

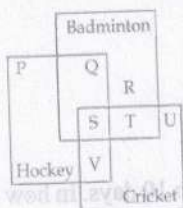
CUET General Test Solved Paper-2023

Held on 22 May 2023 (Shift-I)

1. In how many years will a sum of Rs. 800 become Rs. 926.10 at 10% per annum compounded semi-annually?

- (a) $2\frac{1}{2}$ (b) $1\frac{1}{2}$
(c) 1 (d) 3

2. The given diagram represent who play Hockey, Cricket and Badminton. See the diagram and find out those people who play all three games?



- (a) T + U (b) P + Q + R
(c) Q + R (d) S

3. Find the missing term?

1, 6, 15, 2, 45, 66, 91

- (a) 28 (b) 27
(c) 26 (d) 25

4. On dividing 15968 by a certain number, the quotient is 89 and the remainder is 37. Find the sum of the digits of the divisor.

- (a) 12 (b) 19
(c) 17 (d) 21

5. Match List I with List II

List I

Name of Battle

- (A) Battle of Buxar

- (B) Battle of Samugarh

- (C) Battle of Plassey

- (D) Kalinga War

List II

B/W

- (I) Ashoka and Kings of Kalinga

- (II) Sirajuddaula and English Forces

- (III) Aurangzeb and Imperial Forces

- (IV) Joint Forces of Muslim and English Forces

Choose the **most appropriate** answer from the options given below:

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

6. In certain code, 253 means 'books are old', 546 means 'man is old' and 378 means 'Buy good books' what stand for 'are' in the code?

- (a) 2 (b) 5
(c) 6 (d) 4

7. The last day of a century cannot be either

- (A) Tuesday (B) Thursday
(C) Saturday (D) Sunday

Choose the **most appropriate** answer from the options given below:

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

8. Match List I with List II

List I

Nicknames

- (A) Silver City

- (B) Lake City

- (C) Steel City

- (D) Blue City

List II

Cities

- (I) Udaipur

- (II) Jamshed pur

- (III) Jodhpur

- (IV) Cuttack

Choose the **most appropriate** answer from the options given below:

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

9. Which is not an example of epithelial tissue?

- (a) Cartilage (b) Gland
(c) Skin (d) Intestine

10. A shirt bought for Rs. 270 is marked at 8% higher than the cost price and sold at 10% discount.

What is the selling price (in Rs.) of the shirt?

- (a) 260 (b) 262.44
(c) 267.44 (d) 270

11. Host country of G-20 Summit in 2023 is _____.

- (a) Indonesia (b) India
(c) Italy (d) Japan

12. Match List I with List II

List I

Books

- (A) Death of a City

- (B) Arthshastra

- (C) Unhappy India

- (D) India Wins Freedom

List II

Authors

- (I) Maulana Abul Kalam Azad

- (II) Lala Lajpat Rai

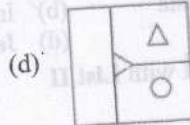
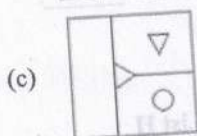
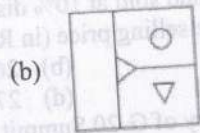
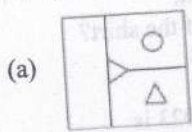
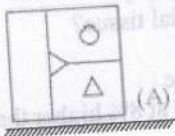
- (III) Amrita Pritam

- (IV) Kautilya

Choose the **most appropriate** answer from the options given below:

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

13. Jamshedpur is situated at the bank of _____ river.
 (a) Godavri (b) Damodar
 (c) Subarnarekha (d) Soan
14. Who was the founder of "Indian National Congress"?
 (a) Lala Lajpat Rai
 (b) Pt. Jawahar Lal Nehru
 (c) Mahatma Gandhi
 (d) A.O. Hume
15. Who is the Author of 'India-The mother of Democracy'?
 (a) Sashi Tharoor
 (b) Vikram Seth
 (c) Dr. Bhaṛang Lal Gupta
 (d) Dharmendra Pradhan
16. Out of the given options, find out the odd one that does not belongs to the group.
 (a) Square (b) Circle
 (c) Rectangle (d) Triangle
17. Alka is older than Mala, Gopal is older than Mala, but Younger than Alka. Kapil is younger than Ram and Mala is older than Ram. Whose age is exactly in the middle of all the five?
 (a) Alka (b) Mala
 (c) Gopal (d) Ram
18. In the following question, choose the most appropriate water image from alternatives (1), (2), (3) and (4) of the figure (A)



