128$ not divisible by 180
half of option (c) = $\frac{360}{2} = 180$, divisible by 180
half of option (d) = $\frac{180}{2} = 90$, not divisible by 180
4. (d) $(81)^2 + (51)^2 - 2(81 \times 51) = a^2 + b^2 - 2ab$
 $= (a - b)^2 = (81 - 51)^2 = (30)^2 = 900$
5. (a) $\sqrt{\frac{1}{100}} \times \sqrt{\frac{27}{1000}} - \frac{3}{100}$
 $= \left(\frac{1}{10} \times \frac{3}{10}\right) - \frac{3}{100}$
 $= \frac{3}{100} - \frac{3}{100} = 0$
6. (d) $ab^2 + 3a^2b$
 $ab(b + 3a)$
 $35(5 + 21)$
 $35 \times 26 = 910$
7. (a) $y + 16 = 2 \times 13$
 $y = 26 - 16$
 $y = 10$
8. (b) $\left(\frac{4}{100} \times 4\right) - \left(\frac{4}{1000} \times 4\right)$
 $\Rightarrow \frac{16}{100} - \frac{16}{1000}$
 $\Rightarrow \frac{160 - 16}{1000} = \frac{144}{1000} = 0.144$
9. (d) $\frac{2^x}{2} + 2^x \cdot 2 = 1280$
 $2^x \left(\frac{1}{2} + 2\right) = 1280$
 $2^x = \frac{1280 \times 2}{5}$
 $2^x = 2^9$
 $x = 9$
10. (a) Let the 1st No. = x
then 11th no = y
A.T.Q.
 $50\% \text{ of } x = \frac{1}{5}y$
 $\frac{1}{2}x = \frac{y}{5}$
 $\frac{x}{y} = \frac{2}{5} \rightarrow 2:5$
11. (d) Let the four consecutive odd number.
 $2x + 1, 2x + 3, 2x + 5, 2x + 7$
A.T.Q.
 $\frac{(2x + 1) + (2x + 3) + (2x + 5) + (2x + 7)}{4} = 16$
 $8x + 16 = 64$
 $8(x + 2) = 64$
 $x + 2 = 8$
 $x = 6$
1st odd no. = $2(6) + 1 = 13$
4th odd no. = $2(6) + 7 = 19$
Diff. between fourth and 1st odd no. = $19 - 13 = 6$
12. (c) Let number = K .
 $\frac{(X)}{100} \cdot (X) = \frac{20}{100} * K$
 $K \Rightarrow \frac{X^2}{20}$
13. (a) Selling cost of 6 eggs = 24
Buying cost of 10 eggs = 30

| | | | | | |
|-----|-----------------------|-----------------------|-----|-----------------------|-----------------------|
| S.P | $\rightarrow 6$ | $\rightarrow 24$ | C.P | $\rightarrow 10$ | $\rightarrow 30$ |
| | $\times 5 \downarrow$ | $\times 5 \downarrow$ | | $\times 3 \downarrow$ | $\times 3 \downarrow$ |
| | 30 | 120 | | 30 | 90 |

 $\text{Profit}\% = \frac{120 - 90}{90} \times 100 = 33.33\%$

14. (d) Cost price of 10 candy = Rs. 1
gain = 25%

∴ Number of candy sell in Rs. 1

$$= 10 \times \frac{100}{(100+25)} = 8$$

15. (b) Let the principal = Rs. P
Sum doubles i.e., = 2P
Simple interest = 2P - P = P

$$S.I. = \frac{P \times R \times T}{100}$$

A.T.Q.

$$P = \frac{P \times R \times 15}{100}$$

$$R = \frac{100}{15} = \frac{20}{3} = 6\frac{2}{3}\%$$

16. (a) A.T.Q.

$$\frac{20000 \times 8 \times 6}{100} = \frac{16000 \times 3 \times T}{100}$$

$$T = 20 \text{ yrs}$$

17. (b) P's one day word = $\frac{1}{15}$

$$Q's \text{ one day work} = \frac{1}{10}$$

Let R take x days to complete work.

$$P + Q + R \text{ one day word} = \frac{1}{4}$$

$$R's \text{ one day work} = \frac{1}{x}$$

A.T.Q.

$$\frac{1}{15} + \frac{1}{10} + \frac{1}{x} = \frac{1}{4}$$

$$\frac{1}{x} = \frac{1}{4} - \left[\frac{1}{15} + \frac{1}{10} \right]$$

$$\frac{1}{x} = \frac{15 - (4+6)}{60} = \frac{5}{60}$$

$$R \text{ can do job} = \frac{60}{5} = 12 \text{ days}$$

18. (d) Let Mohan has x days tour

$$\text{Then, 1 day expense} = \frac{75}{x}$$

A.T.Q.

