

CUET General Test Solved Paper-2023

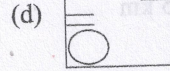
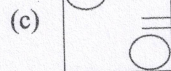
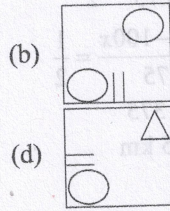
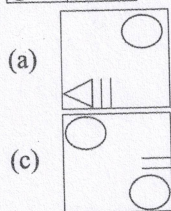
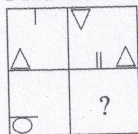
Held on 1 June 2023 (Shift-I)

1. A toy made in the shape of a hemisphere of diameter 7 cm surmounted by a cone. If this 15.5 cm high toy is polished at 20 paise per cm^2 , then find the cost of polishing.

$$\left(\text{Take } \pi = \frac{22}{7} \right)$$

- (a) ₹ 39 (b) ₹ 40.50
(c) ₹ 42.90 (d) ₹ 45

2. Find the missing figure and complete it:



3. A certain sum becomes $\frac{36}{25}$ of itself after 2 years on

compound interest. Find the rate of interest per annum.

- (a) 15% (b) 20% (c) 25% (d) 10%

4. Who was the First female chief minister of India?

- (a) Shakuntala Devi (b) Sarojini Naidu
(c) Anita B. George (d) Sucheta Kripalani

5. Which of following is/are the possible commercial industrial applications of bacteria?

- (A) Fermentation of sugars.
(B) Cleaning of oil spills.
(C) Tanning and making ink.
(D) Production of vaccine
(E) To make Varnish, Polish, Paint etc.

Choose the most appropriate answer from the options given below:

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

6. Fill up the gap with proper group of alphabets.

I K M J L N K M O ?

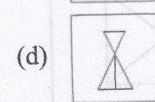
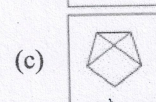
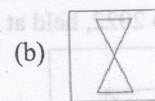
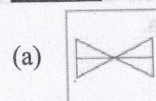
- (a) P N L (b) Q N S
(c) L N P (d) S N Q

7. "Namami Gange" to clean and protect the river Ganga in a comprehensive manner was launched in _____ year.

- (a) 2014 (b) 2015
(c) 2016 (d) 2017

8. Choose the alternative figure which is embedded in the problem figure:

Problem figure



9. If 18th February 1997 fell on Tuesday then what was the day on 18th February 1999?

- (a) Friday (b) Monday
(c) Tuesday (d) Thursday

10. Match List I with List II

List I

List II

(Prime Minister of India)

(Period)

- (A) Lal Bahadur Shastri (I) 1984 to 1989
(b) Rajiv Gandhi (II) 1991 to 1996
(C) Atal Bihari Vajpayee (III) 1964 to 1966
(D) P.V. Narasimha Rao (IV) 1998 to 2004

Choose the **most appropriate** 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)-(I), (B)-(III), (C)-(II), (D)-(IV)
(d) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

11. Linear equations $3x + 5y = 19$ and $10x - 3y = 24$ have

solution $x = \frac{\alpha}{3}$ and $y = \frac{\beta}{2}$, then the value of

$\alpha + \beta$ is:

- (a) 5 (b) 13
(c) 10 (d) 7

12. Find the missing term in given series.

20 : 17 :: 104 : ?

- (a) 52 (b) 55
(c) 59 (d) 61

13. The circumference of a circular field is 396 m and that of the other circular field is 132 m. Find the area (in m^2) of the third circular field whose radius is the sum of the radii

of the first two fields. (Take $\pi = \frac{22}{7}$)

- (a) 13860 (b) 19536
(c) 22176 (d) 23984

14. If the first three letters of the word "SOCIOLOGIST" are reversed, then the last three letters are added and then the remaining letters are reversed and added, then which letter will be exactly in the Middle?

