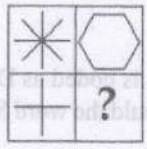
CUET General Test Solved Paper-2023

Held on 5 June 2023 (Shift-III)

1. A rectangle has its longer side 2 cm greater than its shorter side. Its area is $80cm^2$. Find the Perimeter of the rectangle (in cm).
   (a) 40 (b) 38
   (c) 36 (d) 32
2. Brass is an alloy and it is a mixture of _____?
   (a) Zinc and Copper (b) Iron and Zinc
   (c) Copper and Tin (d) Zinc and Lead
3. The screen behind the eye lens is called the _____?
   (a) Pupil (b) Iris
   (c) Ciliary muscle (d) Retina
4. A solid metallic sphere of radius 8 cm is melted and recasted as a cone of height 8 cm. Find the base radius of the cone (in cm).
   (a) 8 (b) 12
   (c) 16 (d) 24
5. Botany : Plants : : Entomology : ____?____
   (a) Germs (b) Birds
   (c) Insects (d) Snakes
6. _____has the highest melting point among metals.
   (a) Bromine (b) Mercury
   (c) Tungsten (d) Carbon
7. On which day, Roma went to Chennai, if week starts on Monday?
   (A) Roma took leave on Wednesday.
   (B) Roma went to Chennai the next day of the day his mother come to his house.
   (C) Roma's mother come to his house neither on Monday nor friday.
   Choose the **most appropriate** answer from the options given below:
   (a) (B) and (C)
   (b) (A) and (B)
   (c) (A) and (C)
   (d) Even (A), (B) and (C) together are not sufficient
8. Ramon Magsayasay Award was given to Arvind Kejriwal in:
   (a) 2003 (b) 2004
   (c) 2005 (d) 2006
9. When seen through a mirror, a clock shows 8 : 30. The correct time is _____?
   (a) 8 : 30 (b) 2 : 30
   (c) 3 : 30 (d) 5 : 30
10. If A (1, 2), B (4, y), C(x, 6) and D(3, 5) are the vertices of a parallelogram ABCD, then find the values of x and y.
    (a) x = 3, y = 6 (b) x = 6, y = 3
    (c) x = 0, y = 0 (d) x = 0, y = 1
11. Match List I with List II.

List I	List II
(A) Spain	(I) Addis Ababa
(b) Israel	(II) Kiev
(C) Ethiopia	(III) Madrid
(D) Ukraine	(IV) Jerusalem

    Choose the most appropriate answer from the options given below:
    (a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
    (b) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
    (c) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
    (d) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
12. In a 2-digit number, the ten's digit is two times its unit's digit and the number is 12 less than two times the number obtained by interchanging its digits. Find the original number.
    (a) 63 (b) 42
    (c) 84 (d) 12
13. The City of Seven Hills is _____?
    (a) Tokyo (b) Cairo
    (c) Athens (d) Rome
14. Complete the figure matrix:



    (a) 
    (b) 
    (c) 
    (d) 
15. Which pair is odd one out?
    (a) 17 : 293 (b) 19 : 365
    (c) 21 : 445 (d) 33 : 1097
16. In a particular week, the average earning per day of a plumber from Monday to Wednesday remained ₹ 580 and that from Thursday to Saturday it was ₹ 612. If the average earning for the whole week was ₹ 675, then how much did he earn on Sunday?
    (a) ₹ 850 (b) ₹ 900
    (c) ₹ 1082 (d) ₹ 1149

17. _____protects the earth from harmful UV (Ultra-Violet) Radiation from sun.
(a) O_2 (b) O_3
(c) CO_2 (d) SO_2

18. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)
Assertion (A) : Diamond is used for cutting glass.
Reason (R) : Diamond has a high refractive Index.
In the light of the above statments, choose the most appropriate answer from the options given below
(a) (A) is correct but (R) is not correct
(b) (A) is not correct but (R) is correct
(c) Both A and (R) are correct and (R) is the correct explanation of (A)
(d) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

19. If 5A = 4B, 7B = 3C and 2C = 7D, then A : D is:
(a) 5 : 6 (b) 5 : 7
(c) 2 : 1 (d) 6 : 5

20. Three men can complete a work in 6 days and 5 women can complete the same work in 18 days. In how many days can 4 men and 10 women together complete the same work?
(a) 3 (b) $3\frac{1}{2}$
(c) 2 (d) $2\frac{1}{2}$

