Bloom Reasoning Olympiad
Sample Paper 1

Maximum Time : 60 Minutes   **Maximum Marks : 60**

INSTRUCTIONS

1. There are 50 Multiple Choice Questions in this paper divided into two sections :

   Section A   40 MCQs; 1 Mark each
   Section B   10 MCQs; 2 Marks each

2. Each question has Four Options out of which **ONLY ONE** is correct.

3. All questions are compulsory.

4. There is no negative marking.

5. No electronic device capable of storing and displaying visual information such as calculator and mobile is allowed during the course of the exam.

|	
School Name	
Student's Name	

Section A (1 Mark Questions)

1. Number of letters skipped in between the adjacent letters in the series are consecutive odd number. Which of the following series observes this rule?

(a) FINUD   (b) FHLRZ   (c) FINUC   (d) FHLSZ

2. In a certain code 'CALANDER' is written as 'CLANAEDR'. How is 'CIRCULAR' written in that code?

(a) ICCRLURA   (b) CRIUCALR   (c) CRIUCLRA   (d) CRIARLCU

3. If 'water' is known as 'food', 'food' as 'tree', 'tree' as 'sky', 'sky' as 'well' and 'well' as 'pond', then which of the following would yield (produce) fruits?

(a) Sky   (b) Food   (c) Well   (d) Tree

4. In the following question, select the related word/letters/number from the given alternatives.

$0.02 : 0.002 :: \dfrac{1}{3} : ?$

(a) 0.333   (b) $\dfrac{1}{30}$ (c) 0.003   (d) 3

5. In the following question, select the related word/letters/number from the given alternatives.

Car : Steering wheel :: Motorcycle : ?

(a) Tyre   (b) Headlight   (c) Engine   (d) Handle bar

6. Find the missing letter and complete the given equation.

If $F = 7$, $W = 6$, $O = 12$, and $R = 4$, then $F - W + R + F = ?$

(a) F   (b) W   (c) O   (d) R

7. Find out the alternative figure which contains figure (X) as its part.

(X)

(a)   (b)   (c)   (d)
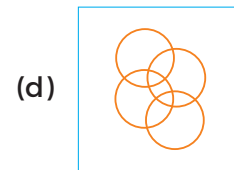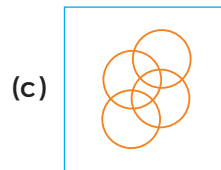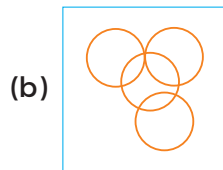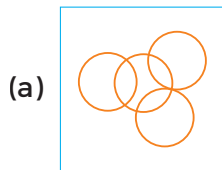
8. If $W = 4$, $T = 7$ and $TEN = 42$, then $SWEET = ?$

(a) 63   (b) 65   (c) 67   (d) 69
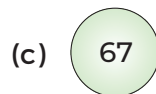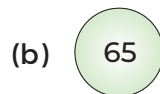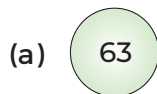
9. Raj, Gauri, Liya, Pihu and Ajay all go into a shop.
- Only Gauri buys a Pizza.
- Pihu, Liya and Raj buy a Pepsi each.
- Everyone except Pihu buys a Milk shake each.
- Pihu is the only one who buys pastry.
- Nobody except Ajay and Liya chooses a sandwich.
- Each of the girls buy a packet of Lays.
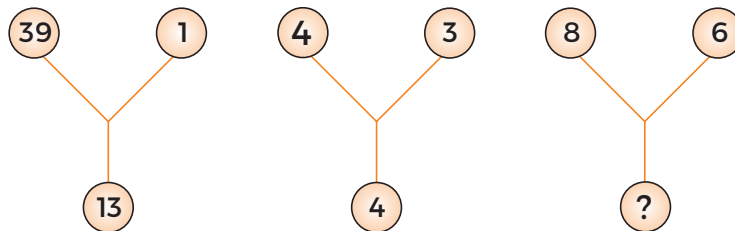
Which child buys the most number of items?

(a) Pihu   (b) Gauri   (c) Liya   (d) Ajay

10. In the following questions, select the related word/letters/number from the given alternatives.

EFG : VUT : : JIH : ?

(a) SUW   (b) QRS   (c) QSU   (d) HFD
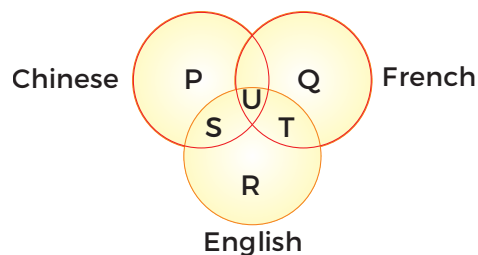
11. Find the missing number.

(a) 16   (b) 32   (c) 61   (d) 14

12. Find the missing number.

1	5	25	125
3	12	?	192
7	14	28	56

(a) 24   (b) 26   (c) 48   (d) 45

13. Study the diagram and identify the people who speak all the three languages.

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

14. If '+' denotes '−', '−' denotes '×', '÷' denotes '+' and '×' denotes '÷',then find the number which replaces the question mark?