19. Bharatpur Bird Sanctuary located in Rajasthan is also known as _____?
 (a) Kakadev National Park
 (b) Keoladeo National Park
 (c) Jaldapara National Park
 (d) Kanha National Park
20. Match List I with List II

List I
Scientist

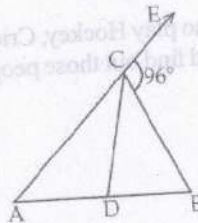
- (A) Homi Jehangir Bhabha
 (B) Srinivasa Ramanujan
 (C) Jagdish Chander Bose
 (D) Vikram Sarabhai

List II
Research Area/Discoveries

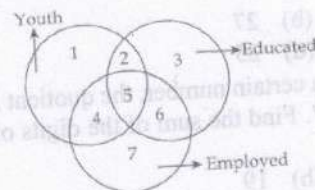
- (I) Number theory
 (II) Aerospace
 (III) Nuclear physics
 (IV) Measurement of plant growth

Choose the most appropriate answer from the options given below:

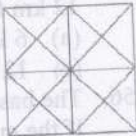
- (a) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
 (b) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
 (c) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
 (d) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
21. Nearest planet to the earth
 (a) Venus (b) Mercury
 (c) Jupiter (d) Saturn
22. In the given figure, if $AD = CD = BC$, then the $\angle CDB$ is:



- (a) 64° (b) 84°
 (c) 32° (d) 16°
23. 8 men or 12 women can do a work in 10 days. In how many days can 4 men and 4 women do the same work?
 (a) 10 (b) 12 (c) 16 (d) 20
24. Study the below diagram and identify the Region representing youth who are employed but not educated?



- (a) 4 only (b) 5 and 6
 (c) 7 only (d) 3 only
25. How many numbers from 1 to 100 are there each of which is not only exactly divisible by 4 but also has 4 as a digit?
 (a) 21 (b) 20
 (c) 7 (d) 10
26. In an examination, the average marks of the entire class was 70. If average marks scored by 10% of the students was 95 and average marks scored by other 20% of the students was 20, then what was the average marks of the remaining students of the class? (correct to one decimal place)
 (a) 78.7% (b) 82.2%
 (c) 80.7% (d) 82.5%
27. In an examination, 96% of the students passed and 500 students failed. How many students appeared in the examination?
 (a) 14000
 (b) 12500
 (c) 12000
 (d) 13500
28. What is the median of the following data?
 1, 0, 2, 4, 1, 2, 1, 1, 2, 5, 5, 0, 1, 2, 3
 (a) 0 (b) 1
 (c) 2 (d) 3

29. If ROAST is coded as PQYUR in a certain language, then how will SLOPPY be coded in that language?
 (a) RANNMQ (b) QNMRNA
 (c) NRMNQA (d) MRNAQN
30. 260 kg rice is divided in three parts such that the first part is 5kg more than the second part and its ratio with the third part is 1:3. The three parts (in kg) respectively are:
 (a) 53, 108, 99 (b) 53, 149, 58
 (c) 53, 49, 158 (d) 53, 48, 159
31. Find the number of triangles and squares in the given figure.
 (a) 40 triangles, 12 squares
 (b) 36 triangles, 12 squares
 (c) 44 triangles, 10 squares
 (d) 14 triangles, 16 squares
- 
32. In the morning a man is standing facing North. In which direction will his shadow be formed?
 (a) East (b) West
 (c) North (d) South
33. The area of a right angled triangle is numerically 30 times its height. How long is its base?
 (a) 80 unit (b) 85 unit
 (c) 60 unit (d) 75 unit
34. Which state or Union territories has higher life expectancy?
 (a) Punjab (b) Uttar Pradesh
 (c) Madhya Pradesh (d) Uttarakhand
35. A die is thrown twice. What is the probability that the number in the second throw is higher than the number in the first throw?
 (a) $\frac{5}{36}$ (b) $\frac{2}{9}$ (c) $\frac{5}{12}$ (d) $\frac{7}{12}$
36. $\frac{256 \times 256 \times 256 - 144 \times 144 \times 144}{256 \times 256 + 256 \times 144 + 144 \times 144}$ is equal to:
 (a) 122 (b) 112
 (c) 400 (d) 312
37. Rajesh is the brother Ankit. Sushma is the sister of Shubham. Ankit is the Son of Sushma. How is Rajesh related to Sushma?
 (a) Father (b) Brother
 (c) Son (d) Nephew
38. Arrange the following Revolutionary Organisation in chronological order:
 (A) Hindustan Socialist Republican Association
 (B) Abhinav Bharat
 (C) Hindustan Republican Association
 (D) Indian Independence League
 (E) Ghadar Party
 Choose the most appropriate answer from the options given below.
 (a) (B), (E), (D), (C), (A)
 (b) (C), (B), (D), (A), (E)
 (c) (E), (B), (A), (D), (C)
 (d) (B), (C), (D), (A), (E)
39. What will replace '?' in the given figure?
- | | | | |
|---|---|---|---|
| + | - | - | × |
| ÷ | × | + | ÷ |
| ? | × | ÷ | - |
| | - | + | |
- (a)