21. Five students are standing in a circle and 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 immediate right of Abhinav?
(a) Apurva (b) Ankur
(c) Abhishek (d) Alok

22. If GOLD is coded as HOME, COME is coded as DONE and CORD is coded as DOSE. How would the word SONS be written in that code language?.
(a) TONT (b) TPOT
(c) TOOT (d) TOOS

23. Find the compound interest on ₹ 42000 for $1\frac{1}{2}$ years at 10% p.a. compunded annually.
(a) ₹ 5601 (b) ₹ 5610
(c) ₹ 6510 (d) ₹ 6620.25

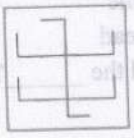
24. The First Women Chief Minister of an Indian State:
(a) V.N. Janaki Rama Chandran
(b) Sarojini Naidu
(c) Sucheta Kripalani
(d) Shashi Kala Kasodkar

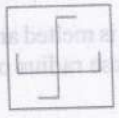
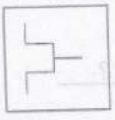
25. The youngest Noble Laureates of the world is _____?
(a) Lawrence Bragg (b) Frederick Banting
(c) Malala Yousafzai (d) Rudyard Kipling

26. Which one of the following States in the leading producer of Copper?
(a) Uttar Pradesh (b) Madhya Pradesh
(c) Uttarakhand (d) Odisha

27. What number should replace the question mark?
(A) 72 : 8 (B) 156 : 12
(C) 272 : 16 (D) 600 : ____?____
Choose the **most appropriate** answer from the options given below:
(a) 26 (b) 32
(c) 24 (d) 22

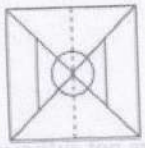
28. Choose the alternative figure which is embedded in the problem figure :
Problem Figure



(a) 
(b) 
(c) 
(d) 

29. **Statements :**
(A) All Principals are men
(B) Some Women are Principals
(C) All humans are women
Conclusions :
(I) All humans are men
(II) Some humans are women
(III) Some men are Principals
(IV) All women are men
(a) Only (I) follows (b) Only (II) follows
(c) Only (III) follows (d) Only (I) and (II) follows

30. The following pattern is drawn in a transparent square sheet and folded along the dotted lines, how does it appear ?



(a) 
(b) 
(c) 
(d) 

31. The countries having natural frontiers with India are?
(a) China, Burma and Nepal
(b) Afghanistan, Nepal and Burma
(c) China, Burma and Afghanistan
(d) China, Russia and Bangladesh

32. If the selling price of 20 pens is equal to the cost price of 16 pens, then find the loss percentage.
(a) 10% (b) 25%
(c) 20% (d) 15%

33. Find the term which does not fit into the series:
1CV, 5FU, 9IT, 15LS, 17OR
(a) 17OR (b) 9IT
(c) 5FU (d) 15LS

34. Match **List I** with **List II**.

List I	List II
(A) Surface Tension	(I) pascal
(b) Acceleration	(II) newton second
(C) Impulse	(III) joule/meter^2
(D) Viscosity	(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)-(II), (B)-(III), (C)-(IV), (D)-(I)
(c) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
(d) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

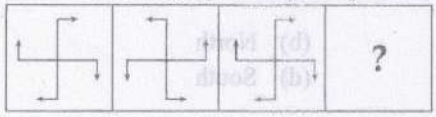
35. P is Q's sister. R is Q's mother, S is R's father, T is S's mother then, how is P related to S?
(a) Grand mother (b) Grand daughter
(c) Grand Father (d) Father

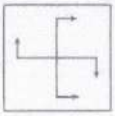
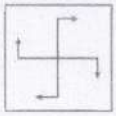
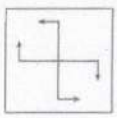
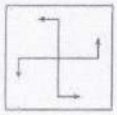
36. The speed of a train is 75 km/h. The distance covered by the train in 6 seconds is:
(a) 80.5 m (b) 100 m
(c) 125 m (d) 130 m

37. Find the length of the longest rod which can be used to measure exactly the lengths 5 m 13 cm, 11 m 34 cm, and 12 m 15 cm.
(a) 11 cm (b) 9 cm
(c) 1 m 3 cm (d) 27 cm