$15 - 3 + 10 \times 5 \div 5 = ?$

(a) 5   (b) 22   (c) 48   (d) 52

15. If P means ÷, T means +, M means − and D means ×, then what will be the value of the expression 65 P 5 D 3 T 27 M 16 T 2?
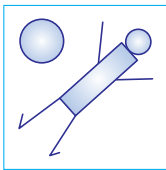
(a) 52   (b) 54   (c) 60   (d) 62
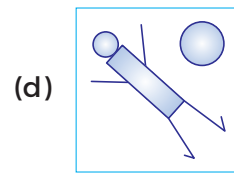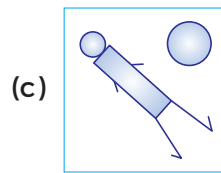
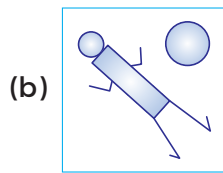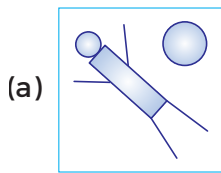**16.** Find the correct mirror image of the following.

QUALITY

(a) YTIⅬAUQ   (b) YUALITQ   (c) YTIⅬAUϘ   (d) ϘUⱯⅬIⱢⱯ

17. Find the correct mirror image of the following.

(X)

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

18. Count the number of cubes?
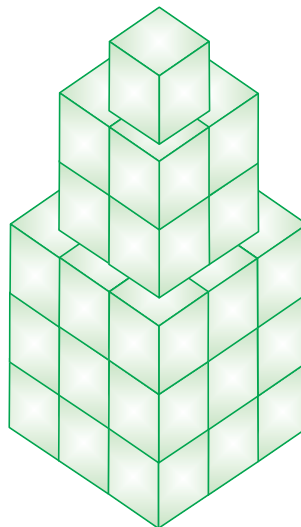
(a) 35   (b) 36   (c) 26   (d) 34

19. Choose the letter that can be moved from the word on the left to the word on the right making two new words. You cannot rearrange any letters, but letter that you move can fit anywhere in the second word.

WET   EAR

(a) W   (b) E   (c) A   (d) T

20. Oval is related to Circle, in the same way as Rectangle is related to

(a) Square   (b) Diagonal   (c) Triangle   (d) None of these

21. If in a certain code language 'Sachin is great' is written as 'ga ma ra', 'is he poor' is written as 'ta sa ga', then find the code for 'is'?

(a) ta   (b) ma   (c) ga   (d) ra

22. Moni is daughter of Sheela. Sheela is wife of my wife's brother. How Moni is related to my wife?

(a) Cousin   (b) Niece   (c) Sister   (d) Sister-in-law

23. If 'South-West' is called 'West', 'North-West' is called 'North', 'South-East' is called 'South', and so on, what will 'East' be called?

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

24. In a certain code language, 'GIVE' is coded as '@ ✳ $ #' and 'BAT' is coded as '+ > <', then how is 'BITE' written in that code?

(a) @ ✳ < $ (b) + ✳ < #   (c) @ ✳ > $ (d) + ✳ > #

25. If Δ means 'equal to', £ means 'not equal to', $+$ means 'greater than', $-$ means 'less than', $\times$ means 'not greater than' and $\div$ means 'not less than', then choose the correct statement for the statement $a - b - c$.

(a) $a - b + c$ (b) $c \times b + a$ (c) $a £ b £ c$ (d) $c + b + a$

26. Two positions of a dice with 1 to 6 dots on its sides are shown below. If the dice is resting on the side with two dots, what will be the number of dots on the side at the top?

(I)   (II)
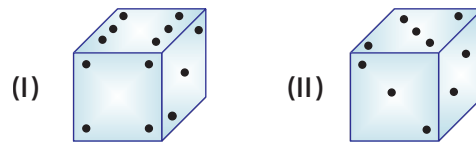
(a) 2   (b) 3   (c) 6   (d) 1

27. In the given question insert the letters that complete the first word and begins the second word.

GRAVI ☐ PING

(a) YT   (b) TY

(c) YK   (d) VT

28. Some capital letters are given below in the first line and numbers are assigned to each of them in the second line. The numbers are the codes for the letters and *vice-versa*.
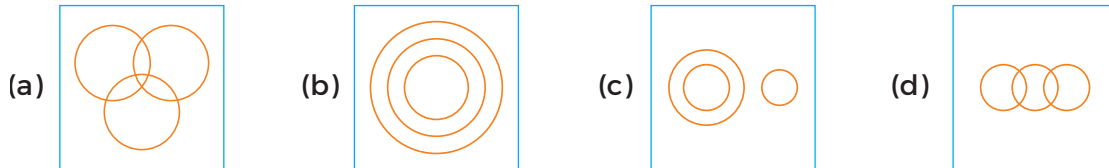
M O E A S J T Z

3 5 7 6 2 9 4 0

Choose the correct number code for the given set of letters.