(a) G (b) T
(c) I (d) C

15. An angle is $\frac{3}{7}$ times its supplementary angles. Find the angle.

(a) 54° (b) 63°
(c) 27° (d) 126°

16. Match List I with List II

List I
(Quantity)

List II
(Unit)

(A) Acceleration (I) newton-meter⁻²
(B) Pressure (II) meter⁻¹
(C) Power of Lens (III) second⁻¹
(D) Frequency (IV) meter-second⁻²

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

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

17. Pointing to a man A lady said "His mother is the only daughter of my mother." How is the lady related to the man?

(a) Aunt (b) Sister
(c) Daughter (d) Mother

18. _____, an Indian patriot from Punjab, shot down General Reginald Dyer in London.

(a) Sardar Bhagat Singh
(b) Shah Nawaz
(c) Sardar Udham Singh
(d) Sohan Singh

19. The angular distance covered by the minute hand in 1 hr 20 minutes is :

(a) 420° (b) 480°
(c) 192° (d) 310°

20. Which of the following is correct for divisibility?

(A) A number is divisible by 6 if it is divisible by 3 or 2.
(B) A number is divisible by 5 if its unit digit is 0 or 5.
(C) A number is divisible by 3 if its unit digit is divisible by 3.
(D) A number is divisible by 4 if the number formed by its last two digits is divisible by 4.

Choose the correct answer from the options given below:

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

21. Match List I with List II

List I

List II

(A) Indian Rare Earths Limited (I) Bengaluru
(B) Indian Space Research Organisation (II) Thiruvananthapuram
(C) Vikram Sarabhai Space Centre (III) Jadugoda
(D) Uranium Corporation of India (IV) Aluva (Kerala)

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

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

22. A man walking at a speed of 5km/h passes a bridge in 15 minutes. What is the length of the bridge (in meters)?

(a) 1000 (b) 1200
(c) 1250 (d) 1500

23. A wholesaler sells 20 pens at the marked price of 16 pens to a retailer. The retailer sells them at the marked price. Determine the gain percent of the retailer.

(a) 30% (b) 23%
(c) 25% (d) 28%

24. Find the missing term in given series:
DF, GJ, KM, NQ, RT, _____?

(a) UW (b) UX
(c) YZ (d) XZ

25. If $243^{3x} = 27^{(4x-1)}$, then the value of 4^x is:

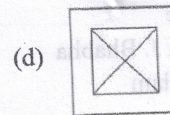
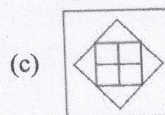
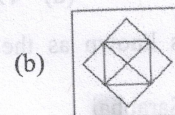
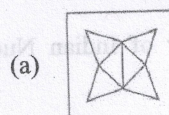
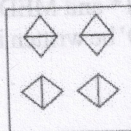
(a) 4 (b) -4
(c) $\frac{1}{4}$ (d) $\frac{1}{16}$

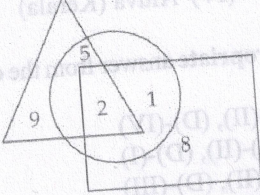
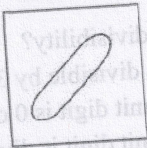
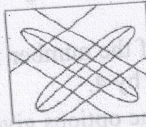
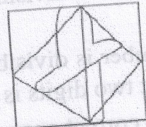
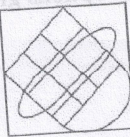
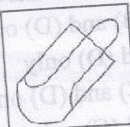
26. Which of the following represents the Boyle's Law?

(a) $V \propto T$ (at constant P)
(b) $V \propto \frac{1}{P}$ (at constant T)

(c) $P \propto T$ (at constant V)
(d) $V \propto n$ (at constant T & P)

