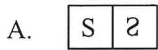


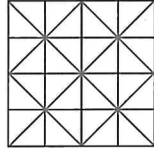


## LOGICAL REASONING

1. Select the odd one out.



2. How many minimum number of straight lines are required to draw the given figure?

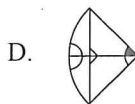
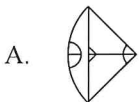
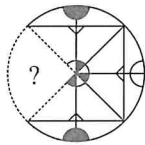


- A. 15
- B. 18
- C. 12
- D. 16

3. Among a group of six boys, Sahil is taller than Anurag but shorter than Vipul. Kunal is the tallest. Atul is shorter than Vipul but taller than Raj. Raj is taller than Sahil. Who is fourth, if the boys are arranged in ascending order of their heights?

- A. Raj
- B. Vipul
- C. Sahil
- D. Atul

4. Which of the following figures will complete the pattern in the given figure?



5. Anamika drives 30 km towards South. Then she turns right and drives 60 km. She again turns right and drives 30 km. Finally she drives 10 km after turning to the left. How far is she now from her starting point?

- A. 20 km
- B. 70 km
- C. 50 km
- D. 60 km

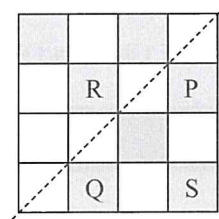
6. What will come next in the given series?  
KM5, LK8, MI11, NG14, \_\_\_

- A. PE15
- B. OD17
- C. OE15
- D. OE17

7. In a certain code language, if 'SECTOR' is written as 'RDBSNQ', then how will 'MYSORE' be written in the same language?

- A. NZTPSF
- B. NZTNQD
- C. LXRNQD
- D. LXRPSF

8. Which of the following squares must be unshaded to make the given figure symmetrical along the dotted line?



- A. P
- B. Q
- C. R
- D. S

9. Select the correct mirror image of the given combination of letters and numbers, if the mirror is placed vertically to the left.

SNOW4682

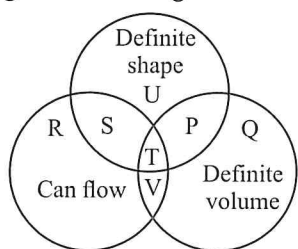
- A. 2ИOМ4q85
- B. 58q4WON2
- C. 2894WONS
- D. M4q85ON2

10. Which of the following Venn diagrams best represents the relationship amongst, "Married persons, Men and Cricketers"?

- A.
- B.
- C.
- D.



11. Study the given Venn diagram.



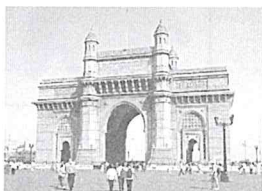
Which letters in the Venn diagram represent wood, juice and oxygen respectively?

|    | Wood | Juice | Oxygen |
|----|------|-------|--------|
| A. | T    | V     | S      |
| B. | P    | V     | R      |
| C. | Q    | S     | U      |
| D. | P    | T     | R      |

12. A cooking method which does not involve use of oil is \_\_\_\_\_.

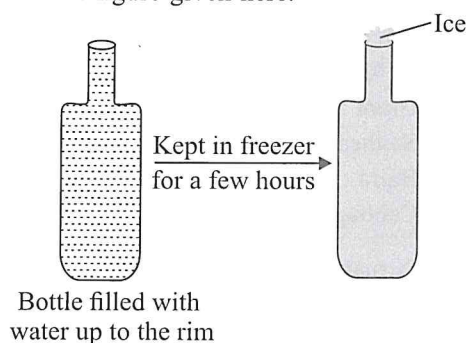
- A. Frying nuggets
- B. Pickling of mango
- C. Boiling potatoes
- D. Both B and C

13. Identify the given figure and select the correct option regarding it.



- A. It was built by Maharaja Jai Singh II.
- B. Its design is a combination of both Hindu and Muslim architectural style.
- C. It is made of red sandstone and concrete.
- D. It was used to forecast weather changes.

14. Amit filled a bottle up to the rim with water and placed it in the freezer. What he saw after a few hours is shown in the figure given here.

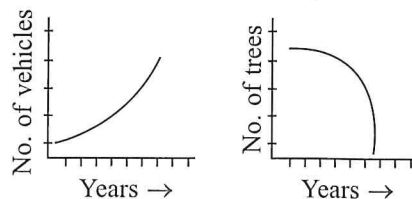


What does it show?