EAST

(a) 7620   (b) 7623   (c) 7624   (d) 7625

29. Which of the following Venn diagrams correctly describes the relationship amongst Clothes, Flowers, Bright things?

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

30. Find the water image of the given figure.

4 : 05   (a) ᵥ: 02   (b) ᴴ : 05   (c) ᴴ : 02   (d) ᴴ : 20

(X)

31. Which number completes the second pair in the same way as the first pair?

1215 is to 2151, as 1113 is to

(a) 3111   (b) 1131   (c) 1313   (d) 3131

32. Choose the group of words that shows the same relationship which is most similar to that of the given group of words.
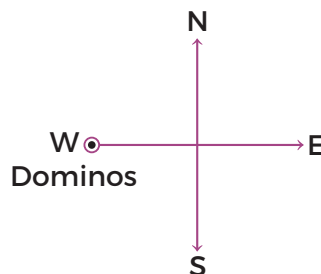
Straws : Nest : : ? : ?

(a) Water : Stream   (b) Wood : Paper   (c) Animals : Zoo   (d) Threads : Cloth

33. Q is the son of P. X is the daughter of Q. R is the aunt (bua) of X and L is the son of R, then what is L's relation with P?

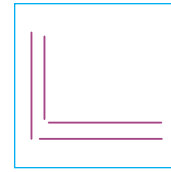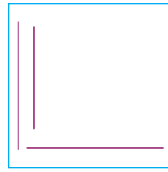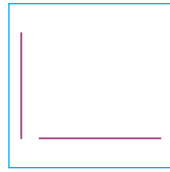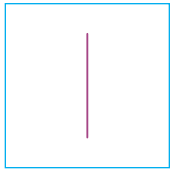(a) Grandson   (b) Granddaughter   (c) Daughter   (d) Nephew

34. Sandeep was facing the 'DOMINOS' at the beginning. He turned anti-clockwise to face South-East. What angle did he turn through?

N

W ⊙   E

Dominos

S

(a) 45°   (b) 90°   (c) 135°   (d) 80°

35. Select the figure from the answer figures which will continue the series as established by the five problem figures.
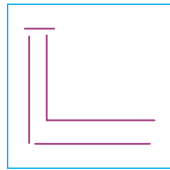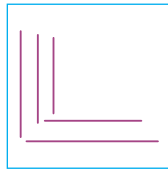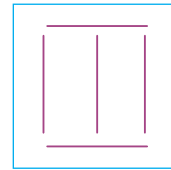
Problem Figures
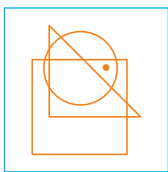

Answer Figures

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

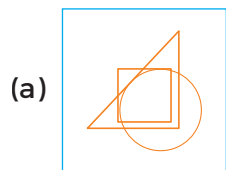**36.** In the given question one or more dots are placed in the figure marked as (A). This figure followed four alternatives marked as (a), (b), (c) and (d). One out of the four options contains region(s) common to circle, square and triangle similar to that marked by dot in figure (X).
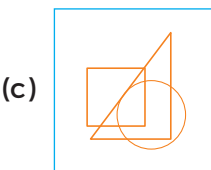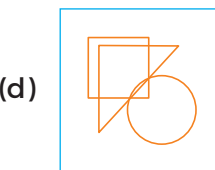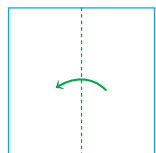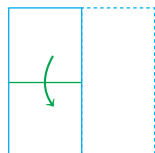

(X)

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

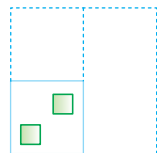**37.** Select the figure out of the answer choice showing the unfolded appearance after the cut.
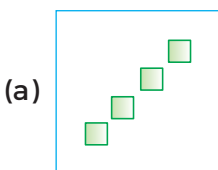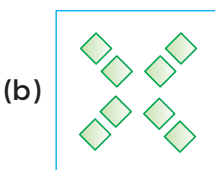
Question Figures
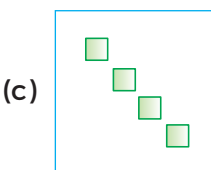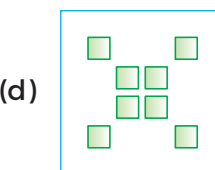

(X)   (Y)   (Z)

Answer Figures

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

38. Find out which one of the figures does not belong to the group.
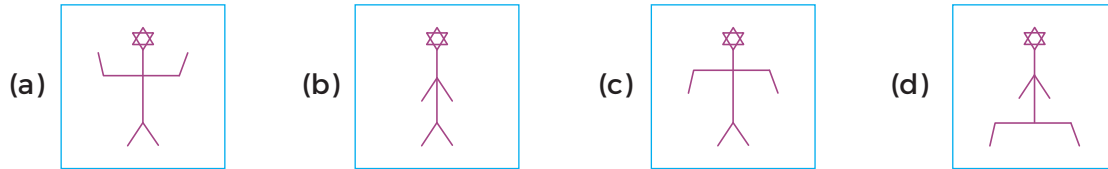
39. In the following question a word is given followed by four other words one which cannot be formed by using the letter of the given word. Find that particular word.