27. Find out the answer figure which can be formed from the pieces given in the question figure?



28. Eight persons with an average weight 49kg were in a lift. Two more persons Anita and Kamal boarded the lift and the average weight of the person in the lift increased by 2.8kg. What is the average weight of Anita and Kamal?
- (a) 51.8 kg (b) 54.6 kg
(c) 59 kg (d) 63 kg
29. 'Venus' is the 'Earth' as 'Mercury' is to ____.
- (a) Sun (b) Pluto
(c) Mars (d) Moon
30. 
- Which number lies inside all the figures?
- (a) 2 (b) 5
(c) 9 (d) 1
31. A sum of ₹ 1250 is divided among, A, B and C such that A gets $\frac{2}{9}$ of B's share and C gets $\frac{3}{4}$ of A's share. Find the shares of A, B and C (in ₹).
- (a) 200, 900, 150 (b) 200, 800, 250
(c) 150, 800, 300 (d) 190, 850, 210
32. The First Chief Justice of India was?
- (a) S.R. Das (b) N.V. Ramana
(c) Harilal J. Kania (d) Patanjali Shastri
33. Palk Strait Separates which of the following country from India?
- (A) Pakistan (B) Bangladesh
(C) Sri Lanka (D) Myanmar
- Choose the **most appropriate** answer from the options given below:
- (a) (A) only (b) (B) only
(c) (C) only (d) (B) and (C) only
34. If in $\triangle ABC$ $\angle A + \angle B = 90^\circ$ and $\sin B = \frac{4}{5}$, then find the value of $\cos A$.
- (a) 1 (b) $\frac{3}{5}$
(c) $\frac{4}{5}$ (d) 0
35. In certain code GONE is written as 4%1* and MEDAL is written as 2*7\$@, then how will 'GOLD' be written in that code?
- (a) 4@%7 (b) 4#%7
(c) 4%#@7 (d) 4%#7
36. _____ is known as the father of Indian Nuclear Physics.
- (a) Vikram Sarabhai
(b) J.C. Bose
(c) Dr. Homi J. Bhabha
(d) A.P.J. Kalam
37. According to their celebrating months, arrange the following festivals in ascending order in calendar:
- (A) Bihu (B) Pongal
(C) Holi (D) Christmas
(E) Onam
- Choose the **most appropriate** answer from the options given below:
- (a) (B), (A), (C), (D), (E)
(b) (B), (C), (A), (E), (D)
(c) (A), (B), (C), (D), (E)
(d) (E), (C), (A), (B), (D)
38. If CAT is 12, then LION is:
- (a) 24 (b) 25
(c) 48 (d) 50
39. 1 kilo Watt-hour (kWh) is equals to ____.
- (a) 3.6×10^4 joule (b) 3.6×10^7 joule
(c) 3.6×10^5 joule (d) 3.6×10^6 joule
40. Rajan does $\frac{7}{11}$ of a work in 21 days. How many more days will be take to complete the work?
- (a) $9\frac{1}{4}$ (b) 12
(c) 15 (d) $13\frac{1}{2}$
41. If mean of the numbers 2, $(2p+2)$, 7, 13, 17, 4 and $(p-1)$ is 8, then find their median.
- (a) 4 (b) 6
(c) 7 (d) 13
42. The volumes of 3 solid cubes made of metal are 125 cm^3 , 64 cm^3 and 27 cm^3 respectively. After melting all the three cubes a solid cube is made. Find the edge of the new cube.
- (a) 2.5 cm (b) 4 cm
(c) 6 cm (d) 5 cm
43. Choose set of numbers from the four alternatives sets that is similar to the given set.
- (8, 12, 18) (b) (7, 11, 15)
(a) (6, 12, 18) (c) (7, 11, 17) (d) (9, 13, 20)
44. In the following four options, in which the problem figure is embedded:
- Problem Figure**
- 
- (a)  (b) 
- (c)  (d) 

45. The greatest football player 'Pele' belongs to _____.
- (a) Belgium (b) Argentina
(c) Brazil (d) Germany
46. In which language most of Ashoka inscription are written?
- (a) Sanskrit & Pali (b) Prakrit & Brahmi
(c) Hindi & Pali (d) Urdu & Sanskrit
47. If $\sin\theta + \operatorname{cosec}\theta = 2$, then what is the value of $\sin^2\theta + \operatorname{cosec}^2\theta$?
- (a) 4 (b) 8
(c) 2 (d) 16
48. Which of the following country shares the shortest border with India?
- (a) Bhutan (b) Myanmar
(c) Nepal (d) Pakistan
49. Who wrote the famous novel "The Guide"?
- (a) R.K. Narayan (b) Sarojini Naidu
(c) B.M. Kaul (d) Vijay Tendulkar
50. Joseph gifted ₹20000 to his wife and some money to his three children aged 12, 14 and 16 years in the ratio of their ages. If he gave ₹3000 to his youngest child, then how much money he gifted to his family?
- (a) ₹30000 (b) ₹30150
(c) ₹30225 (d) ₹30500
51. A quadrilateral has vertices in the order (0, -1), (-2, 3), (6, 7) and (8, 3). The quadrilateral is a :
- (a) Trapezium (b) Square
(c) Rhombus (d) Rectangle
52. Five students are standing in a circle and all are facing the centre of circle. Abhinav is between Alok and Ankur. Apurva is on the left of Abhishek. Alok is on the left of Apurva. Who is sitting next to Abhinav on his right?
- (a) Apurva (b) Ankur
(c) Abhishek (d) Alok
53. The provision for the anti-defection law is given under which schedule of the constitution:
- (a) 10th Schedule (b) 9th Schedule
(c) 8th Schedule (d) 12th Schedule
54. _____ is the famous folk dance in Maharashtra.
- (a) Kathi (b) Lavani
(c) Jatra (d) Garba
55. Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.
Assertion (A): Earth is the only planet known to have life.
Reason (R): Earth has an atmosphere which is a mixture of Oxygen, Nitrogen and Carbon dioxide.