÷	+
×	-

 (b)

+	-
÷	×

 (c)

÷	+
+	-

 (d)

-	×
÷	+
40. Out of the following which is the largest exporter of cotton textile in the world?
 (a) U.S.A (b) China
 (c) Japan (d) India
41. **Statement:** Most jeans in that shop are expensive. Choose the correct option which logically follow the above statement.
 (a) There are no cheap jeans available in that shop
 (b) Handloom jeans in that shop are cheap
 (c) There are cheap jeans also in that shop
 (d) Some jeans in that shop are expensive
42. Six students A, B, C, D, E and F are sitting on the ground. A and B belong to Rachna house, while the rest belong to Amar house. D & f are tall. while other are short. C & D are wearing glasses, while others are not wearing. Which girl of Amar house is tall and wearing glasses?
 (a) B (b) C
 (c) D (d) A
43. MGNREGA stands for:
 (a) Mahatma Gandhi National Regular Employment Generating Act
 (b) Mahatma Gandhi National Regular Employment Guarantee Act
 (c) Mahatma Gandhi National Rural Employment Guarantee Act
 (d) Mahatma Gandhi National Rural Regular Employee Guarantee Act
44. Match List I with List II

List I	List II
(A) Archery	(I) P.V. Sindhu
(B) Hockey	(II) Geeta Phogat
(C) Wrestling	(III) Pargat Singh
(D) Badminton	(IV) Deepika Kumari

 Choose the **most appropriate** answer from the options given below:
 (a) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
 (b) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
 (c) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
 (d) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
45. How many times the hands of a clock are at right angle in a day?
 (a) 24 (b) 48
 (c) 44 (d) 22

