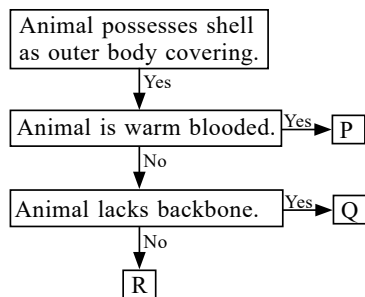




LEVEL - 2

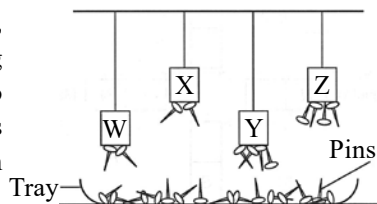
Year 2017-18

1. Refer to the given flow chart and identify animals P, Q and R.



	P	Q	R
A.	Hamster	Hedgehog	Clam
B.	Armadillo	Oyster	Turtle
C.	Porcupine	Pangolin	Snail
D.	Caiman	Platypus	<i>Pila</i>

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



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

3. Select the option in which odd member is encircled correctly.

- A. Scissors, Pliers, Tweezers
- B. Nutcracker, Hammer, Bottle opener
- C. Fishing rod, Wheelbarrow, Ice tongs
- D. Stapler, Seesaw, Wheelbarrow

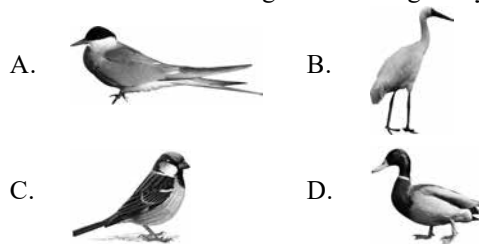
4. X is a gaseous planet that rotates in clockwise direction unlike others. Which of the following could be X?

- A. Venus B. Jupiter
C. Mars D. Uranus

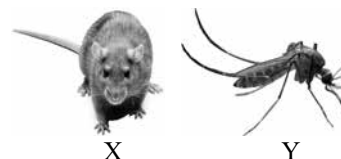
- Shred a paper into tiny pieces. Take a comb and comb your hair. Now bring the comb closer to the paper pieces. What will you observe?

- A. The paper pieces will get repelled due to magnetic force.
- B. The paper pieces will get repelled due to electrostatic force.
- C. The paper pieces will get attracted and stick to the comb due to electrostatic force.
- D. The paper pieces will get attracted and stick to the comb due to frictional force.

6. Which of the following is not a migratory bird?



- Following animals have been paired based on the manner in which they obtain and consume their food.



Select the option that correctly pairs animals on the same basis.

	X	Y
A.	Python	Grasshopper
B.	Hamster	Bed bug
C.	Viper	Housefly
D.	Cassowary	Butterfly

8. Which of the following is a reflex action?

- A. Teaching a group of students
B. Sneezing in response to irritation of nose lining
C. Responding to questions asked in oral examination
D. Making a beautiful sketch of a model

9. Four pupils were asked to identify forces X and Y from the given description and also give one more application of each one of these forces.

Force X is responsible for falling of a fruit that gets detached from tree on the ground whereas force Y is responsible for slowing down a ball rolling on the ground. Which of the pupils stated the correct applications of these forces?

	Pupil	Force X	Force Y
A.	Ravi	It helps any object to float on water.	It helps us to walk.
B.	Rinki	It helps us to stay on ground.	It helps us to write with a pencil or pen.
C.	Kartik	Electric air purifiers use this force to purify polluted air of factories.	Car brakes can be applied because of this force.
D.	Nilu	It helps the astronauts to float in space.	It helps any stretchable object to regain its original shape on being stretched.

10. Select the correct statement among the following.
- The European stork travels from Europe to Africa every summer.
 - Arctic tern travels the longest distance among the migratory birds.
 - Whales travel to cold water for reproduction and warmer water for feeding.
 - Butterflies have short lifespan thus they do not migrate.

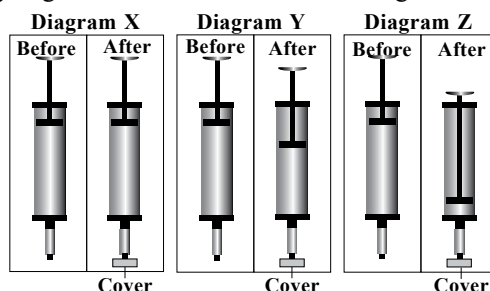
11. Garima performed an experiment to test the properties of four different objects and tabulated her results as follows.