In the light of the above statements, choose the **most appropriate** answer from the options given below:

- (a) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(b) Both (A) and (R) are correct but (R) is the **not** the correct explanation of (A)
(c) (A) is correct but (R) is not correct
(d) (A) is not correct but (R) is correct
56. **Statement (I) :** All children are students. All students are players.

Conclusions (I) : All students are children

(II) : All children are players

Which of the conclusions follow from the given statements?

- (a) Only I follows
(b) Only II follows
(c) Both I & II follows
(d) Neither I nor II follows
57. Find the A.P. whose 3rd term is 18 and 12th term is 72.
- (a) 6, 12, 18 (b) 0, 9, 18
(c) 12, 15, 18 (d) 4.5, 9, 18
58. Tickets numbered from 1 to 20 are mixed and a ticket is drawn at random. What is the probability that the ticket drawn bears a number which is a multiple of 3?

- (a) $\frac{3}{10}$ (b) $\frac{3}{20}$
(c) $\frac{2}{5}$ (d) $\frac{1}{2}$

59. Arrange the following in correct chronological order:

- (A) Dandi March
(B) Chauri Chaura incident
(C) Quit India Movement
(D) Formation of Indian National Congress
(E) Swadeshi Movement

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

- (a) (D), (E), (B), (A), (C)
(b) (A), (C), (B), (D), (E)
(c) (E), (B), (C), (A), (D)
(d) (C), (A), (B), (E), (D)
60. A boy runs 4 km to East side then turn right side 6 km, and then turn left runs 8 km again turn left to run 3 km again turn left 4 km, then turn right 1 km. Now the boy at which direction?
- (a) West (b) South
(c) North (d) East

Hints & Explanations

1. (c) Height of cone of (h) = $15.5 - \frac{7}{2} = 12$ cm

$$\text{Radius of cone (r)} = \frac{7}{2} = 3.5 \text{ cm}$$

$$\therefore l = \sqrt{(12)^2 + (3.5)^2} = \sqrt{156.25}$$

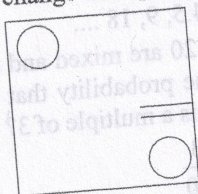
$$\Rightarrow l = 12.5 \text{ cm.}$$

$$\text{Hence, cost of polishing} = (\pi r l + 2\pi r^2) \times 0.20$$

$$= \left(\frac{22}{7} \times 3.5 \times 12.5 + 2 \times \frac{22}{7} \times 3.5 \times 3.5 \right) \times 0.20$$

$$= (137.5 + 77) \times 0.20 = ₹ 42.90$$

2. (c) Pattern is that line and shape become double and change their place.



3. (b) Let sum is P and rate of interest is R%.
According to question,

$$\frac{36}{25}P = P \left(1 + \frac{R}{100} \right)^2$$

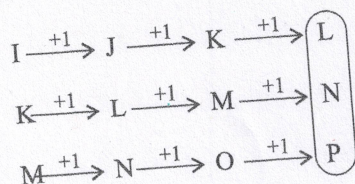
$$\Rightarrow 1 + \frac{R}{100} = \sqrt{\frac{36}{25}} = \frac{6}{5}$$

$$\Rightarrow \frac{R}{100} = \frac{1}{5} \Rightarrow R = \frac{1}{5} \times 100 = 20\%$$

4. (d) A well known freedom fighter and Politician, Sucheta Kriplani was the first women Chief Minister of India, she served as the CM of Uttar Pradesh from 1963 to 1967. Additionally, she was one of the few female members of the constituent assembly and served as the MP from 1951-1961.