'MERCHANDISE'

(a) CHANGE   (b) MESH   (c) DICE   (d) CHARM

40. If 3 children takes 10 days to finished a cake. Find in how many days. 5 children can finished the cake.

(a) 10 days   (b) 12 days   (c) 7 days   (d) 6 days

Section B (2 Marks Questions)

Directions (Q. Nos. 41 and 42) Study the following information carefully and answer the questions given below.

- There is a family of six persons A, B, C, D, E and F.
- There are two married couples.
- D is grandmother of A and mother of B.
- C is wife of B and mother of F.
- F is the granddaughter of E.

41. How is C related to A?

(a) Mother   (b) Daughter
(c) Cousin   (d) Grandmother

42. How many female members are there in the family ?

(a) 2   (b) 3
(c) 3 or 4   (d) None of these

Directions (Q. Nos. 43 and 44) Read the following information carefully to answer the questions below.

A, B, C, D, E, F and G are the names of two vegetables, three fruits and two flowers. B, G and D are not fruits. E and F are not vegetables. C is a fruit but A is a flower. B, F and G are not flowers.

43. Which are the two vegetables?

(a) A and D   (b) B and G
(c) A and G   (d) G and D

44. Which are the three fruits?

(a) A, C and E

(b) C, E and F

(c) A, C and F

(d) E, F and G

Directions (Q. Nos. 45 and 46) In the following diagrams, if CW indicates clockwise and ACW indicates anti-clockwise and arrow indicates the direction of movement. Then, fill the appropriate directions in the circle.

45. SE ←
anti-clockwise
90°

?

(a) NW

(b) NE

(c) SW

(d) N

46. NE

?

45°

CW
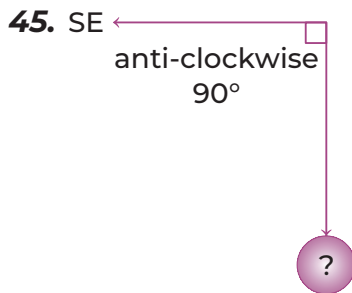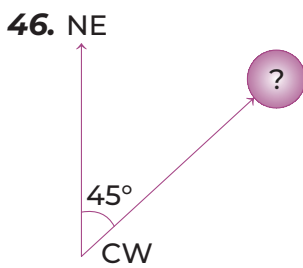
(a) South

(b) North

(c) East

(d) West

Directions (Q.Nos. 47 and 48) In each of the following questions given below, a word is given followed by four combinations of symbols and digits labeled. You have to find out which of the following four combinations correctly represents the word based on the symbol codes and the conditions given below.

Letter	Y	F	I	P	S	E	H	R	C	U
Code	7	*	5	4	1	#	6	$	%	9

47. What would be the code of the word 'UESI'?

(a) 9#15

(b) 9#51

(c) 51#9

(d) 951#

48. What would be the code of the word 'FECY'?

(a) 5*#%

(b) 7#51

(c) *#%7

(d) %*7#

Directions (Q.Nos. 49 and 50) Study the information carefully and answer the questions given below.

Point A is 12 m West of point B. Point F is 8m East of point D. Point G is 10m North of Point E. Point C is 8m South of point B. Point D is 3m North of point C. Point E is 6m West of point C.

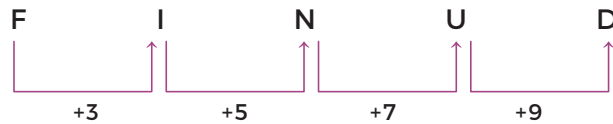**49.** Total distance covered by the every point is?

(a) 34 m   (b) 30 m

(c) 42 m   (d) 54 m

50. Point D is in which direction with respect to G?

(a) North-East   (b) South-West

(c) South-East   (d) North

Solutions

1. (a) As per the question given,

F   I   N   U   D

+3   +5   +7   +9

Hence, option (a) is having the series according to the given rule.

2. (b) Pattern is follows as,

As,   Similarly,

C → C   C → C
A ⤫ L   I ⤫ R
L   A   R   I
A ⤫ N   C ⤫ U
N   A   U   C
D ⤫ E   L ⤫ A
E   D   A   L
R → R   R → R

Hence, option (b) is correct.

3. (a) As, we all know that, tree yields fruits and according to code tree is called sky. So, sky yields fruits.
   Hence, option (a) is correct.

4. (b) As, $0.02 = \dfrac{2}{100} = \dfrac{1}{50}$ and $0.002 = \dfrac{2}{1000} = \dfrac{1}{500}$

   i.e. the denominator is multiplied by 10

   Similarly, $\dfrac{1}{3} : ? = \dfrac{1}{3} : \dfrac{1}{3} \times \dfrac{1}{10} = \dfrac{1}{3} : \dfrac{1}{30}$

   Hence, option (b) is correct.