If tour is extended i.e. (x + 4)

$$\text{Then 1 day expense} = \frac{75}{x+4}$$

Now,

$$\frac{75}{x} - \frac{75}{x+4} = 5$$

$$60 = x^2 + 4x$$

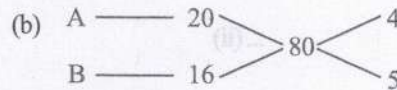
$$x^2 + 4x - 60 = 0$$

$$x^2 + 10x - 6x - 60 = 0$$

$$x(x+10) - 6(x+10) = 0$$

$$(x+10)(x-6) = 0$$

$$x = 6$$

19. (b) 

B's 1 day work = 5

B's 8 day work = 5 × 8 = 40

Remaining work finish by A = $\frac{(80-40)}{4} = 10 \text{ days}$

20. (d) Speed of the boat = u km/hr.

Here upstream speed = (u - 2) = 12

∴ u = 14 km/hr.

∴ Downstream speed = 14 + 2 = 16 km/hr.

Hence, time taken = $\frac{48}{16} = 3 \text{ hr.}$

21. (b) Average speed = $\frac{2 \times S_1 \times S_2}{S_1 + S_2}$

$$= \frac{2 \times 20 \times 25}{(20+25)}$$

$$= \frac{1000}{45} \text{ km/hr.}$$

Total travels time = 10 hrs.

$$\therefore \text{Distance} = \frac{1000}{45} \times 10$$

$$= 222.22 \text{ km.}$$

22. (a)

| | without stoppage | with stoppage |
|-------|------------------|---------------|
| Speed | 120 | 100 |
| Time | 5 | 6 |

Train takes 6 hrs with stoppage, whereas actual time taken is 5 hrs.

i.e. 1 hours is stopped in 6 hours.

A.T.Q:

6 hours = 60 min

$$1 \text{ hours} = \frac{60}{6} = 10 \text{ min}$$

23. (d) Let the length of Train = L_T
and speed of Train = S_T
A.T.Q.
Train passes 1st bridge of 1000 m in 120 sec.
Then
$$120 = \frac{1000 + L_T}{S}$$

$$S = \frac{1000 + L_T}{120} \quad \dots (i)$$

Train passes 2nd bridge of 500 m in 80 sec.
Then,
$$S = \frac{500 + L_T}{80} \quad \dots (ii)$$

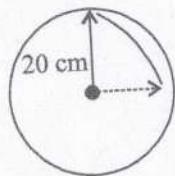
From (i) and (ii)
$$\frac{1000 + L_T}{120} = \frac{500 + L_T}{80}$$

$$2000 + 2L_T = 1500 + 3L_T$$

$$L_T = 500 \text{ m.}$$
24. (b) Speed of train (in m/sec) = $28 \times \frac{5}{18} = \frac{70}{9} \text{ m/sec}$
Speed of boy (in m/sec) = $10 \times \frac{5}{18} = \frac{25}{9} \text{ m/sec}$
A.T.Q.
Relative speed of train :
$$t = \frac{720}{\left(\frac{70}{9} - \frac{25}{9}\right)} = \frac{9 \times 720}{45}$$

$$= 144 \text{ sec.}$$

25. (b)



Total length covered by minute hand in 60 min.
 $= 2\pi \times 20$
 \therefore Time required to move 20 cm

$$= \frac{60}{2\pi \times 20} \times 20 = 9.54 \text{ min.}$$

26. (d) Number of odd days between 1st Feb 2024 to 1st Feb 2013 = $1 + 1 + 1 + 2 + 1 + 1 + 1 + 2 + 1 + 1 + 1 = 13$ days
Hence, Feb 01, 2024 will be Thursday.
27. (c) In 24 hours, they are at 180° , 22 times and at 0° , 2 times
 \therefore total number of times = 44
28. (c) Actual time = $(11:60) - (9:30) = 2:30$
29. (*) Radius of circle = 22 cm.