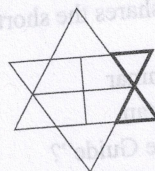
5. (b) Bacteria have multiple applications in the industry, to mention a few they produce enzymes, antibiotics, organic acids and other products of high value. One can understand that, Bacteria helps in the fermentation of Sugar, cleaning of oil spills and in the production of vaccines.

6. (c) Pattern of the series-



7. (a) 'Namami Gange Programme', is an Integrated Conservation Mission, approved as 'Flagship Programme' by the Union Government in June 2014 with budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.

8. (b)



9. (d) 18th Feb 1997 = Tuesday (1 odd day)
18th Feb 1998 = Wednesday (1 odd day)
Hence, 18th Feb 1999 = Thursday

10. (b)

Prime Minister of India	Period
Lal Bahadur Shastri	1964-1966
Rajiv Gandhi	1984-1989
Atal Bihari Vajpayee	1998-2004
P.V. Narsimha Rao	1991-1996

11. (b) $3x + 5y = 19$... (i)
 $10x - 3y = 24$... (ii)

Solving equation. (i) and (ii)

$$x = 3 \text{ and } y = 2$$

$$\therefore 3 = \frac{\alpha}{3} \Rightarrow \alpha = 9$$

$$\text{And, } 2 = \frac{\beta}{2} \Rightarrow \beta = 4$$

$$\text{Hence, } \alpha + \beta = 9 + 4 = 13$$

12. (c) Pattern is that

$$20 \rightarrow \frac{20}{2} + 7 = 10 + 7 = 17$$

Similarly

$$104 \rightarrow \frac{104}{2} + 7 = 52 + 7 = 59$$

13. (c) $2\pi r_1 = 396$

$$\Rightarrow 2 \times \frac{22}{7} \times r_1 = 396 \Rightarrow r_1 = \frac{396}{44} \times 7 = 63 \text{ m}$$

$$\text{And, } 2\pi r_2 = 132$$

$$\Rightarrow 2 \times \frac{22}{7} \times r_2 = 132$$

$$\Rightarrow r_2 = \frac{132}{44} \times 7 = 21 \text{ m}$$

So, radius of third circular field (r_3)

$$= r_1 + r_2$$

$$= 63 + 21 = 84 \text{ m}$$

Hence, area of third circular field

$$= \pi r_3^2 = \frac{22}{7} \times 84 \times 84 = 22176 \text{ m}^2$$

14. (b) COSIS(T)GOLOI

15. (a) Let the angle is x .

$\therefore$ Supplementary angle $= 180^\circ - x^\circ$

According to question,

$$x = \frac{3}{7} \times (180 - x)$$

$$\Rightarrow 7x = 540 - 3x$$

$$\Rightarrow 10x = 540$$

$$\Rightarrow x = 54^\circ$$

16. (b)

Quantity	Unit
Acceleration	Meter-second ⁻²
Pressure	newton-meter ⁻²
Power of lens	meter ⁻¹
Frequency	second ⁻¹

17. (d) Lady's mother

Lady (man's mother)

Man

Hence, lady is the mother of the man.

18. (c) Sardar Udham Singh was a revolutionary patriot, who was deeply affected by the Jallianwala Bagh Tragedy. He was from Punjab and shot down General Reginald Dyer in London.

19. (b) 1 hr 20 min = 80 min

Angular distance covered by the minute hand in

$$60 \text{ minute} = 360^\circ$$

Hence, angular distance covered in 1 hr 20 min

$$= \frac{360}{60} \times 80 = 480^\circ$$

20. (b) A number is divisible by 6 if it is divisible by 3 and 2.

A number is divisible by 3 if sum of it's digits is divisible by 3.