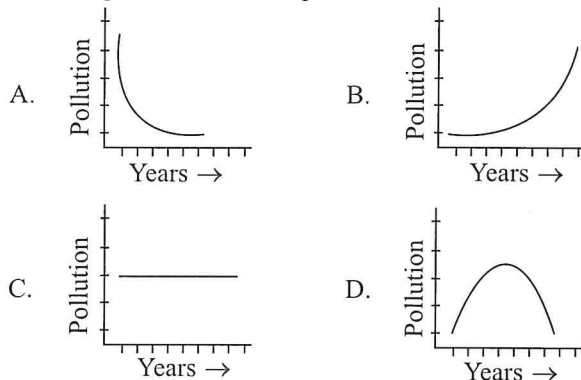
- A. Freezing decreases mass of water.

- B. Freezing compresses water.
- C. Freezing increases volume of water.
- D. Freezing increases mass of water.

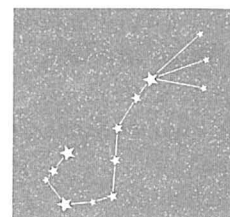
15. The graphs given below show change in the number of vehicles and trees for a time period in a city.



Which of the following graphs shows change in the level of pollution for this period of time?



16. Identify the constellation shown in the picture.



- A. Ursa minor
- B. Ursa major
- C. Scorpius
- D. Cassiopeia

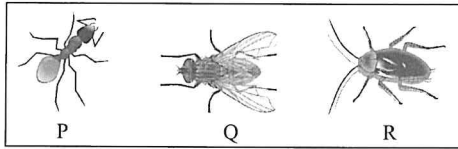
17. Refer to the given figure and select the correct statement regarding it.



- A. In this plant, roots are fixed to the bottom of the pond.
- B. The leaves of this plant lack stomata.
- C. The body of this plant is filled with air.
- D. Both B and C



27. Identify the given pictures and select the correct match.



- A. P - Body is covered by hard covering called cuticle.  
Q - Life cycle consists of four stages.  
R - Body is divided into head, thorax and abdomen.
- B. P - It breathes through its skin.  
Q - It has scales on its body.  
R - It runs very swiftly.
- C. P - It breathes through spiracles.  
Q - It lays its eggs in water.  
R - It has a backbone.
- D. P - Its body is covered with spines.  
Q - It lays eggs in large clusters called spawn.  
R - Its body is covered with shell-like covering.
28. Select the option that correctly gives the examples of physical and chemical changes.

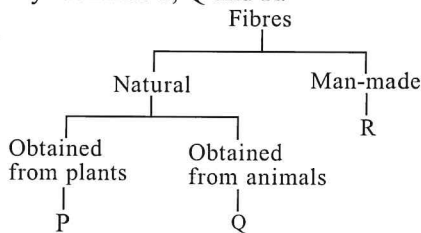
**Physical change**

- A. Tearing of paper  
B. Burning of paper  
C. Rusting of iron  
D. Formation of ice from water

**Chemical change**

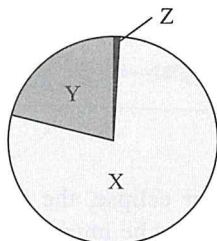
- Breaking of glass  
Cooking of food  
Melting of butter  
Burning of wood

29. Refer to the given flow chart and select the option that correctly identifies P, Q and R.



- A. P : Linen, Jute; Q : Wool, Nylon; R : Polyester, Silk  
B. P : Cotton, Wool; Q : Silk, Linen; R : Polyester, Nylon  
C. P : Cotton, Nylon; Q : Wool, Silk; R : Polyester, Linen  
D. P : Cotton, Jute; Q : Wool, Silk; R : Polyester, Nylon

30. Refer to the given pie chart representing composition of air. Identify gases X, Y and Z and select the incorrect statement.



- A. Z is made up of gases such as argon, neon, hydrogen, etc.

- B. X in the air is needed for burning.  
C. Special bacteria present in soil convert Y in air into a form that can be used by plants.  
D. Both B and C.

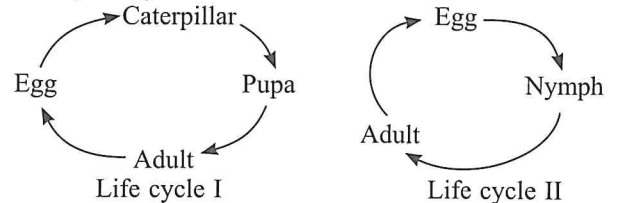
31. Sonam made two groups of objects as shown in the given table.

| Group P             | Group Q     |
|---------------------|-------------|
| Hollow plastic ball | Glass plate |
| Paper boat          | Metal key   |

Select the correct option regarding the characteristics of these groups.