Property	Objects			
	W	X	Y	Z
Can be attracted by magnet	×	✓	×	×
Breaks when hit by hammer	✓	×	✓	✓
Floats on water	✓	×	✓	×
Waterproof	✓	✓	×	✓

Based on the above given information, which of the following best represents object W, X, Y and Z?

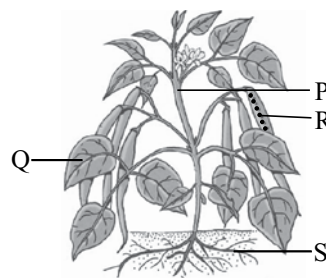
- | | W | X | Y | Z |
|-------------------|----------------|----------------|----------------|---|
| A. Iron ball | Thermocol bead | Glass bead | Plastic ball | |
| B. Glass bead | Plastic ball | Iron ball | Thermocol bead | |
| C. Thermocol bead | Iron ball | Wooden bead | Glass bead | |
| D. Rubber ball | Plastic ball | Thermocol bead | Iron ball | |

12. Three different types of matter were put into the syringes as seen in the 'Before' diagrams. The opening of each syringe was then covered tightly and the piston was pushed as hard as possible. The results for each syringe are shown in the 'After' diagrams.



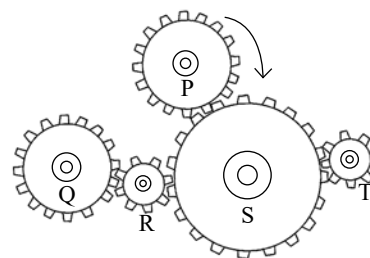
Which syringe is most likely to have turmeric powder in it?

- Syringe in diagram X
 - Syringe in diagram Y
 - Syringe in diagram Z
 - None of these
13. The given figure shows plant parts labelled as P, Q, R and S. Which of the following options correctly lists the plants in which labelled part is edible?



- P – Sugarcane, Potato, Sweet potato
- Q – Maize, Cauliflower, Cabbage
- R – Rajma, Soybean, Pea
- S – Ginger, Carrot, Onion

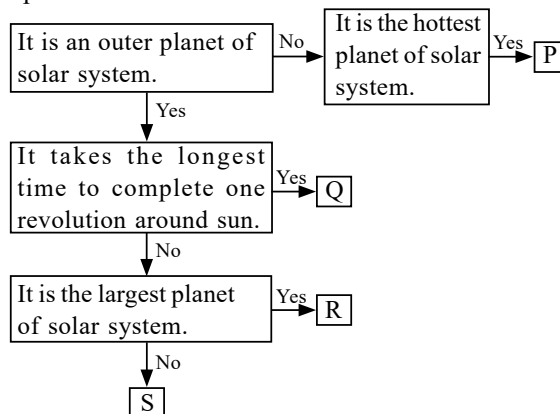
14. Refer to the given figure.



If gear P rotates in clockwise direction, select the directions in which other gears will rotate.

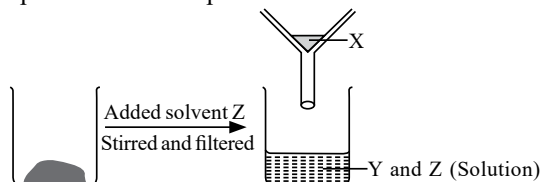
- Q – Anticlockwise, R – Clockwise, S – Anticlockwise, T – Clockwise
- Q – Clockwise, R – Anticlockwise, S – Clockwise, T – Anticlockwise
- Q – Anticlockwise, R – Anticlockwise, S – Clockwise, T – Clockwise
- Q – Clockwise, R – Clockwise, S – Anticlockwise, T – Anticlockwise

15. Refer to the given flow chart and select the correct option.



- P takes only 88 days to complete one revolution around the sun.
- Q has total 14 known moons and its Indian name is *Varun*.
- R appears bluish in colour due to the presence of methane gas in its atmosphere.
- Surface of S is covered by red dust and its atmosphere is composed of carbon dioxide, nitrogen, argon, oxygen and water vapour.