38. Which of the following are Zaid Crops ?
(A) Rubber (B) Cucumber
(C) Tea (D) Watermelon
Choose the **most appropriate** answer from the options given below:
(a) (A) and (B) only (b) (B) and (D) only
(c) (C) and (D) only (d) (B), (C) and (D) only

39. Find the missing figure in given pattern:



(a) 
(b) 
(c) 
(d) 

40. If mean of the data 5, 6, 8, 13, p + 3, 8, 3 is 7 and its median is q, then find $\sqrt{p+q}$.
(a) 3 (b) 4
(c) 8 (d) 9

41. Mahesh is five ranks below top student Mukesh in a class of forty students. What is Mahesh's rank from the bottom in the class?
(a) 35th (b) 33rd
(c) 34th (d) 36th

42. If January 1 is a friday, then what is the first day of the month of March in that leap year?
(a) Friday (b) Tuesday
(c) Wednesdays (d) Thursday

43. Which river was the lifeline for the Harappan and Indus valley Civilization. This river is mostly extinct now?
(a) Jhelum river (b) Indus river
(c) Beas river (d) Saraswati river

44. In a Δ ABC right angled at B, AB = 8 unit and AC = 10 unit. What is the value of $\sin^2\theta - \cos^2\theta$ where θ is $\angle$ ACB ?
(a) $\frac{9}{25}$ (b) $\frac{7}{25}$
(c) $\frac{22}{25}$ (d) $\frac{16}{25}$

45. The land of the Rising Sun is _____?
(a) Burma (b) Norway
(c) Japan (d) Rome

46. Who started the "Rama Krishna Mission"?
(a) Annie Besant
(b) Swami Vivekananda
(c) Raja Rammohan Roy
(d) Gopal Krishna Gokhale

47. At what time between 5 : 30 and 6 O' Clock, will the hands of a clock be at right angle?
(a) 45 min past 5 (b) 40 min past 5
(c) $43\frac{7}{11}$ min past 5 (d) $43\frac{3}{11}$ min past 5

48. A sum of ₹1500 is invested at 5 % p.a. simple interest. If the interest is added to the principal after every 10 years, the amount will become ₹ 3000 after :
(a) $15\frac{1}{2}$ years (b) $16\frac{2}{3}$ years
(c) 18 years (d) 20 years

49. Find the 50th term of the A.P. 5, 11, 17, 23, ___?
(a) 298 (b) 299
(c) 250 (d) 300

50. Match List I with List II.

List I	List II
(A) Tourism Day	(I) 13th February
(B) World Radio Day	(II) 1st May
(C) International Labour Day	(III) 25th January
(D) National Technological Day	(IV) 11th May

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

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

51. The length of the side of an equilateral triangle is $4\sqrt{3}$ cm. Find its height:

(a) 4 cm (b) $6\sqrt{3}$
(c) $4\sqrt{3}$ cm (d) 6 cm

52. Choose the correct sequence of the ocean according to there size:

(A) Arctic Ocean (B) Atlantic Ocean
(C) Indian Ocean (D) Pacific Ocean

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

(a) (A) > (B) > (C) > (D)
(b) (A) > (B) > (D) > (C)
(c) (D) > (B) > (C) > (A)
(d) (D) > (C) > (B) > (A)

53. What percent of 3 minutes is 15 seconds ?

(a) 5% (b) $8\frac{1}{3}\%$
(c) 12% (d) 50%

54. Match **List I** with **List II**.

List I	List II
(A) Somali Current	(I) Warm and Stable
(B) N-E Monsoon Current	(II) Warm and Unstable
(C) North Equatorial Current	(III) Warm
(D) S-W Monsoon Current	(IV) Cold and Unstable

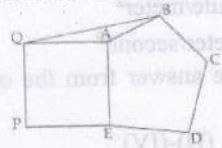
Choose the **most appropriate** answer from the options given below:

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

55. Simplify : $2 \times [4 - \{2 - (2 - 3) - (2 + 3)\} - 1] - 5 \times [-3 - (3 - 2)]$

(a) 34 (b) 30
(c) 22 (d) -10

56. In the figure, ABCDE and AEPQ are a regular pentagon and a square respectively. What is the measure of $\angle AQB$?



(a) 9° (b) 14°
(c) 18° (d) 19°

57. A and B are mutually exclusive events. The probability of occurrence of A is $\frac{3}{5}$ and the probability of occurrence of B as $\frac{1}{3}$. What is the probability of both A and B occurring at the same time?