Hence, only statement (B) and (D) are correct.

21. (c)

List I	List II
Indian Rare Earths Limited	Aluva (Kerala)
Indian Space Research Organisation	Bangalore
Vikram Sarabhai Space Centre	Thiruvananthapuram
Uranium Corporation of India	Jadugoda

22. (c) Length of the bridge $= 5 \times \frac{15}{60} \times 1000$
 $= 1250 \text{ m}$

23. (c) $20 \times \text{SP} = 16 \times \text{MP}$

$$\Rightarrow \frac{\text{SP}}{\text{MP}} = \frac{16}{20} = \frac{4}{5}$$

20 pens at MP of 16 pens $= 16 \times 5 = ₹ 80$

Now, 20 pens at MP of 20 pens $= 20 \times 5 = ₹ 100$

Hence, gain percent $= \frac{20}{80} \times 100 = 25\%$

24. (b) Pattern of the series

D $\xrightarrow{+3}$ G $\xrightarrow{+4}$ K $\xrightarrow{+3}$ N $\xrightarrow{+4}$ R $\xrightarrow{+3}$ U

F $\xrightarrow{+4}$ J $\xrightarrow{+3}$ M $\xrightarrow{+4}$ Q $\xrightarrow{+3}$ T $\xrightarrow{+4}$ X

25. (c) $243^{3x} = 27^{(4x-1)}$

$$\Rightarrow (3^5)^{3x} = (3^3)^{(4x-1)}$$

$$\Rightarrow 3^{15x} = 3^{12x-3}$$

If base is same then power will be equal.

$$15x = 12x - 3$$

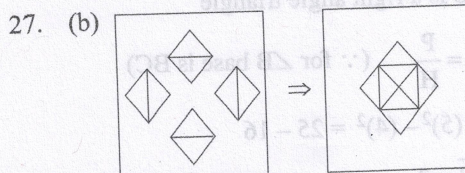
$$\Rightarrow 3x = -3$$

$$\Rightarrow x = -1$$

$$\text{Hence, } 4^x = 4^{-1} = \frac{1}{4}$$

26. (b) Boyle's law is a gas law that states that a gas's pressure and volume are inversely proportional, when the temperature is kept constant.

Mathematically, $V \propto \left(\frac{1}{P}\right)$ (At constant T)



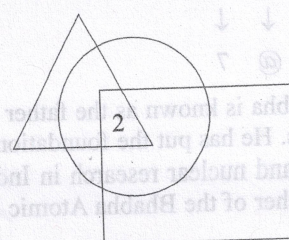
27. (b)

28. (d) Total weight of Anita and Kamal
 $= (49 + 2.8) \times 10 - 49 \times 8$
 $= 49(10 - 8) + 2.8 \times 10$
 $= 49 \times 2 + 28$
 $= 98 + 28 = 126$

$$\text{Hence, average} = \frac{126}{2} = 63 \text{ kg}$$

29. (a) Venus is planet nearest to the Earth. Similarly, Mercury is the planet nearest to the Sun.

30. (a)



31. (a) Let B's share is
- $18x$
- .

$$A's \text{ share} = 18x \times \frac{2}{9} = 4x$$

$$C's \text{ share} = 4x \times \frac{3}{4} = 3x$$

$$\therefore \text{Ratio of share} = 4 : 18 : 3$$

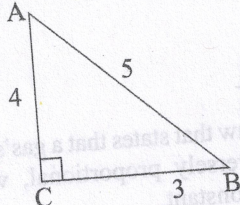
$$\text{Hence, A's share} = 1250 \times \frac{4}{25} = ₹ 200$$

$$B's \text{ share} = 1250 \times \frac{18}{25} = ₹ 900$$

$$C's \text{ share} = 1250 \times \frac{3}{25} = ₹ 150$$

32. (c) Harilal J. Kania was the first Chief Justice of India. The Chief Justice of India is the highest executive head of the judiciary and he appointed by the President of India, as suggested by the outgoing Chief Justice.
33. (c) The Palk Strait is a strait between the Tamil Nadu state of India and the Jaffna District of the Northern Province of the island nation of Sri Lanka.