5. (d) As car is controlled via Steering wheel. Similarly, motorcycle is controlled *via* handle bar.
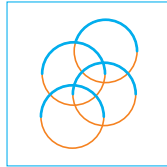   Hence, option (d) is correct.

6. (c) On putting the value of letters we get,

   $F - W + R + F = ?$

   $= 7 - 6 + 4 + 7$

   $= 7 - 6 + 11$

   $= 1 + 11 = 12 = \boxed{O}$

   Missing letter is 'O'.
   Hence, option (c) is correct.

7. (c) Option (c) figure contains figure (X) as its part.

Hence, option (c) is correct.

8. (a) Here, W = 4 and T = 7

Now,

$$\begin{array}{ccc} T & E & N \\ \downarrow & \downarrow & \downarrow \end{array}$$

$$7 + 22 + 13 = 42$$

Then,

$$\begin{array}{ccccc} S & W & E & E & T \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \end{array}$$
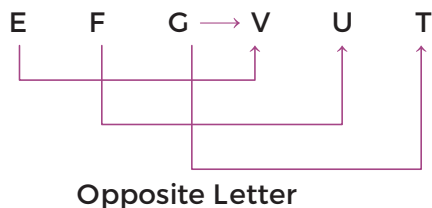
$$8 + 4 + 22 + 22 + 7 = \boxed{63}$$

So, the code for SWEET is 63. Hence, option (a) is correct.

9. (c) On the basis of given information, the arrangement of five people is shown below

	Sandwich	Lays	Pizza	Pepsi	Milk Shake	Pastry
Ajay	✔	✗	✗	✗	✔	✗
Pihu	✗	✔	✗	✔	✗	✔
Liya	✔	✔	✗	✔	✔	✗
Gauri	✗	✔	✔	✗	✔	✗
Raj	✗	✗	✗	✔	✔	✗

Liya buy most number of items. Hence, option (c) is correct.

10. (b) As,   E   F   G ⟶ V   U   T

Opposite Letter

Similarly,   J   I   H ⟶ Q   R   S
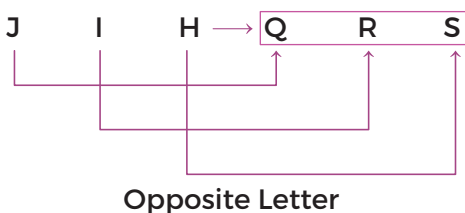
Opposite Letter

Here, opposite letter of each letter in English alphabet is given.

Hence, option (b) is correct.

11. (a) Here, (Top left number × Top right number) ÷ 3 = Bottom number

In figure I, $\dfrac{39 \times 1}{3} = 13$

In figure II, $\dfrac{4 \times 3}{3} = 4$

Similarly, in figure III, $= \dfrac{8 \times 6}{3} = 16$

Hence, option (a) is correct.

12. (c) In, row I,

$$1 \times 5 = 5,\ 5 \times 5 = 25,\ 25 \times 5 = 125$$

In row III,

$$7 \times 2 = 14,\ 14 \times 2 = 28,\ 28 \times 2 = 56$$

Similarly, in row II,

$$3 \times 4 = 12,\ 12 \times 4 = 48,\ 48 \times 4 = 192$$

So, 48 replaces the (?).

Hence, option (c) is correct.

13. (b) The people who speak all the three languages is represented by 'U', which is common to all the three circles.

Hence, option (b) is correct.

14. (c) Using the correct symbols, we have given expression,

$$15 - 3 + 10 \times 5 \div 5 = 15 \times 3 - 10 \div 5 + 5$$
$$= 45 - 2 + 5 = 50 - 2 = 48$$

So, 48 will replace the (?).

Hence, option (c) is correct.

15. (a) Using the correct symbols, we have given expression, 65 P 5 D 3 T 27 M 16 T 2 $= 65 \div 5 \times 3 + 27 - 16 + 2 = 13 \times 3 + 27 - 16 + 2$
$$= 39 + 29 - 16 = 68 - 16 = 52$$
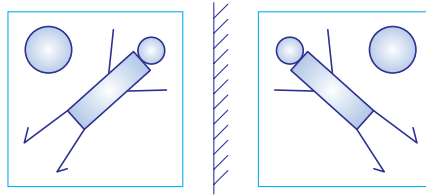
So, 52 will replace the (?).

Hence, option (a) is correct.

16. (c) The correct mirror image is

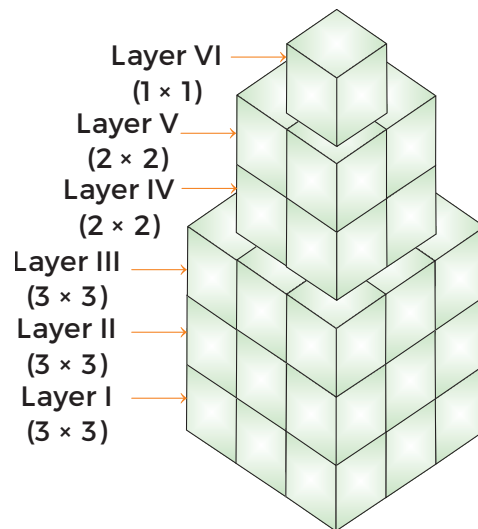QUALITY ┊ YTIⱢAUꟼ

Hence, option (c) is correct.