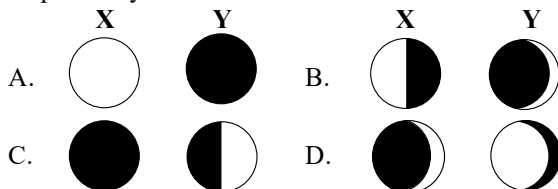
16. Riya performed an experiment as shown below.



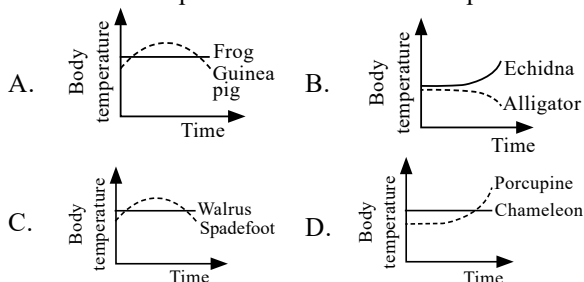
A mixture of X and Y

Select the correct option regarding it.

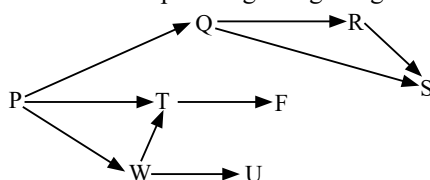
- A. X could be common salt, Y could be sugar and Z could be water.
- B. If Y is sugar and Z is water then Y can be recovered by evaporating Z.
- C. Both X and Y are insoluble in solvent Z.
- D. X is a liquid whereas Y is a solid.
17. Rajat observed a gibbous moon in the night sky of 15th February. Which of the following phases of moon must have appeared on 8th February (X) and which phase of moon will he observe on 23rd February (Y) respectively?



18. Which of the following graphs correctly depicts the body temperature of the given animals with respect to ambient temperature over a 24 hours period?



19. Select the correct option regarding the given food web.



- A. The energy transferred from R to S is higher than energy transferred from Q to S.
- B. Q, T and W are the herbivores in this food web.
- C. There are 5 food chains in this food web.
- D. If S is removed from this community, then population of Q will increase but that of R will decrease.
20. Select the incorrect match from the following.
- A. Bleeding wound – Tourniquet
- B. Fractured bone – Splint
- C. Sprain – Caustic soda
- D. Minor burn – Antiseptic lotion

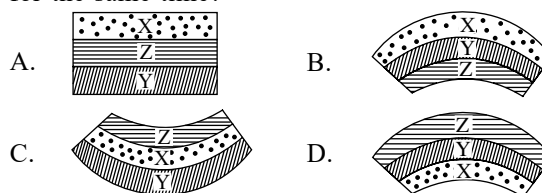
21. Given in the box below is a list of some crops.

Sorghum, Wheat, Oat, Rice, Groundnut, Barley, Pearl millet, Linseed, Chickpea, Mustard

How many of them are rabi crops?

- A. 3 B. 6
C. 8 D. 4

22. The order of expansion of three metals X, Y and Z is $X > Y > Z$. Which of the following would be observed if trimetallic strips made of these metals are heated for the same time?



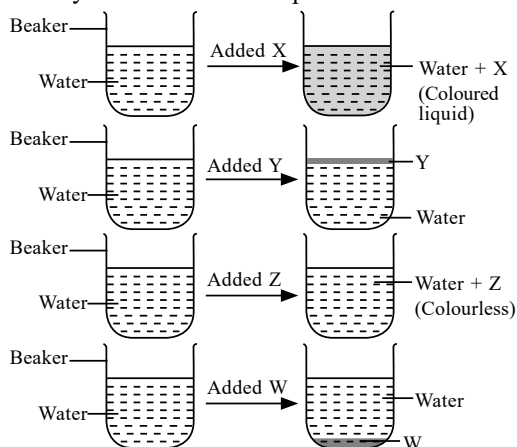
23. Chaitanya suffers from stomach ache and bad digestion whenever he eats any wheat product whereas his brother Satvik complains of bad vision in dim light. Which of the following holds true regarding them?

- A. Chaitanya is suffering from vitamin C deficiency and should take more of citrus fruits in his diet.
- B. Satvik is suffering from iron deficiency and should take more of spinach, apple, etc., in his diet.
- C. Chaitanya is allergic to wheat products so he should stop taking them to avoid illness caused due to their consumption.
- D. Satvik is suffering from vitamin B₁ deficiency so he should take more of carrots and papaya.