46. Who discovered electron?
 (a) J.J. Thomson (b) Louis Pasteur
 (c) J.D. Watson (d) Edward Jenner
47. If 1st January 2007 was Monday then what day of the week lies on 1st January 2008?
 (a) Tuesday (b) Monday
 (c) Wednesday (d) Sunday
48. Choose the most appropriate alternative word Influenza: Virus :: Typhoid: ?
 (a) Parasite (b) Protozoa
 (c) Bacteria (d) Bacillus
49. A fraction becomes $\frac{6}{5}$ when 5 is added to its numerator and becomes $\frac{1}{2}$ when 4 is added to its denominator. The fraction is:
 (a) $\frac{8}{9}$ (b) $\frac{7}{10}$
 (c) $\frac{7}{10}$ (d) $\frac{6}{11}$
50. If L stand for +, M stand for - N stand for $\times$, P stand for $\div$, Then $14 N 10 L 42 P 2 M 8 = ?$
 (a) 248 (b) 25 (c) 153 (d) 216
51. The average of two numbers is 56. If 4 is added to the smaller number, then the ratio of the new number to the other number is 1:3. What is the smaller number?
 (a) 27 (b) 25 (c) 35 (d) 87
52. India is the _____ largest country (in term of Area) in the world.
 (a) Fifth (b) Eight
 (c) Seventh (d) Second
53. Boric acid is used as an _____.
 (a) Antipyretic (b) Analgic
 (c) Antiseptic (d) Catalytic agent
54. If a, b, c are in G.P. and $\frac{1}{a^x} = \frac{1}{b^y} = \frac{1}{c^z}$, then which one of the following is correct?
 (a) $2x = y + z$ (b) $x^2 = yz$
 (c) $\frac{1}{x} + \frac{1}{z} = \frac{2}{y}$ (d) $2y = x + z$
55. Two boys A and B start at the same time to ride from Delhi to Meerut, 60 km away. A rides 4km/h slower than B. B reaches Meerut and at once turns back meeting A at a place 12 km from Meerut. Find the speed of A.
 (a) 6 km/h (b) 8 km/h
 (c) 12 km/h (d) 4 km/h
56. The base radius of a cylinder is 5 m more than its height. If the curved surface area of the cylinder is 792 m^2 , then what is the volume of the cylinder (in m^3)? (Use $\pi = \frac{22}{7}$)
 (a) 5306 (b) 5244
 (c) 5544 (d) 5462
57. How much simple interest will a sum of Rs. 4800 earn at $10\frac{1}{2}\%$ per annum in 2 years 3 months?
 (a) Rs.918 (b) Rs.1134
 (c) Rs. 1234 (d) Rs. 1256
58. If the points A(6,1), B(8,2), C(9,4) and D(7, k) are the vertices of a parallelogram taken in order, then find the value of k.
 (a) 3 (b) 5 (c) 7 (d) 9
59. A ladder leaning against a wall makes an angle of 60° with the ground. If the length of the ladder is 19 m, then what is the distance of the foot of the ladder from the wall?
 (a) 7.5 m (b) 8 m
 (c) 8.5 m (d) 9.5 m
60. Heavy water, D_2O have molecular mass of _____.
 (a) 20 (b) 18 (c) 22 (d) 24

Hints & Explanations

1. (b) Principal = ₹ 800
 Amount = ₹ 926.10
 Rate of interest $\Rightarrow 10\%$ per annum
 $\therefore$ Compounded semi-annually
 $\therefore$ Rate of Interest $\frac{10}{2} = 5\%$

$$\text{and Amount} = \text{Principal} \left(1 + \frac{r}{100}\right)^{2n}$$

$$926.1 = 800 \left(1 + \frac{5}{100}\right)^{2n}$$

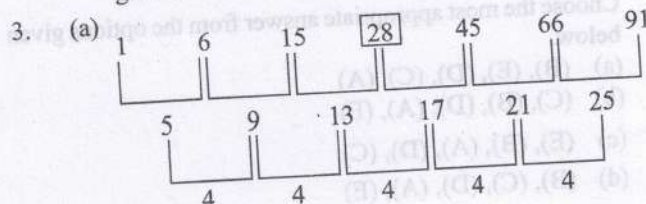
$$\frac{9261}{8000} = \left(\frac{21}{20}\right)^{2n}$$

$$\left(\frac{21}{20}\right)^3 = \left(\frac{21}{20}\right)^{2n}$$

$$2n = 3$$

$$n = \text{years} = \frac{3}{2} = 1\frac{1}{2} \text{ years}$$

2. (d) 'S' represents those people who play all the three games.



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4. (c) (Divisor $\times$ quotient) + Remainder = Dividend
 (Divisor $\times$ 89) + 37 = 15968
 Divisor $\times$ 89 = 15931
 Divisor = $\frac{15931}{89} = 179$
 Sum of the digits of the divisor = $1 + 7 + 9 = 17$
5. (b) (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

Name of the Battle	B/W
Battle of Buxar	Joint Forces of English and Muslim Forces
Battle of Samugarh	Aurangzeb and Imperial Forces
Battle of Plassey	Sirajud daula and English Forces
Kalinga War	Ashoka and Kings of Kalinga

6. (a) 253 — books are old
 546 — man is old
 378 — Buy good books
 5 — old
 3 — books
 2 — are
7. (c) 100 years contain 5 odd days. So, last day of 1st century is 'Friday'.
 200 years contain $(5 \times 2) = 10$ odd days = 3 odd days
 So, last day of 2nd century is 'Wednesday'.
 Since the order is continually kept in successive cycles we see that the last day of a century cannot be Tuesday, Thursday or Saturday.
8. (c) (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