34. (c)



$$\therefore \angle A + \angle B = 90^\circ$$

$$\therefore \angle C = 180^\circ - 90^\circ = 90^\circ$$

So, $\triangle ABC$ is a right angle triangle

$$\sin B = \frac{4}{5} = \frac{P}{H} \quad (\because \text{for } \angle B \text{ base is } BC)$$

$$\therefore (B)^2 = (5)^2 - (4)^2 = 25 - 16$$

$$\Rightarrow B = \sqrt{9} = 3$$

$$\text{Hence, } \cos A = \frac{B}{H} = \frac{4}{5}$$

($\because$ for $\angle A$ base is AC)

35. (c) G O N E ; M E D A L

↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

4 % 1 * 2 * 7 \$ @

Hence, G O L D

↓ ↓ ↓ ↓

4 % @ 7

36. (c) Dr. Homi J Bhabha is known as the father of Indian Nuclear Physics. He has put the foundation stone of space research and nuclear research in India. He is the founding father of the Bhabha Atomic Research Centre (BARC).

37. (b)

Festival	Month
Bihu	April
Pongal	January
Holi	March
Christmas	December
Onam	August

$$38. (b) \text{ As, CAT} \rightarrow \frac{3+1+20}{2} = \frac{24}{2} = 12$$

Similarly,

$$\text{LION} \rightarrow \frac{12+9+15+14}{2} = \frac{50}{2} = 25$$

39. (d) 1 kilowatt hour is the energy produced by 1 kilowatt power source in 1 hour.
 $1 \text{ kWh} = 1 \text{ kW} \times 1 \text{ hour}$
 $= 1000 \times 3600 \text{ W.s.}$
 $\Rightarrow 1 \text{ kWh} = 3.6 \times 10^6 \text{ J}$

40. (b) Rajan does complete work in

$$= 21 \times \frac{11}{7} = 33 \text{ days}$$

Hence, remaining work will complete in
 $= 33 - 21 = 12 \text{ days.}$

$$41. (c) \frac{2+2p+2+7+13+17+4+p-1}{7} = 8$$

$$\Rightarrow 3p + 44 = 56$$

$$\Rightarrow 3p = 12$$

$$\Rightarrow p = 4$$

$$\therefore 2p + 2 = 10 \text{ and } p - 1 = 3$$

Ascending order of numbers:

2, 3, 4, 7, 10, 13, 17

$$n = 7$$

$$\text{Hence, median} = \frac{n^{\text{th}}}{2} \text{ term} = \frac{7+1}{2}$$

$$= 4^{\text{th}} \text{ term} = 7$$

$$42. (c) \text{ Volume of new cube} = 125 + 64 + 27$$

$$= 216 \text{ cm}^3$$

$$\text{Hence, edge of the new cube} = \sqrt[3]{216} = 6 \text{ cm}$$

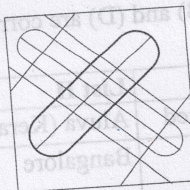
43. (c) Pattern is that

$$8 \rightarrow 8 + 4 = 12 \rightarrow 12 + 6 = 18$$

Similarly,

$$7 \rightarrow 7 + 4 = 11 \rightarrow 11 + 6 = 17$$

44. (a)



45. (c) Pele was a famous footballer from Brazil, he was also the former minister of sports of Brazil.
46. (b) Prakrit & Brahmi

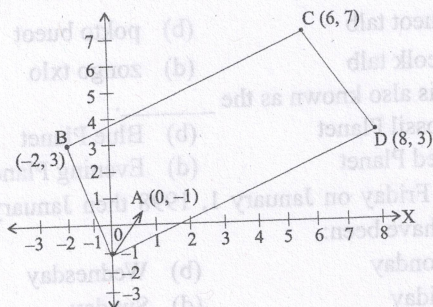
47. (c) $\sin \theta + \operatorname{cosec} \theta = 2$
By squaring both sides,
 $(\sin \theta + \operatorname{cosec} \theta)^2 = 4$
 $\Rightarrow \sin^2 \theta + \operatorname{cosec}^2 \theta + 2 \sin \theta \cdot \operatorname{cosec} \theta = 4$
 $\Rightarrow \sin^2 \theta + \operatorname{cosec}^2 \theta = 4 - 2 = 2$
 $(\because \sin \theta \cdot \operatorname{cosec} \theta = 1)$
48. (a) India shares its borders with seven countries. It shares the shortest border with Bhutan whereas the longest border is shared by Bangladesh.
49. (a) R. K Narayan was an Indian writer and novelist known for his work set in the fictional South Indian town of Malgudi. He was a leading author of early Indian literature in English along with Mulk Raj Anand and Raja Rao.
50. (d) Ratio of ages of his children = 12 : 14 : 16
= 6 : 7 : 8