24. Select the correct statement from the following.

- A. If blisters are formed due to severe burn, they should be immediately pricked and vinegar should be applied on the burnt area.
- B. Toothpaste should be applied to the skin area where the snake has bitten and the victim should be positioned such that the bitten part lies above the level of heart.
- C. If a person is bleeding through nose he should be made to lie down flat on ground with head held back.
- D. Both A and B

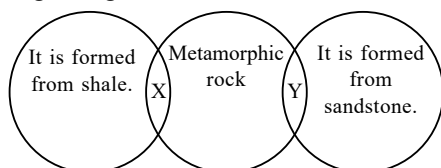
25. Saumya conducted an experiment as shown below.



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

	W	X	Y	Z
A.	Chalk	Ink	Oxygen	Turmeric powder
B.	Carbon dioxide	Chilly powder	Ink	Sand
C.	Lemon juice	Oil	Chalk	Milk
D.	Sand	Milk	Oil	Sugar

26. Refer to the given Venn diagram and select the correct option regarding X and Y.



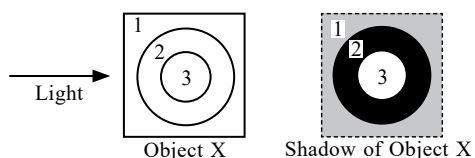
- A. X is obsidian whereas Y is conglomerate.
 B. X is rich in mineral calcite whereas Y is rich in mineral feldspar.
 C. X is used in making slates and blackboards whereas Y is used in making statues.
 D. X is used to make cutting tools whereas Y is used by dentists for polishing teeth.

27. Study the given table and select the incorrect option regarding P, Q, R and S.

Animal	Characteristics				
	Wings	Feathers	Scales	Fins	Hair
P	✓	✗	✓	✗	✗
Q	✓	✓	✓	✗	✗
R	✗	✗	✓	✓	✗
S	✗	✗	✓	✗	✓

- A. P could be an animal that has six legs, is oviparous and has many stages in its life cycle.
 B. Q and S are warm blooded animals where Q is always oviparous and lacks teeth whereas S may be viviparous and possesses teeth.
 C. R could be a cold blooded, oviparous, aquatic animal like seal or arowana.
 D. P could be moth, Q could be nightingale, R could be *Scoliodon* and S could be pangolin.

28. An object X is made up of three materials 1, 2 and 3. When light is shone on it, it casts a shadow on screen as shown here.



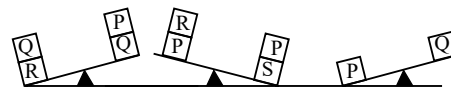
Identify materials 1, 2 and 3 of which object X is made.

	Material 1	Material 2	Material 3
A.	Frosted glass	Ceramic	Clear plasticsheet
B.	Aluminium foil	Iron sheet	Cardboard
C.	Cellophane paper	Clear glass	Styrofoam
D.	Ceramic	Thermocol	Aluminium foil

29. Select the option that correctly gives the examples of physical and chemical changes.

Physical change	Chemical change
A. Tearing of paper	Breaking of glass
B. Burning of paper	Cooking of food
C. Rusting of iron	Melting of butter
D. Formation of ice	Burning of wood

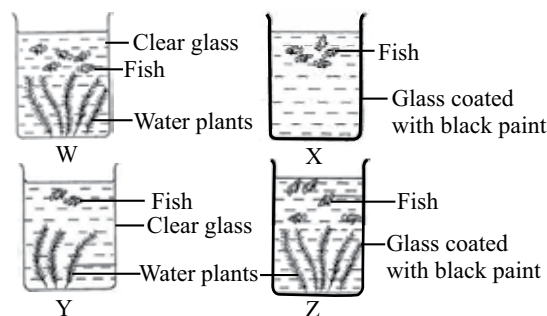
30. Four solid cubes of the same size but made from different materials are weighed against each other as shown in the diagram below.



Which of the four cubes has the greatest mass?

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

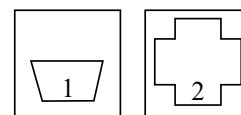
31. Nidhi wants to carry out an experiment to find out how light affects the amount of oxygen in an aquarium.