- A. Group P objects are heavier than group Q objects.  
B. Group P objects are harder than group Q objects.  
C. Group P objects float on water while group Q objects sink.  
D. Both group P and group Q objects are magnetic materials.

32. Which of the following statements is true about the life cycles given here?



- A. In life cycle I, newly hatched young one does not resemble the adult whereas in life cycle II the young one looks similar to the adult.  
B. In both the life cycles, all stages occur in water.  
C. Grasshopper shows life cycle I whereas cockroach shows life cycle II.  
D. In both the life cycles, the adults moult many times.

33. Ritesh had arranged three bar magnets as shown in the figure.

Which of the following is another possible arrangement of these magnets?

- A. 

|   |   |
|---|---|
| R | T |
| S | U |
| Q | P |

North 

|   |   |
|---|---|
| P | Q |
| R | S |
| T | U |
- B. 

|   |   |   |   |   |
|---|---|---|---|---|
| Q |   |   |   |   |
| P | T | U | R | S |
- C. 

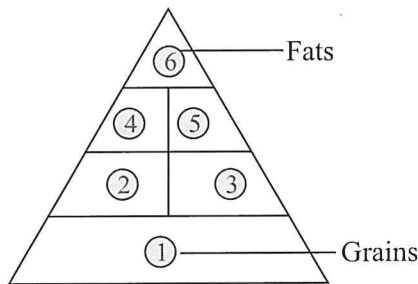
|   |   |   |   |  |
|---|---|---|---|--|
| P | T |   |   |  |
| Q | U | S | R |  |
- D. 

|   |   |   |   |   |
|---|---|---|---|---|
| R | S | T |   |   |
|   |   | U | P | Q |



34. Read the given statements and select the option that correctly identifies them as true (T) and false (F) ones.
- (i) Drinking contaminated water could cause typhoid.
  - (ii) Long or repeated exposure to sounds at or above 85 dB is hazardous for the ears.
  - (iii) Decreased carbon dioxide content of atmosphere can cause depletion of ozone layer.
  - (iv) Terrace farming increases soil erosion.
- |    | (i) | (ii) | (iii) | (iv) |
|----|-----|------|-------|------|
| A. | T   | T    | F     | T    |
| B. | T   | F    | F     | T    |
| C. | F   | T    | T     | F    |
| D. | T   | T    | F     | F    |

35. Identify food items 2, 3, 4 and 5 in the given food pyramid and select the correct option.



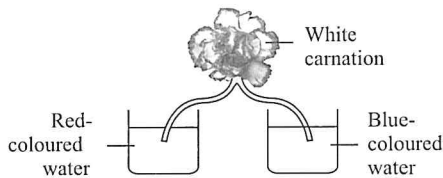
- |    | 2          | 3      | 4          | 5          |
|----|------------|--------|------------|------------|
| A. | Fruits     | Dairy  | Vegetables | Eggs       |
| B. | Vegetables | Fruits | Fish       | Dairy      |
| C. | Sweets     | Dairy  | Meat       | Vegetables |
| D. | Bread      | Fruits | Vegetables | Fish       |

36. In a lever the fixed point around which the rod moves is called \_\_\_\_\_.

- |           |            |
|-----------|------------|
| A. Effort | B. Load    |
| C. Pulley | D. Fulcrum |

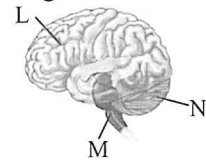
37. Shruti took a white carnation flower and split its stalk halfway along the length and arranged a set-up as shown in the given figure. After some time, she observed that half of the petals turned blue and half turned red. A section through stem also showed blue and red coloured areas.

What can she infer from this experiment?



- A. Stem conducts water to all plant parts.
- B. Stem has localised structures for conduction of water.
- C. Stem conducts solutes along with water.
- D. All of these

38. Refer to the given figure and identify L, M and N.



Select the option which correctly matches these parts with the given functions (i) – (vi).

|   |                |
|---|----------------|
| (i) Regulates heartbeat                 | (ii) Thinking  |
| (iii) Controls blood circulation        | (iv) Balancing |
| (v) Controls musculo-skeletal movements |                |
| (vi) Controls memory                    |                |

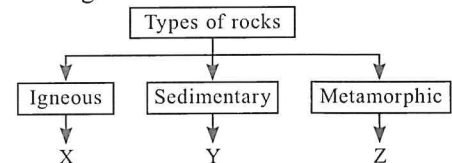
- |    | L           | M          | N         |
|----|-------------|------------|-----------|
| A. | (ii), (vi)  | (i), (iii) | (iv), (v) |
| B. | (iii), (vi) | (i), (ii)  | (iv), (v) |
| C. | (iv), (vi)  | (iii), (v) | (i), (ii) |
| D. | (i), (iii)  | (ii), (iv) | (v), (vi) |