(a) $\frac{14}{15}$ (b) $\frac{1}{5}$
(c) $\frac{11}{15}$ (d) 0

58. Pinky walks a distance 600m towards east, turns left moves 500m, then again turns left and walk 600 m and then turns left again and moves 500m and halts. At what distance (in meter) she is from the starting point ?

(a) 600 (b) 500
(c) 800 (d) 0

59. _____ is study of human beauty.

(a) Ophthalmology (b) Kalology
(c) Osteologes (d) Nephrology

60. Four students P, Q, R and S are plying Carrom. In this game, P makes a pair with R and Q makes a pair with S. S is the right of R whose face is towards west. Which direction is S facing?

(a) East (b) North
(c) West (d) South

Hints & Explanations

1. (c) Let the breadth of the rectangle = x
the length of the rectangle = $x + 2$
Area of the rectangle = $l \times b$
$80 = x(x + 2)$
$80 = x^2 + 2x$
$x^2 + 2x - 80 = 0$
$x^2 + 10x - 8x - 80 = 0$
$x(x + 10) - 8(x + 10) = 0$
$(x + 10)(x - 8) = 0$
$\boxed{x = 8}$ $\boxed{x \neq -10}$
Perimetre of the rectangle = 2 (l + b)
$= 2(x + 2 + x)$
$\Rightarrow 2(8 + 2 + 8)$
$\Rightarrow 2(18) = 36$ cm

2. (a) Brass is an alloy of Zinc and Copper. It is a historically important alloy and has an edurance capability. It is important because of its quality of hardness and workability.

3. (d) In human anatomy, the retina is the screen behind the eye. The retina is a layer of photoreceptors cells and glial cells within the eye that captures incoming photons and transmits them along neuronal pathways as both electrical and chemical signals for the brain to perceive a visual picture.

4. (c) Radius of a sphere is = 8 cm
Height of a cone is = 8 cm
Volume of sphere = Volume of cone

$$\frac{4}{3}\pi r^3 = \frac{1}{3}\pi R^2 h$$

$4r^3 = R^2 h$
$4 \times 8 \times 8 \times 8 = R^2 \times 8$

$R = \sqrt{8 \times 8 \times 4}$

$\boxed{R = 16 \text{ cm}}$

Radius of the cone is = 16 cm

5. (c) The study of plants is called botany, so the question deals with the keyword. Entomology is the study of Insects.

6. (c) Tungsten metal has the highest melting point among metals. The metal is used as the filament in light bulbs as it has high melting point. The atomic number of tungsten is 74 and the symbol is W.

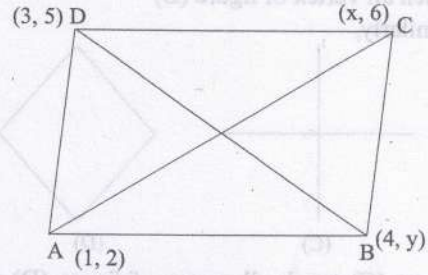
7. (d) **Statements:**
(A) Roma took leave on Wednesday
(B) Roma went to Chennai the next day of the day his mother came to his house.
(C) Roma's mother came to his house neither on Monday nor Friday

From the above statements
Monday - mother does not come
Tuesday - mother may come
Wednesday - leave/mother may come
Thursday - mother may come
Friday - Mother does not come
Saturday - mother may come
Sunday - Mother may come
All three statements together are not sufficient to answer the question.

8. (d) The Ramon Magsaysay Award, also known as the Nobel Prize of Asia is a prize given to Asian individuals for excellence in their respective field. The award is named after Ramon Magsaysay, the seventh president of the Republic of the Philippines.