Nicknames	Cities
Silver City	Cuttack
Lake City	Udaipur
Steel City	Jamshedpur
Blue City	Jodhpur

9. (a) Epithelial tissue or epithelium forms the outer covering of the skin and also lines the body cavity. It forms the lining of respiratory, digestive, reproductive and excretory tracts. They perform various functions such as absorption, protection, sensation and secretion. Gland, Skin and Intestine are all Epithelial tissue, However, Cartilage is not an epithelial tissue.
10. (b) Cost price of the shirt is = ₹ 270

$$\text{Market price of the shirt} = 270 \times \frac{108}{100} = 291.6$$

Selling price after 10% discount

$$= 291.6 \times \frac{90}{100} = 262.44$$

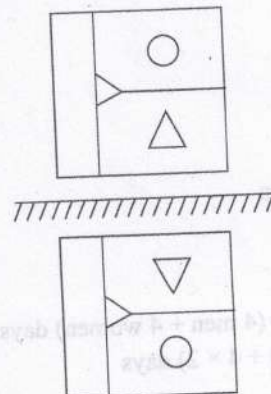
11. (b) India will assume the G20 Presidency from the 1st of December this year from Indonesia and will convene the G20 Leaders' Summit for the first time in the country in 2023. A nation deeply committed to democracy and multilateralism, India's G20 Presidency would be a watershed moment in her history as it seeks to play an important role by finding pragmatic global solutions.

12. (b) (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

Books	Authors
Death of a city	Amrita Pritam
Arthshastra	Kautilya
Unhappy India	Lala Lajpat Rai
India Wins Freedom	Maulana Abul Kalam Azad

13. (c) Subarnarekha is the principal river of Jamshedpur, which flows from west to south-eastern part of the territory. The city also witnesses a confluence of Subarnarekha and Damohini.
14. (d) A. O Hume was the founder of the Indian National Congress. The safety valve theory has emerged after the foundation of INC. It is theorised that the Congress was used as a valve to protect the British Interests.
15. (d) Union Education & Skill Development Minister Shri Dharmendra Pradhan released the book 'India: The Mother of Democracy' prepared and published by Indian Council of Historical Research (ICHR) in New Delhi.
16. (b) Square, Rectangle and Triangle all are made by the lines except circle.
17. (b) Alka
 Gopal
 Mala
 Rani
 Kapil $\rightarrow$ Mala's age is exactly in the middle of all the five.

18. (c)



Option (c) is the correct water image.

19. (b) In Bharatpur, Rajasthan, India, there is a well-known avifauna sanctuary called Keoladeo National Park or Keoladeo Ghana National Park (formerly known

as the Bharatpur Bird Sanctuary), which is home to thousands of birds, especially during the winter.

20. (c) (A)- (III), (B)- (I), (C)- (IV), (D)- (II)

Scientist	Research Area/ Discoveries
Homi Jehangir Bhabha	Nuclear Physics
Srinivasa Ramanujan	Number Theory
Jagdish Chander Bose	Measurement of plant growth
Vikram Sarabhai	Aerospace

21. (b) The nearest planet to the Earth is Mercury. For a long time, Venus was thought to be the closest planet to Earth. However, Venus is only the nearest planet when it falls between the Earth and the Sun during its course of revolution. When Venus is on the other side of the orbit than Earth, Mercury for the most part is estimated to be the nearest one. The distance between Mercury and Earth, at this time, is around 33 million miles.

22. (a)



$$\therefore AD = CD$$

$$\therefore \angle CAD = \angle ACD = y$$

$$\therefore CD = BC$$

$$\therefore \angle CBD = \angle CDB = x$$

$$x + y = 96$$

$$x = 2y \quad \{\text{In } \triangle CAD \quad 2y + (180 - x) = 180\}$$

Put x in eq (i)

$$2y + y = 96$$

$$3y = 96$$

$$y = 32^\circ$$

$$x = 2y$$

$$x = 2 \times 32$$

$$x = 64^\circ$$

23. (b) 8 men = 12 women

$$\frac{\text{men}}{\text{women}} = \frac{12}{8} = \frac{3}{2}$$

$$8 \text{ men} \times 10 \text{ days} = (4 \text{ men} + 4 \text{ women}) \text{ days}$$

$$8 \times 3 \times 10 = (4 \times 3 + 4 \times 2) \text{ days}$$

$$240 = 20 \times \text{days}$$

$$\text{days} = 12$$

24. (a) '4' represents the youth who are employed but not educated.