39. The given box lists names of some animals. Select the option that correctly identifies animals with same respiratory organs.

|       |             |        |                   |
|-------|-------------|--------|-------------------|
| (i)   | Dragonfly   | (ii)   | <i>Paramecium</i> |
| (iii) | Prawn       | (iv)   | Dolphin           |
| (v)   | Grasshopper | (vi)   | Cockroach         |
| (vii) | Earthworm   | (viii) | Salmon            |

- A. (iii), (iv) and (viii) only
- B. (v), (vi) and (vii) only
- C. (i), (ii) and (vii) only
- D. (i), (v) and (vi) only

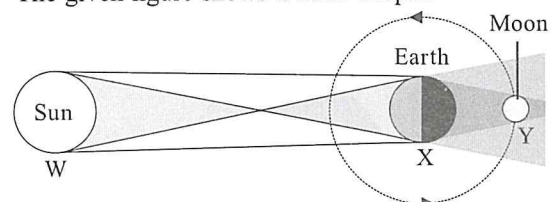
40. Refer to the given flow chart.



Select the option that correctly identifies X, Y and Z.

- |    | X         | Y            | Z        |
|----|-----------|--------------|----------|
| A. | Granite   | Limestone    | Obsidian |
| B. | Basalt    | Shale        | Slate    |
| C. | Quartzite | Conglomerate | Gneiss   |
| D. | Marble    | Sandstone    | Pumice   |

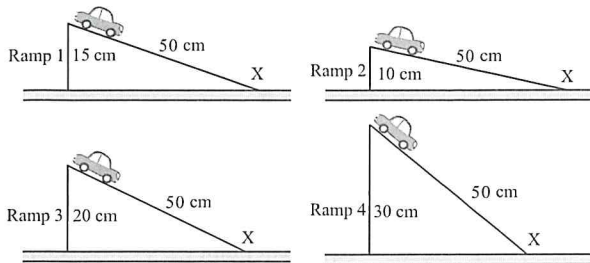
41. The given figure shows a lunar eclipse.



In case of a solar eclipse, the positions of \_\_\_\_\_ and \_\_\_\_\_ should be interchanged.

- |         |                 |
|---------|-----------------|
| A. W, X | B. X, Y         |
| C. Y, W | D. Any of these |

42. Study the four set-ups given below.



From the set-ups shown, which ramp do you think would make the toy car, when released, travel the farthest along the table top from point X?

- A. Ramp 1                      B. Ramp 2  
C. Ramp 3                      D. Ramp 4

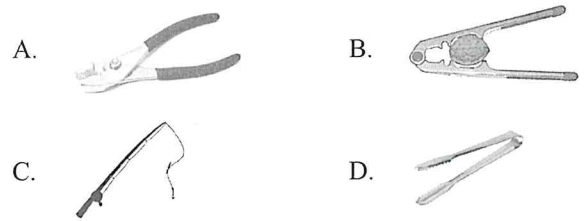
43. Study the given table.

| Material | Water- proof | Conducts electricity | Elastic |
|----------|--------------|----------------------|---------|
| P        | ✓            | ✗                    | ✓       |
| Q        | ✓            | ✓                    | ✗       |
| R        | ✓            | ✓                    | ✓       |

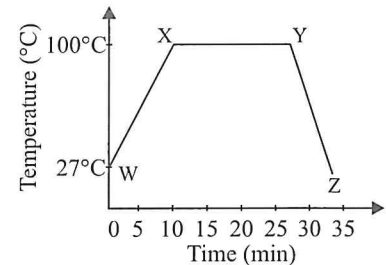
Select the option that correctly identifies any two of them.

- A. P - Rubber, R - Wood  
B. Q - Copper, R - Plastic  
C. P - Rubber, Q - Iron  
D. Q - Wood, R - Glass

44. Which of the following is a second class lever?



45. An experiment was carried out with water by a group of pupils and the given graph was plotted to show the results. Identify the processes taking place between WX, XY and YZ and select the correct option.