9. (c) The correct time is → 23 : 60
$-$ 8 : 30
15 : 30 or 3 : 30

10. (b)



mid point of BD = mid point of AC

$$\left(\frac{3+4}{2}, \frac{5+y}{2}\right) = \left(\frac{1+x}{2}, \frac{6+2}{2}\right)$$

$$\frac{7}{2} = \frac{1+x}{2}, \frac{5+y}{2} = \frac{8}{2}$$

$\boxed{x = 6}$ $\boxed{y = 3}$

11. (c)

Country	Capital
Spain	Madrid
Israel	Jerusalem
Ethiopia	Addis Ababa
Ukraine	Kiev

12. (c) Let unit digit of the number = y
Ten's digit of the number = x
$x = 2y$ ...(i)
Number = $10x + y$
According to question
$2(10y + x) - (10x + y) = 12$
$20y + 2x - 10x - y = 12$
$19y - 8x = 12$ ...(ii)

Put the value of x from equation (i) in eq (ii)

$19y - 8(2y) = 12$

$19y - 16y = 12$

$3y = 12$

$y = 4$

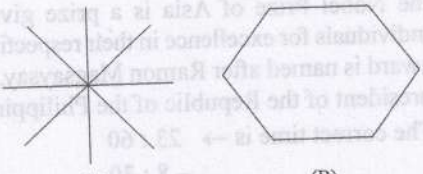
$x = 2y = 2 \times 4 = 8$

Original number $= 10x + y$

$= 10 \times 8 + 4 = 84$

13. (d) Rome, the capital of Italy is called the city of seven hills. It is called city of seven hills because the ancient city was built on and between seven hills, all of which make up part of the core of the modern Italian capital. The Seven Hills of Rome mark the ancient boundaries of the city.

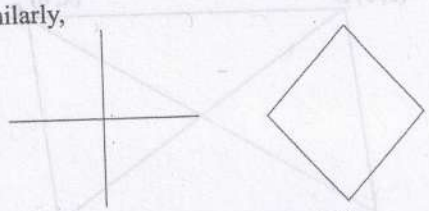
14. (d)



(A) (B)

If figure (A) will be put inside the figure (B) it will touch all vertex of figure (B)

Similarly,



(C) (D)

figure (C) touch all vertex of figure (D) when put inside the figure (D).

So, option (d) will complete the figure matrix.

15. (d) $(17)^2 + 4 = 293$

$(19)^2 + 4 = 365$

$(21)^2 + 4 = 445$

$(33)^2 + 8 = 1097$

option (d) is odd one out.

16. (d) The average earning from Monday to Wednesday $= 580$

$$\frac{\text{Monday} + \text{Tuesday} + \text{Wednesday}}{3} = 580$$

Monday + Tuesday + Wednesday = 1740

The average earning from Thursday to Saturday = 612

$$\frac{\text{Thursday} + \text{Friday} + \text{Saturday}}{3} = 612$$

Thursday + Friday + Saturday = 1836

The average of the whole week = 675

Total earning per week $= 675 \times 7 \Rightarrow 4725$

Earning on Sunday $= 4725 - 1740 - 1836$

$= 4725 - 3576 \Rightarrow$ Rs. 1149

17. (b) The ozone layer or ozone shield is a region of Earth's stratosphere that absorbs most of the Sun's ultraviolet radiation and protects the earth from harmful radiation.

18. (d) **Assertion (A):** Diamond is used for cutting glass.

Reason (R): Diamond has high refractive index.

(R) is not the correct explanation of (A) because diamond is the hardest substance and can easily exert the force required for cutting. Both (A) and (R) are individually correct.

19. (d) $5A = 4B, 7B = 3C, 2C = 7D$

$$\frac{A}{B} = \frac{4}{5}, \frac{B}{C} = \frac{3}{7}, \frac{C}{D} = \frac{7}{2}$$

A	:	B	:	C	:	D
4	:	5	:	5	:	5
3	:	3	:	7	:	7
7	:	7	:	7	:	2
84	:	105	:	245	:	70

A : D

84 : 70

12 : 10

6 : 5

20. (a) According to question

$3M \times 6 = 5W \times 18$

$$\frac{M}{W} = \frac{5}{1}$$

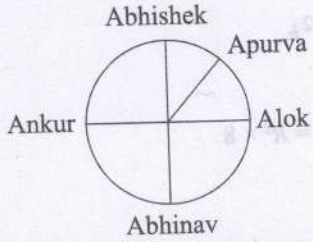
$(4M + 10W)$ days $= 500 \times 18$

$(20 + 10)D = 5 \times 1 \times 18$

$30D = 90$

D = 3

21. (d)



Alok is sitting immediate right of Abhinav.