25. (c) There are seven numbers which are not only exactly divisible by 4 but also has 4 as a digit.
4, 24, 40, 44, 48, 64, 84

26. (c) Let the total students in the class was = 100

$$\text{Average marks of the entire class was} = 70$$

$$\text{Total marks of the entire class was} = 70 \times 100 = 7000$$

$$\text{Total marks scored by 10\% students} = 95 \times 10 = 950$$

$$\text{Total marks scored by 20\% students} = 20 \times 20 = 400$$

$$\text{Total marks of the remaining students}$$

$$= 7000 - (950 + 400)$$

$$\Rightarrow 7000 - 1350 \Rightarrow 5650$$

$$\text{Remaining students} = 100 - 30 = 70$$

$$\text{Average marks of the remaining students} = \frac{5650}{70} = 80.7\%$$

27. (b) Students failed in the examination = 500

$$\text{Students failed in percentage} = 100 - 96 = 4\%$$

$$\text{Students appeared in the examination} = \frac{500}{4} \times 100 = 12500 \text{ students.}$$

28. (c) Arrange the following data in ascending order.

$$0, 0, 1, 1, 1, 1, 2, 2, 2, 2, 3, 4, 5$$

$$\text{median of the following data} = \text{middle term of the data} = 2$$

$$29. (b) \begin{array}{ccccc} R & O & A & S & T \\ -2 & +2 & -2 & +2 & -2 \\ P & Q & Y & U & R \end{array}$$

Similarly

$$\begin{array}{ccccc} S & L & O & P & Y \\ -2 & +2 & -2 & +2 & -2 \\ Q & N & M & R & N & A \end{array}$$

30. (d)

$$\begin{array}{lcl} \text{First part} & : & \text{Second part} : \text{third part} \\ x + 5 & : & x : 3(x + 5) \end{array}$$

$$x + 5 + x + 3(x + 5) = 260$$

$$5x + 20 = 260$$

$$5x = 240$$

$$x = 48$$

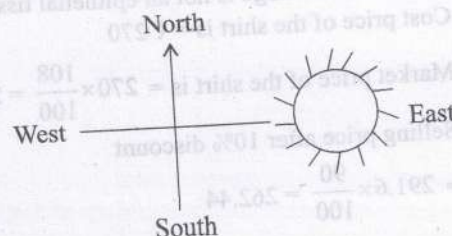
$$\text{First part} \Rightarrow 48 + 5 = 53$$

$$\text{Second part} \Rightarrow 48$$

$$\text{third part} \Rightarrow 3(48 + 5) = 159$$

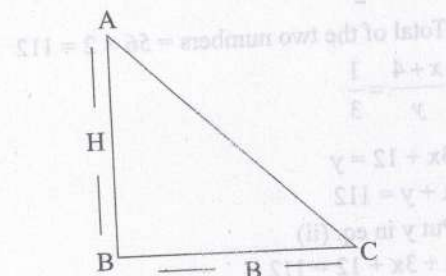
31. (c) There are 44 triangles and 10 squares in the given figure.

32. (b)



If a man is standing facing North, his shadow will be form in West direction.

33. (c)



Area of the triangle ABC is $\frac{1}{2} \times H \times B$

$$30 \times H = \frac{1}{2} \times H \times B$$

$$B = 60$$

Its base is 60 unit.

34. (a) The term "life expectancy" refers to the number of years a person can expect to live. By definition, life expectancy is based on an estimate of the average age that members of a particular population group will be when they die.

State/ UT	Life expectancy
Punjab	72.3
Uttar Pradesh	65.7
Madhya Pradesh	67.4
Uttarakhand	70.1

35. (c)

Let the numbers in the first throw	The numbers in the second throw
1	2,3,4,5,6
2	3,4,5,6
3	4, 5, 6
4	5, 6
5	6