17. (d) The correct mirror image of figure (X) is

Hence, option (d) is correct.

18. (b)

Here, there are 9 cubes each in layers, I, II and III, 4 cubes each in layer IV and V and 1 cube in layer VI.

∴ Total number of cubes $= 9 + 9 + 9 + 4 + 4 + 1 = 36$

Hence, option (b) is correct.

19. (d) With the help of option (d), we get two words i.e. 'TWET' and 'TEAR'.

Hence, option (d) is correct.

20. (a) As, Oval is the figure which is similar to the Circle, in the same way Rectangle is the figure which is similar to Square as both of them have four corners.
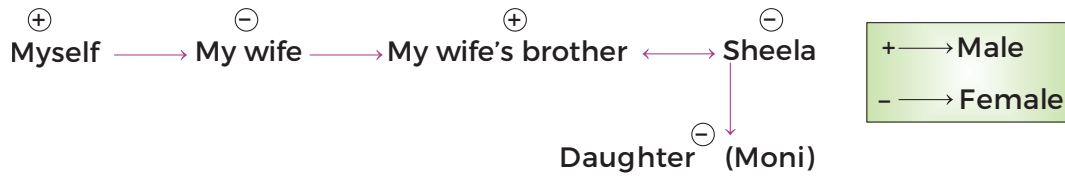
Hence, option (a) is correct.

21. (c) After decoding the given code we get,

Sachin (is) great ⟶ (ga) ma ra

(is) he poor ⟶ ta sa (ga)

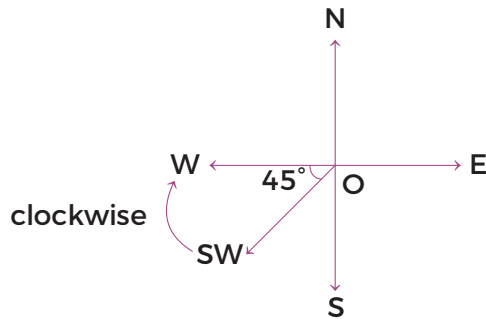From Eqs. (i) and (ii), $\boxed{\text{is} \Rightarrow \text{ga}}$

Hence, option (c) is correct.

22. (b) As,

Myself ⊕ ⟶ My wife ⊖ ⟶ My wife's brother ⊕ ⟷ Sheela ⊖

Daughter ⊖ (Moni)
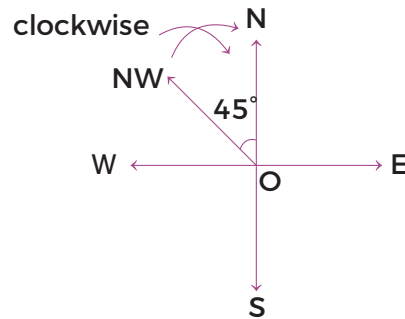
+ ⟶ Male
− ⟶ Female

So, Moni is niece of my wife.
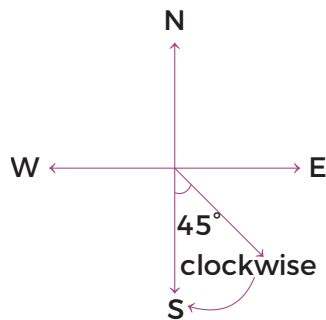
Hence, option (b) is correct.

23. (b) The direction diagram can be drawn as shown below
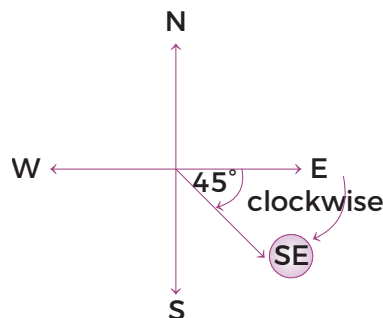

(a) SW is called W   (b) NW is called N

Here, each direction moves 45° in clockwise direction. Thus, East when moved clockwise through 45° will become South-East as shown below.

Hence, option (b) is correct.

24. (b) As given, the letters are coded as

Letters	G	I	V	E	B	A	T
Symbols	@	★	$	#	+	>	<

Here, B is coded as +, I is coded as ★,
T is coded as < and E is coded as #.
So, the code for BITE is + ★ < #.
Hence, option (b) is correct.