22. (c)

G O L D C O R D
+1 | | +1| +1| +1 | | +1| +1|
H O M E D O S E

C O M E
+1 | | +1| |
D O N E

No change in vowel alphabets

Similarly

S O N S
+1 | | +1| +1|
T O O T

23. (c) Principal = Rs 42000

Time = $1\frac{1}{2}$ years

Rate of interest = 10% per annum

Compound Interest $\Rightarrow P\left(1+\frac{r}{100}\right)^{h}-P$

$=42000\times\left(1+\frac{10}{100}\right)^{\frac{3}{2}}-42000$

$\Rightarrow 42000\times\frac{11}{10}\times\sqrt{\frac{11}{10}}-42000$

$\Rightarrow 46200\times\sqrt{\frac{11}{10}\times\frac{10}{10}}-42000$

$\Rightarrow 46200\times 1.05-42000$

$\Rightarrow 48510-42000$

$\Rightarrow$ ₹6510

24. (c) Sucheta Kriplani an important figure of the Indian struggle movement, member of the Constituent Assembly was the first women chief minister of an Indian state.

25. (c) Malala Yousafzai was awarded the Nobel Peace Prize for her fight for the right of every child to receive an education. She was born in the Swat Valley in Pakistan, when the Islamic Taliban movement took control of the valley. In 2012, Malala was shot in the head on a school bus by a Taliban gunman. She survived, but had to flee to England and live in exile there because a fatwa was issued against her.

26. (b) Madhya Pradesh is the leading producer of copper in India. It accounts for producing 53% of copper in this country.

27. (c) $8\times(8+1)=72$

$12\times(12+1)=156$

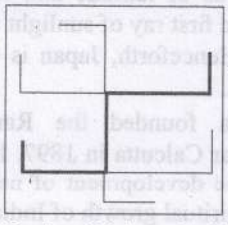
$16\times(16+1)=272$

Similarly

$x\times(x+1)=600$

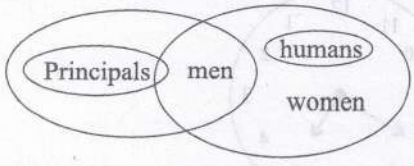
$\boxed{x=24}$

28. (b)



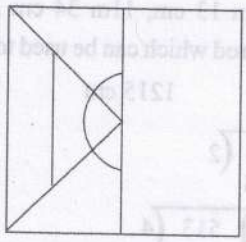
Option (b) is embedded in the problem figure.

29. (*)



Option (b) and (c) both are correct.

30. (c)



Option (c) is folded along the dotted lines.

31. (a) From the given option, China, Burma and Nepal have a natural frontier with India. There are 17 states of India that share international borders with our neighbours like Pakistan, Nepal, Sri Lanka, China, Afghanistan, Myanmar, Bangladesh, and Bhutan.

32. (c) According to question

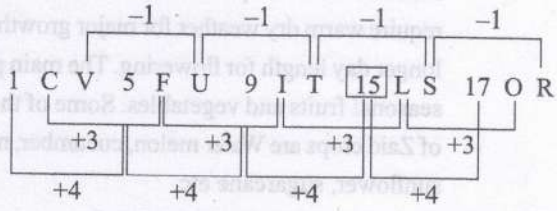
$SP\times 20=CP\times 16$

$\frac{SP}{CP}=\frac{16}{20}$

$\text{Loss}\%=\frac{\text{Loss}}{CP}\times 100=\frac{4}{20}\times 100$

$\boxed{\text{Loss}=20\%}$

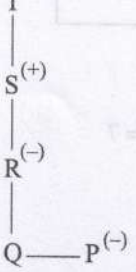
33. (d)



34. (c)

List I	List II
Surface Tension	Joule/meter2
Acceleration	Meter/second2
Impulse	Newton second
Viscosity	Pascal

35. (b)



'P' is grand daughter of 'S'.

36. (c) Speed of a train is = 75 km/h

$\Rightarrow 75\times\frac{5}{18}=\frac{125}{6}$ m/sec

The distance covered by train in 6 seconds $=\frac{125}{6}\times 6$

= 125 m

37. (d) HCF of lengths 5 m 13 cm, 11m 34 cm and 12 m 15 cm is the longest rod which can be used to measure.