$$\text{Area of circle} = \pi r^2 = \frac{22}{7} \times (22)^2$$

$$= 1571.24 \text{ cm}^2$$

$$\text{Circumference of circle} = 2\pi r = 2 \times \frac{22}{7} \times 22$$

$$= 138.78 \text{ cm.}$$

30. (d) Let the height of cylinder = h
Radius of cylinder = r
C.S.A of cylinder = $2\pi rh$
A.T.Q.

$$\text{height of cylinder} = \left(\frac{h}{2}\right)$$

$$\text{Radius of cylinder} = 2r$$

$$\text{C.S.A. of new cylinder} = 2\pi(2r)\left(\frac{h}{2}\right) = 2\pi rh$$

Comparing both C.S.A of cylinder, New C.S.A is sequence.

31. (d) Perimeter of square = 40

$$4a = 40$$

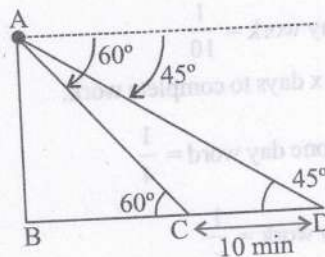
$$a = 10 \{ \because a = \text{side} \}$$

$$\text{Area of square} = (a)^2$$

$$= (10)^2 = 100 \text{ cm}^2$$

32. (d) In $\triangle ABD$

$$\tan 45^\circ = \frac{AB}{BD}$$



In $\triangle ABC$

$$\tan 60^\circ = \frac{AB}{BC}$$

$$BC = \frac{AB}{\sqrt{3}}$$

$$CD = BD - BC$$

$$= AB - \frac{AB}{\sqrt{3}}$$

$$CD = AB \frac{(\sqrt{3} - 1)}{\sqrt{3}}$$

$$\text{Dis. covered in 10 min} = \frac{AB(\sqrt{3} - 1)}{\sqrt{3}}$$

$$\text{time taken to cover dis.} = \frac{AB}{\sqrt{3}}$$

$$= \frac{100 \times \sqrt{3}}{AB(\sqrt{3}-1)} \times \frac{AB}{\sqrt{3}}$$

$$= \frac{10 \times (\sqrt{3}+1)}{3-1} \Rightarrow 5(1.73+1)$$

$$= 13.6 \text{ min.}$$

33. (b) Amount of muscles and skin protein fraction from all

$$\text{protein} = \frac{30}{100} \times 20 = 6$$

Now,

Fraction of Saksham's weight consists of muscles and skin

$$\text{protein} \Rightarrow \frac{6}{100} \Rightarrow \frac{3}{50}$$

34. (b) Ratio of Distribution of Protein in muscles to the distribution of Protein in eye $\Rightarrow 20:50$

$$\Rightarrow 2:5$$

35. (d) Cannot determined

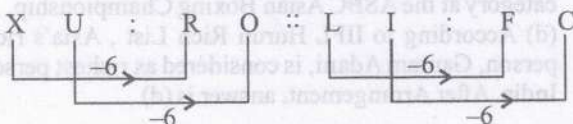
36. (a) Proportion of material other than water and protein

$$= \frac{20}{100} = \frac{1}{5}$$

37. (c) Copy : Pen :: Wall : Brush.

Pen is used to write on copy, like that Brush is used to paint on the wall.

38. (d)



39. (c) Crooked and Bent are synonymous words, like that twisted and zig zag are synonymous words.

40. (d) $69 : 23 :: 87 : 29$
 $\downarrow \quad \quad \downarrow$
 $\div 3 \quad \quad \div 3$

41. (c) Dismal and cheerful are opposite meaning words, like that despair and hope are opposite meaning word.

42. (a) 'Moon' is a satellite, whereas Mars, Mercury and venus are planets.

43. (c) 153, 144, 135, 126, 117, 108, 99
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 $-9 \quad -9 \quad -9 \quad -9 \quad -9 \quad -9$

44. (c) 1, 8, 27, 64, 125, 216, 243
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 $(1)^3 \quad (2)^3 \quad (3)^3 \quad (4)^3 \quad (5)^3 \quad (6)^3 \quad (7)^3$

45. (c) Given series is a series of alternate prime number 23, (29), 31, (37), 41, (43), 47, (53), 59, (61), 67.