25. (d) Using correct symbols, we have
given statement,
$a - b - c \Rightarrow a < b < c$
Option (a), $a - b + c \Rightarrow a < b > c \ne a < b < c \ne a < b < c$ (False)
Option (b), $c \times b + a$
$\Rightarrow c \not> b > a \Rightarrow c \le b > a \ne a < b < c$ (False)
Option (c), a £ b £ c
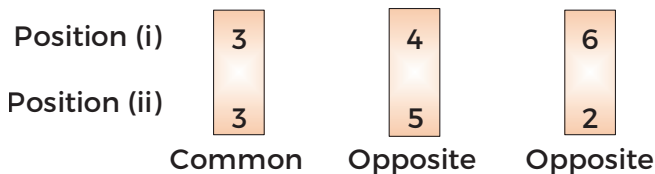$\Rightarrow a \ne b \ne c \ne a < b < c$ (False)
Option (d) $c + b + a$
$\Rightarrow c > b > a \Rightarrow a < b < c$ (True)
Hence, option (d) is correct.

26. (c) The face having 3 dots is common in both positions. So, moving clockwise starting from 3, we get

| Position (i)	3	4	6
Position (ii)	3	5	2
	Common	Opposite	Opposite

So, it is clear that the face having 6 dots will be at the top, when the face having 2 dots is at bottom. Hence, option (c) is correct.

27. (b) With the help of option (b), 'TY' letters we get 'GRAVITY' and 'TYPING'.
Hence, option (b) is correct.

28. (c)

M	O	E	A	S	J	T	Z	
3	5	7	6	2	9	4	0	EAST = 7624

So, the correct number code for the given set of letters EAST is 7624.
Hence, option (c) is correct.

29. (d) Some clothes are bright and some flowers are also bright, but not all bright things are clothes or flowers. Also, clothes and flowers are not related. This can be represented as
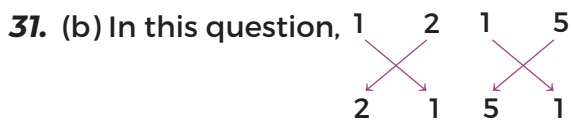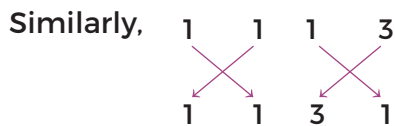
Clothes ———◯◯◯——— Flowers

Bright Things
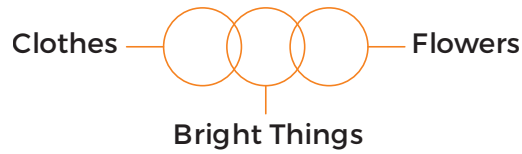
Hence, option (d) is correct.

30. (c) The correct water image of the figure (X) is

$$\boxed{\text{д:02}}$$

Hence, option (c) is correct.

31. (b) In this question,

1　　2　1　　5
　✕　　　✕
2　　1　5　　1

We change the positions of digits in a pair of two digits each.

Similarly,

1　　1　1　　3
　✕　　　✕
1　　1　3　　1

1113 becomes 1131. Hence, option (b) is correct.

32. (d) As, Nest is made up of Straws, in the same way Cloth is made up of Threads. Hence, option (d) is correct.
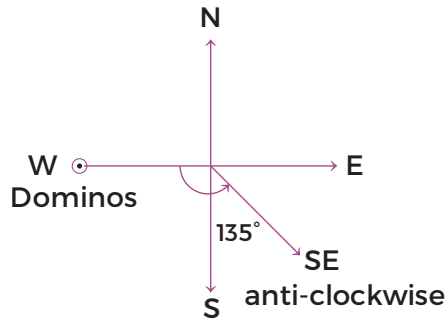
33. (a) Let us draw the family relationship diagram.

| + ⟶ Male |
| − ⟶ Female |
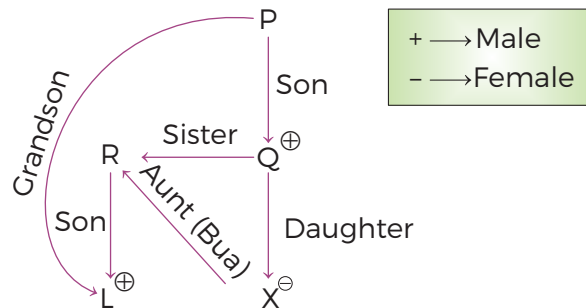
So, L is grandson of P.
Hence, option (a) is correct.

34. (c) a It is given that, Sandeep was facing the 'DOMINOS' at the beginning and he turned anti-clockwise to face South-East, then

From the above figure, it is clearly shown that the DOMINOS is in WEST and moving anti-clockwise from West to South-East, 135° angle is formed.

Hence, option (c) is correct.

35. (c) Vertical and horizontal line segments are added to the figure alternately. Hence, option (c) is correct.

36. (d)

Common to the circle and square

Hence, option (d) is correct.

37. (d) Option (d) showing the unfolded appearance after the cut.

Hence, option (d) is correct.

38. (b) Except in figure (b), all the other figures comprise of a 6 line segments.

Hence, option (b) is correct.

39. (a) From the given word 'CHANGE' is the only word which cannot be formed due to the absence of letter 'G'.