513cm 1134 cm 1215 cm

$513\overline{)1134}(2$ (1026)

$108\overline{)513}(4$ (432)

$81\overline{)108}(1$ (81)

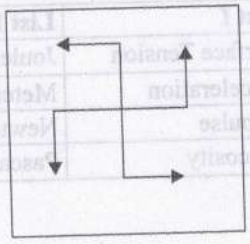
$27\overline{)81}(3$ (81) ×

$27\overline{)1215}(45$ (108) (135) (135) ×

HCF of 513 cm, 1134 cm and 1215 cm is 27 cm

38. (d) Zaid crops are those crops which are cultivated in summer season specifically March to June. They require warm dry weather for major growth period and longer day length for flowering. The main produce are seasonal fruits and vegetables. Some of the examples of Zaid crops are Water melon, cucumber, muskmelon, sunflower, sugarcane etc.

39. (d) Option (d) will complete the series.



40. (a) Mean of the data = 7

$$\frac{5+6+8+13+(P+3)+8+3}{7}=7$$

$46 + P = 49$

$\boxed{P=3}$

Arrange the data in ascending order

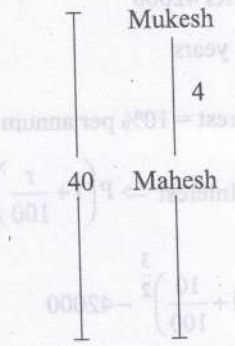
3, 5, 6, 6, 8, 8, 13

Median middle term $\Rightarrow 6$

$\Rightarrow \sqrt{p+q}$

$\Rightarrow \sqrt{3+6} \Rightarrow \sqrt{9} \Rightarrow 3$

41. (a)



Mahesh's rank from the bottom is $\Rightarrow 41 - 6 = 35^{th}$

42. (b) 1 January = Friday

According to question

January = 31

$$\text{February} = \frac{29}{60}=4 \text{ (remainder)}$$

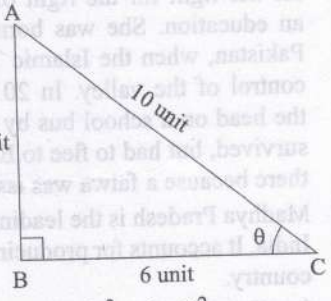
7

1 March = Friday + 4 days

=Tuesday

43. (d) Saraswati River or the lost river was used to be the lifeline of Harappan and Indus Valley civilisation. There is a theory that the civilisation collapsed due to the drying of saraswati river.

44. (b)



$$\sin^2\theta - \cos^2\theta = \left(\frac{8}{10}\right)^2 - \left(\frac{6}{10}\right)^2$$

$$\Rightarrow \frac{64}{100}-\frac{36}{100}=\frac{28}{100}=\frac{7}{25}$$

45. (c) Japan is the eastern most country according to International standards of latitude and longitudes. Hence, Japan sees the first ray of sunlight as the day begins universally. Henceforth, Japan is called the land of the rising sun.

46. (b) Swami Vivekananda founded the Ramakrishna Mission at Belur, near Calcutta in 1897. It played a significant role in the development of nationalistic awareness and the spiritual growth of Indians.

47. (c)

Total minutes from 12 to 8 = 40

Time $\Rightarrow \frac{40\times 6^\circ}{6-0.5}$

$\Rightarrow \frac{40}{5.5}\times 6^\circ$

$\Rightarrow \frac{2400}{55}=\frac{480}{11}=43\frac{7}{11}$ min past 5

48. (b) Principal = ₹1500

Rate of interest = 5%

Amount after 10 years = $1500\times\frac{5}{100}\times 10$

= 750 + 1500 = ₹2250

The amount will become 3000 after $\Rightarrow \frac{3000-2250}{2250\times\frac{5}{100}}$

$\Rightarrow \frac{750\times 2}{225}$

$\Rightarrow \frac{30\times 2}{9}\Rightarrow\frac{20}{3}$

$\Rightarrow 6\frac{2}{3}$ years + 10 years

$\Rightarrow 16\frac{2}{3}$ years

49. (b) $a = 5$

$d = a_2 - a_1$

$\Rightarrow 11 - 5 = 6$

$n = 50$

$a_n = a + (n-1)d$

$a_{50} = 5 + (50-1)6 = 5 + 49\times 6$

$= 5 + 294 \Rightarrow 299$

50. (c)