The probability that the number in the second throw is higher than the number in the first row $\Rightarrow \frac{15}{36}$

$$\Rightarrow \frac{5}{12}$$

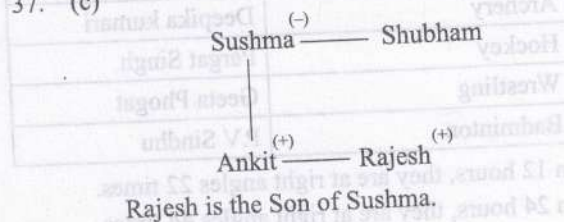
$$36. (b) \frac{256 \times 256 \times 256 - 144 \times 144 \times 144}{256 \times 256 + 256 \times 144 + 144 \times 144}$$

$$\Rightarrow \frac{a^3 - b^3}{a^2 + ab + b^2}$$

$$\Rightarrow \frac{(a-b)(a^2 + ab + b^2)}{(a^2 + ab + b^2)}$$

$$\Rightarrow (a-b) \\ \Rightarrow 256 - 144 \Rightarrow 112$$

37. (c)

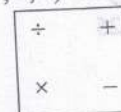


38. (a) (B), (E), (D), (C), (A)

Sno	Revolutionary organisation	Formed In
A	Hindustan Socialist Republican Association	1928
B	Abhinav Bharat	1904
C	Hindustan Republican Association	1924
D	Indian Independence League	1942
E	Ghadar Party	1913

Hence, B > E > D > C > A is the correct chronology of the given revolutionary groups.

39. (a) All the symbols (+, -, ×, ÷) are rotating anti-clockwise.



option (a) will complete the figure.

40. (b) China is the largest exporter of cotton textile in the world. In 2021 the top exporters of Cotton were China (\$12.1B), India (\$10B), United States (\$7.21B), Vietnam (\$3.92B), and Brazil (\$3.61B).
41. (c) **Statement:** Most Jeans in that shop are expensive. It means there must be some cheap jeans also in that shop. So, option (c) is the correct answer.

42. (c)

Students	House	Height	Glasses
A	Rachna	Short	Not wearing
B	Rachna	Short	Not wearing
C	Amar	Short	wearing
D	Amar	tall	wearing
E	Amar	Short	Not wearing
F	Amar	tall	Not wearing

'D' is of Amar house and tall and wearing glasses.

43. (c) Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGA stands for Mahatma Gandhi National Rural Employment Guarantee Act. The act was enacted in 2005 to provide unskilled employment for 100 days.

44. (d) (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

List I	List II
Archery	Deepika kumari
Hockey	Pargat Singh
Wrestling	Geeta Phogat
Badminton	P.V Sindhu

45. (c) In 12 hours, they are at right angles 22 times.
In 24 hours, they are at right angles 44 times.
46. (a) In a cathode ray experiment, J.J. Thomson discovered electrons. Electrons are the sub atomic particles which carry a negative charge and revolve around the nucleus of atom.
47. (a) 1 January, 2007 = Monday
1 January, 2008 = Tuesday
48. (c) Typhoid is caused by bacteria. Hence, Bacteria is the most appropriate word.
49. (b) Let the fraction is $= \frac{x}{y}$

$$\frac{x+5}{y} = \frac{6}{5}$$

$$5x + 25 = 6y$$

$$5x - 6y = -25$$

$$\therefore \frac{x}{y+4} = \frac{1}{2}$$

$$\therefore 2x = y + 4$$

$$2x - y = 4$$

Multiply eq. (ii) by 6

$$12x - 6y = 24$$

By eq. (i) and (iii)

$$5x - 6y = -25$$

$$12x - 6y = 24$$

$$- \quad + \quad -$$

$$-7x = -49$$

$$x = \frac{49}{7}$$

$$x = 7$$

$$x = 7$$

Put x in eq. (i)

$$5x - 6y = -25$$

$$35 - 6y = -25$$

$$-6y = -60$$

$$y = 10$$

$$\text{Fraction is } \frac{x}{y} = \frac{7}{10}$$

50. (c) $14N 10L 42P 2M 8$
 $\Rightarrow 14 \times 10 + 42 \div 2 - 8$
 $\Rightarrow 140 + 21 - 8$
 $\Rightarrow 161 - 8 \Rightarrow 153$

51. (b) Let the two numbers be x and y

$$\text{then } \frac{x+y}{2} = 56$$

$$\text{Total of the two numbers} = 56 \times 2 = 112$$

$$\frac{x+4}{y} = \frac{1}{3}$$

$$3x + 12 = y$$

$$x + y = 112$$

Put y in eq. (ii)

$$x + 3x + 12 = 112$$

$$4x = 100$$

$$x = 25$$

...(i)

...(ii)

52. (c) India is the seventh largest country in terms of area in the world. India covers a total area of 3,287,263 square kilometres (1,269,219 sq mi). India measures 3,214 km (1,997 mi) from north to south and 2,933 km (1,822 mi) from east to west.
53. (c) Boric acid is also known as acidum boricum, hydrogen borate, boracic acid, and orthoboric acid. It is a weak acid and has antiviral, antifungal, and antiseptic properties.