- |    | WX      | XY      | YZ      |
|----|---------|---------|---------|
| A. | Boiling | Cooling | Heating |
| B. | Boiling | Heating | Cooling |
| C. | Heating | Cooling | Boiling |
| D. | Heating | Boiling | Cooling |

## ACHIEVERS SECTION

46. Read the given passage where few words have been italicised and select the correct option regarding it.

Deep inside the earth, there is a hot molten rock called *lava* which comes up and collects in a chamber. When the pressure in the chamber builds up, *lava* finds a release through an opening or a crack called *vent* in the crust of the Earth, called volcano. When *lava* erupts through volcano, it is called *magma*. *Magma* and ash that are thrown out, collect and after repeated eruptions, form a mountain on cooling down. The hollow top of this mountainous volcano is shaped like a bowl, called *crater*.

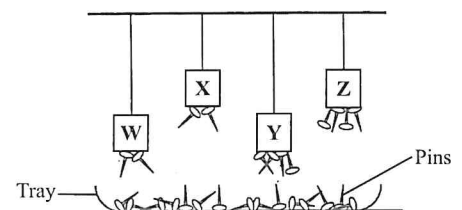
- A. The term *crater* should be replaced as it is incorrectly mentioned.  
B. The terms *lava* and *magma* should be interchanged.  
C. The terms *crater* and *vent* should be interchanged.  
D. The term *vent* should be replaced as it is incorrectly mentioned.

47. Select the option which classifies non-communicable and communicable diseases correctly. [Communicable diseases (CD) and Non-communicable diseases (ND)]

- A. CD : Conjunctivitis, Typhoid, Cholera  
ND : Dengue, Measles, Ringworm

- B. CD : Plague, Whooping cough, Jaundice, Chickenpox  
ND : Anaemia, Night blindness  
C. CD : Asthma, Dengue, Rickets  
ND : Malaria, Conjunctivitis  
D. CD : Scurvy, Arthritis, Beri-beri  
ND : Chickenpox, Tetanus, Cholera

48. Four magnets, W, X, Y and Z are hanging from strings of two different lengths as shown in the diagram below.

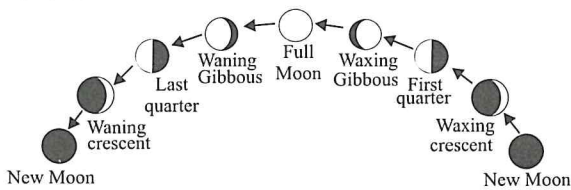


A tray of pins is placed below the magnets and different numbers of pins are attracted to the magnets. Which is the weakest magnet?

- A. W                                      B. X  
C. Y                                      D. Z



49. Refer to the different phases of the Moon over a month across the sky and answer the questions that follow.

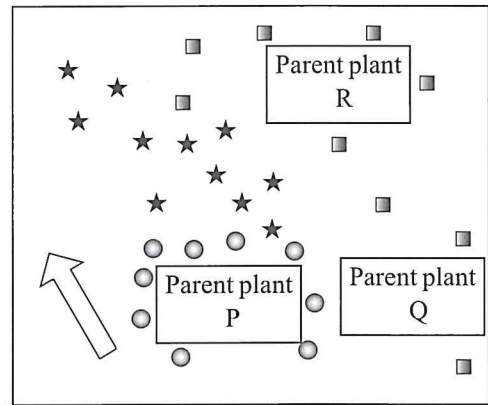


- (a) Which phases shown in the above diagram are incorrect?
- (b) If waxing crescent appears on 20<sup>th</sup> June 20XX, then when is the last quarter expected to appear?

(a) (b)

- A. First quarter, Waning crescent 8<sup>th</sup> July, 20XX  
 B. Waxing crescent, Last quarter 28<sup>th</sup> June, 20XX  
 C. Full Moon, New Moon 12<sup>th</sup> June, 20XX  
 D. Waxing crescent, Full Moon 1<sup>st</sup> July, 20XX

50. Refer to the given figure representing seed dispersal. Select the option which correctly identifies plants P, Q and R.



| Key | ○ Seed of plant P | ★ Seed of plant Q | ■ Seed of plant R | ↖ Wind direction |
|-----|-------------------|-------------------|-------------------|------------------|
|-----|-------------------|-------------------|-------------------|------------------|

- |    | P                | Q                   | R                   |
|----|------------------|---------------------|---------------------|
| A. | Balsam, Hiptage  | Xanthium, Dandelion | Urena, Pea          |
| B. | Poppy, Tigernail | Hiptage, Castor     | Urena, Dandelion    |
| C. | Pea, Balsam      | Dandelion, Hiptage  | Xanthium, Urena     |
| D. | Pea, Poppy       | Coconut, Dandelion  | Tigernail, Xanthium |

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**National Office:** Plot 99, First Floor, Sector 44 Institutional area, Gurugram -122 003 (HR) India  
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