List I	List II
Tourism Day	25th January
World Radio Day	13th February
International Labour day	1st May
National Technological Day	11th May

51. (d) Length of the side of an equilateral triangle $= 4\sqrt{3}$

Height of an equilateral trianlge = side $\times\frac{\sqrt{3}}{2}$

$\Rightarrow \frac{4\sqrt{3}\times\sqrt{3}}{2}\Rightarrow 6$ cm

52. (c) There are 5 major oceans of the world namely Pacific Ocean, Atlantic Ocean, Indian Ocean, Arctic Ocean and Southern Ocean. The order of the size of oceans is:

Pacific Ocean> Atlantic Ocean> Indian Ocean > Southern Ocean > Arctic Ocean

53. (b) 3 minutes in seconds = 3 × 60 = 180 seconds

Percentage $=\frac{15}{180}\times 100$

$\Rightarrow \frac{100}{12}=\frac{25}{3}=8\frac{1}{3}\%$

54. (b)

List I	List II
Somali Current	Warm
N-E Monsoon Current	Cold and Unstable
North Equatorial Current	Warm and stable
S-W Monsoon Current	Warm and Unstable

55. (b) $2\times\{4-\{2-(2-3)-(2+3)\}-1]-5\times[-3-(3-2)]$

$\Rightarrow 2\times[4-\{3-5\}-1]-5\times[-3-1]$

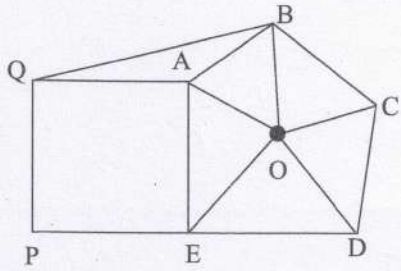
$\Rightarrow 2\times[5]-5\times[-4]$

$\Rightarrow 10-5\times(-4)$

$\Rightarrow 10+20\Rightarrow 30$

56. (a) $\because$ ABCDE is a regular pentagon

$\therefore$ Angle at centre$=\frac{360}{5}=72^\circ$



$\angle AOB = 72^\circ$

$\angle OAB = \frac{180-72}{2}=\frac{108}{2}=54^\circ$

$\angle BAE = \angle OAB + \angle OAE$ $\{\angle OAE=\angle OAB\}$

$\Rightarrow 54^\circ + 54^\circ = 108^\circ$

$\because$ AEPQ is a square

$\therefore \angle QAE = 90^\circ$

$\angle QAB + \angle QAE + \angle EAB = 360^\circ$

$\angle QAB + 90^\circ + 108^\circ = 360^\circ$

$\angle QAB = 360 - 198$

$\boxed{\angle QAB = 162^\circ}$

In ΔQAB

$\angle QAB + \angle BQA + \angle QBA = 180^\circ$

$162^\circ + x + x = 180^\circ$ $[\angle BQA = \angle QBA]$

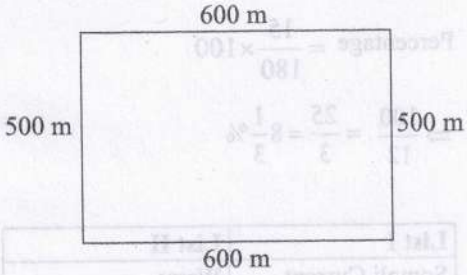
$2x = 18^\circ$

$\boxed{x = 9^\circ}$

57. (d) $\because$ A and B are mutually exclusive events.

$\therefore P(A \cap B) = 0$

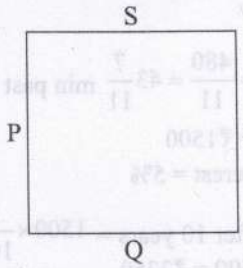
58. (d)



She is at the starting point
Distance = 0

59. (b) Kalology is the study of beauty and the ways in which beauty influences society. This study is focused primarily on human attractiveness, rather than the broader field of aesthetics, and was popularized during the 19th century when philosophers attempted to codify beauty and create a uniform system for evaluating it

60. (d)



'S' is facing south.