54. (d) $\therefore a, b, c$ are in G.P.

$$\text{So, } \frac{b}{a} = \frac{c}{b}$$

$$b^2 = ac$$

$$\frac{1}{a^x} = \frac{1}{b^y} = \frac{1}{c^z} = k$$

$$a = k^x$$

$$b = k^y$$

$$c = k^z$$

$$\therefore b^2 = ac$$

$$(k^y)^2 = k^x \times k^z$$

$$k^{2y} = k^{x+z}$$

$$2y = x + z$$

55. (b) Delhi $\xrightarrow{-12 \text{ km}}$ Meerut
Meeting point

$$\text{Speed of A} = (x - 4) \text{ km/h}$$

$$\text{Let speed of B} = x \text{ km/h}$$

$$\text{Time taken by A} = \text{time taken by B}$$

$$\frac{60-12}{x-4} = \frac{60+12}{x}$$

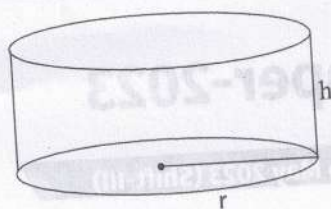
$$48x = 72x - 288$$

$$24x = 288$$

$$x = 12$$

$$\text{The speed of A} = x - 4 = 12 - 4 = 8 \text{ km/h}$$

56. (c)



$$r = h + 5$$

Curved surface area of the cylinder is = 792 m²
 $2\pi rh = 792$

$$2 \times \frac{22}{7} \times (h + 5) \times h = 792$$

$$(h + 5)h = \frac{792 \times 7}{44}$$

$$(h + 5)h = 126$$

$$h = 9 \text{ m}$$

Volume of the cylinder = $\pi r^2 h$

$$= \frac{22}{7} \times 14 \times 14 \times 9$$

$$\Rightarrow 5544 \text{ m}^3$$

57. (b) Principal = ₹4800

Rate of interest = $10\frac{1}{2}\%$

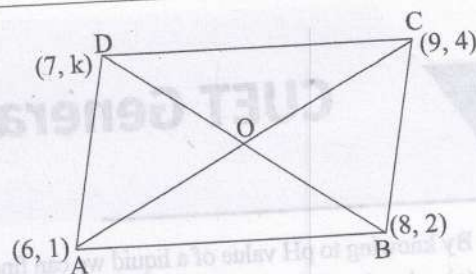
$$\text{Time} = 2\frac{3}{12} = \frac{9}{4} \text{ years}$$

$$\text{Simple Interest} = \frac{\text{Principal} \times \text{rate} \times \text{time}}{100}$$

$$= \frac{4800 \times 21 \times 9}{2 \times 100 \times 4}$$

$$\Rightarrow ₹1134$$

58. (c) A (6, 1), B (8, 2), C (9, 4) and D (7, k) are the vertices of a parallelogram.



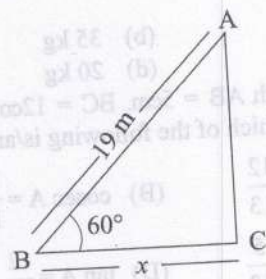
Mid point of BD = mid point of AC

$$\frac{k+2}{2} = \frac{1+4}{2}$$

$$k+2 = 5$$

$$k = 3$$

59. (d)



In $\triangle ABC$

$$\cos 60^\circ = \frac{x}{19}$$

$$\frac{1}{2} = \frac{x}{19}$$

$$x = 9.5 \text{ m}$$

60. (a) D_2O which is known as heavy water has the molecular mass of 20.

D_2O is used as a neutron moderator in certain types of nuclear reactors. It helps in slowing down neutrons so that the probability of them reacting with the fissile uranium-235 than with uranium-238 increases.