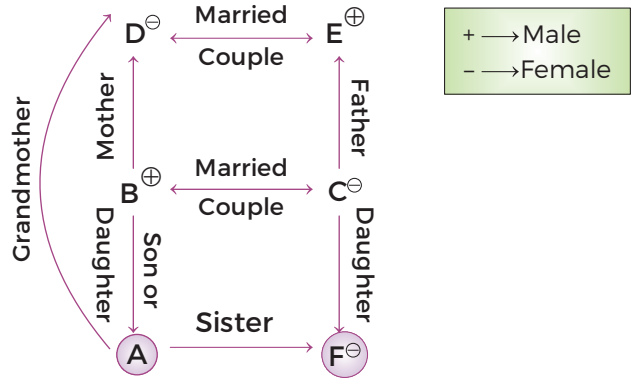Hence, option (a) is correct.

40. (d) According to the question,

∵ 3 children can finished a cake in $=10$ days

∴1 children can finished a cake in $=(10 \times 3)$ days

∴5 children will finished the cake in $= \dfrac{10 \times 3}{5}$ days $= 6$ days

Hence, option (d) is correct.

Sol. (Q Nos. 41 and 42) The family relationship diagram is

41. (a) C is mother of A.

Hence, option (a) is correct.

42. (c) There is 3 or 4 female members as we have no idea of gender of 'A'. We cannot say anything about the gender of 'A'. So, A can be a male or female. Hence, option (c) is correct.
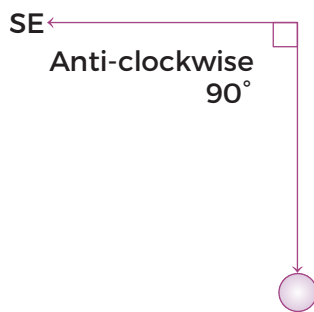
Sol. (Q.Nos. 43 and 44) On the basis of given information, we get

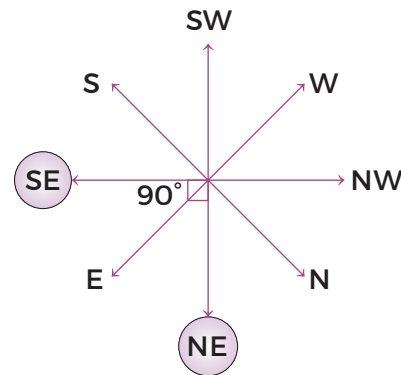| Vegetables	Fruits	Flowers
B	C	A
G	F	D
	E	

43. (b) B and G are two vegetables.

44. (b) C, F and E are the three fruits.

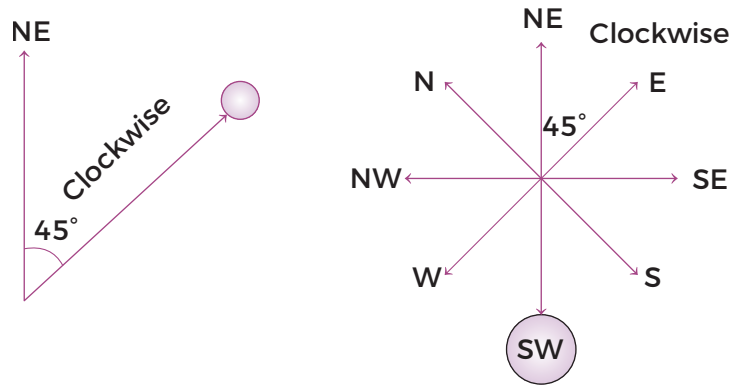**45.** (b) Given,   Then,

So, 'NE' will come in the circle. Hence, option (b) is correct.
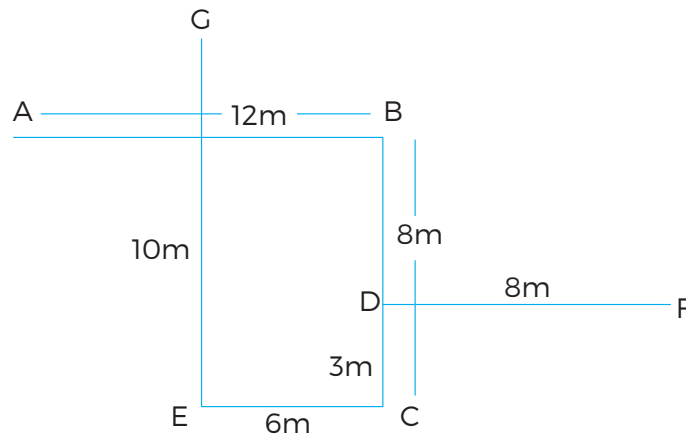
46. (c) According to the question,

On moving clockwise 45° from North-East direction, we face East direction. Hence, option (c) is correct.

47. (a) The code of the word 'UESI' will be 9#15. Hence, option (a) is correct.

48. (c) The code of the word 'FECY' will be *#%7. Hence, option (c) is correct.

Sol. (Q.Nos. 49 and 50) According to the question,

49. (a) Total distance covered by the every point is $= 12\,\text{m} + 8\,\text{m} + 6\,\text{m} + 8\,\text{m} = 34\,\text{m}$
Hence, option (a) is correct.

50. (c) Point D is in South-East direction with respect to G. Hence, option (c) is correct.