46. (c) Coding pattern is based on the letters position in english alphabet.

F A S H I O N
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 6 1 19 8 9 15 14 and

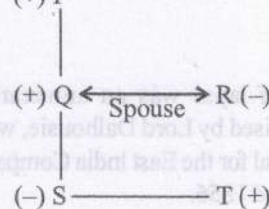
D E S I G N E R
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 4 5 19 9 7 14 5 18

Similarly,

C A T W A L K
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 3 1 20 23 1 12 11

47. (a) Car

48. (d) (+) P



Hence, P is grand father of 'S'.

49. (d)

\therefore Distance from starting point
 $= 40 + 20 = 60 \text{ km.}$

50. (b) $\begin{bmatrix} 1 \rightarrow 2 \rightarrow 6 \\ 4 \rightarrow 5 \rightarrow 3 \end{bmatrix}$

4 is opposite to 1.

51. (c) 11.0

52. (b) Arun - Rohit = Rohit - Neena

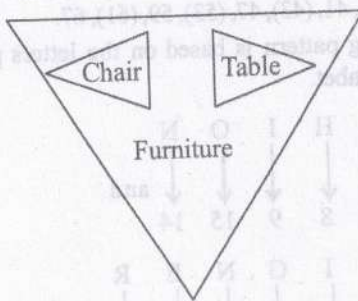
$$\text{Rohit} = \frac{\text{Arun} + \text{Neena}}{2}$$

$$\frac{110}{2} = 55 \text{ yrs.}$$

53. (c) Words arrangement as per dictionary:
 Desperation (C), Distraction (A), Distribution (B), District, (D), Documentation (E).

54. (b) BADEC

55. (b)



56. (a) No. of students who took any three language = common region to any three circle only
 $= 13 + 13 + 18 + 18$
 $= 62$

57. (b) Common regions to the circles representing Hindi and Urdu
 $= 20 + 13 + 12 + 18 = 63$

58. (a) No. of students who took Hindi or English or Sanskrit
 \Rightarrow Total students – students who took only Urdu
 $\Rightarrow 192 - 9$
 $= 183$

59. (c)

60. (b) The doctrine of lapse was an annexation policy purportedly devised by Lord Dalhousie, who was the Governor General for the East India Company in India between 1848 and 1856.

61. (c) Megasthenes was an ambassador of Seleucus I Nicator of Greek to Chandragupta Maurya in Pataliputra, India, between 302 and 298 BCE.

62. (b) Shivaji used cannons and ammunition from the Portuguese to attack the English. Chhatrapati Shivaji was the famous Maratha king who had the utmost courage to stand against the vast ocean of Mughal rule, single-handedly.

63. (b) Dyanand Saraswati completed his Vedic studies under Swami Virjanand in 1864. Thereafter, he travelled across India till 1874 AD for Vedic propagation and learning and gave slogan, Back to the Vedas.

64. (a) Relative Humidity of the atmosphere is measured by the wet and dry bulb thermometer also called the Hygrometer. The hygrometer consists of two similar mercury thermometers.

65. (d) Earth's atmosphere has five major and several secondary layers. From lowest to highest, the major layers are the troposphere, stratosphere, mesosphere, thermosphere and exosphere.

66. (d) Meira Kumar was first women speaker of India. She was elected unopposed as the first woman Speaker of Lok Sabha on 3 June 2009.

67. (d)

68. (a)

69. (b) *Leela Sanson* is a Bharatanatyam dancer, choreographer, instructor, writer and actress from India. Pandit *Birju Maharaj* was an Indian dancer, composer, singer and exponent of the Lucknow "Kalka-Bindadin" Gharana of Kathak dance in India.

70. (d) 'Operation Ganga' is the initiative launched by the government of India to bring back Indians stranded in Ukraine.

71. (a)

72. (d) The Pictorial coming book "India's women Unsung Heroes" is a tribute to the forgotten women freedom fighters of the country.

73. (a) World Athletes of the year 2021 is given to Elaine Thompson-Herah and Kartsen Warholm.

74. (d) Sanjeet Kumar has won a gold medal in the 91kg weight category at the ASBC Asian Boxing Championship.

75. (d) According to IIFL Hurun Rich List, Asia's richest person, Gautam Adani, is considered as richest person of India. After Arrangement, answer is (d)