$$\text{So, Joseph gave money to his children} = \frac{3000}{6} \times 21$$

$$= ₹ 10500$$

$$\text{Hence, Joseph gifted money to his family} \\ = 20000 + 10500 = ₹ 30,500$$

51. (d)



$$\therefore AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{(-2 - 0)^2 + (3 + 1)^2}$$

$$\Rightarrow AB = \sqrt{4 + 16} = \sqrt{20}$$

Similarly,

$$BC = \sqrt{(6 + 2)^2 + (7 - 3)^2} = \sqrt{64 + 16} = \sqrt{80}$$

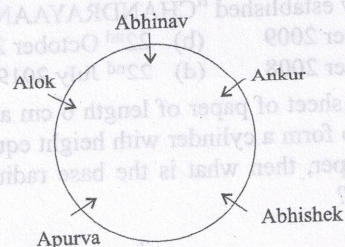
$$CD = \sqrt{(8 - 6)^2 + (3 - 7)^2} = \sqrt{4 + 16} = \sqrt{20}$$

$$DA = \sqrt{(0 - 8)^2 + (-1 - 3)^2} = \sqrt{64 + 16} = \sqrt{80}$$

So, $AB = CD$ and $BC = DA$

Hence, the quadrilateral is a rectangle.

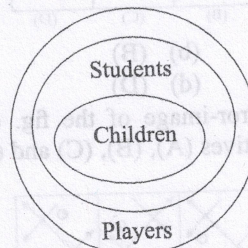
52. (d)



Hence, Alok is sitting next to Abhinav on his right.

53. (a) The 10th Schedule of the Indian Constitution popularly referred to as the 'Anti-Defection Law' was inserted by the 52nd Amendment (1985) to the Constitution. The law ensures that a party member does not violate the party mandate and in case they do they will lose their membership.
54. (b) Lavani is the folk dance of Maharashtra, while Garba is the folk dance of Gujarat and Kathi is the folk dance of Madhya Pradesh.
55. (b) Both (A) and (R) are correct but (R) is the not correct explanation of (A) because earth also has a suitable temperature for living organisms.

56. (b)



Hence, only conclusion II follows

$$57. (a) T_n = a + (n - 1)d$$

$$\Rightarrow 18 = a + 2 \times d$$

$$\Rightarrow a + 2d = 18 \quad \dots(i)$$

$$\text{And, } a + 11d = 72 \quad \dots(ii)$$

By solving equation (i) and (ii),

$$a = 6 \text{ and } d = 6$$

Hence, A.P. is = 6, 12, 18, 24,

$$58. (a) \text{ Total case} = 20$$

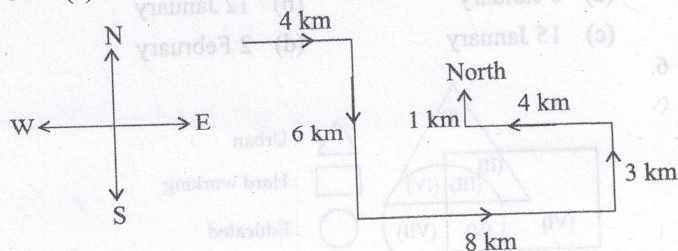
Case of a number is multiple of 3 = 3, 6, 9, 12, 15, 18

$$\text{Hence, probability} = \frac{6}{20} = \frac{3}{10}$$

59. (a)

Historical Event	Timeline
Formation of Indian National Congress	1885
Swadeshi Movement	1905
Chauri Chaura Incident	1922
Dandi March	1930
Quit India Movement	1942

60. (c)



Hence, now the boy at North direction.