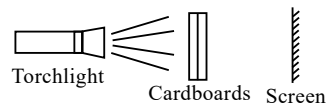
Which of the above given two set-ups should she use in order to carry out a fair test?

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

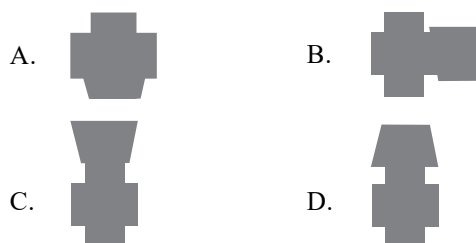
32. Shalu had two cardboards. She cut out different shapes from each of the cardboards as shown below.



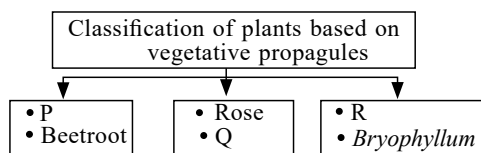
She glued cut-out pieces of cardboards by aligning sides 1 and 2 marked on them. She shone a torchlight on the cardboards as shown here.



Which of the following is most likely the shadow formed on the screen?



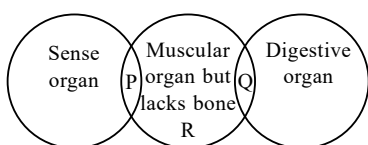
33. Refer to the given classification chart where plants have been classified based on plant parts from which they propagate vegetatively.



Now study the given relationship $P :: R :: Q$ and select the option that correctly satisfies the same relationship.

- A. *Dahlia* :: *Zamikand* :: Water hyacinth
 B. Turmeric :: *Tapioca* :: Onion
 C. Garlic :: *Colocasia* :: *Kalanchoe*
 D. *Asparagus* :: *Begonia* :: Ginger
34. Aquarium keepers are typically advised to remove dead fish from an aquarium the moment they are discovered. Otherwise, the water may soon become cloudy due to a bacterial bloom. Which of the following best explains why a bacterial bloom should be avoided?
- A. The bacteria acting on the dead organism may infect other fish and aquatic organisms, causing an aquarium plague.
 B. The cloudiness in the tank prevents the fish keepers from properly observing their pets.
 C. The bacteria may become airborne with the evaporation of water from the aquarium and cause diseases in the external environment.
 D. The sudden spike in bacterial population may result in insufficient dissolved oxygen for the other aquatic organisms, causing more aquatic life to die.
35. A housewife was preparing hot meal for her family. She accidentally placed her fingertip into some boiling soup, but quickly withdrew it. She felt significant pain in the finger immediately after that. Which of the following is the most likely explanation for this time lag?
- A. The withdrawal of her finger is a reflex action that is triggered more quickly than the transmission of information related to pain stimulus to her brain.
 B. The pain receptors present on her finger skin are less efficient, so information regarding pain is transmitted to brain at a slower rate as compared to that of heat.
 C. The withdrawal of her finger is controlled by brain so it occurs very fast whereas feeling of pain is a reflex action controlled by spinal cord so it takes comparatively much more time.
 D. None of these

36. Study the given Venn diagram and select the incorrect option regarding organs P, Q and R.



- A. P could be a sense organ that also helps in mixing of food with saliva in the mouth.

- B. Q could be an organ which churns the food so that it mixes with digestive juices and acid.
 C. P could be a sense organ that helps to take up atmospheric air and possesses hair which traps dust particles and germs.
 D. R could be an organ that pumps blood to all other body organs through blood vessels.

37. Read the given paragraph.

X is a dome shaped and largest part of brain whereas Y is a structure that connects brain to spinal cord. Now refer to the activities listed below.

- (i) Recalling mugged up content
 (ii) Problem solving
 (iii) Breathing while sleeping
 (iv) Running
 (v) Swallowing food

Select the option that correctly matches these activities with the brain parts that regulate them.

- A. X – (i), (iii) B. X – (i), (iv)
 Y – (iv), (v) Y – (ii), (iii)
 C. X – (i), (ii) D. X – (i), (iii), (iv)
 Y – (iii), (v) Y – (ii)

38. Select the option in which the odd member is encircled correctly on the basis of habitat.

- A. Baseball plant, *Pistia*, Golden barrel cactus
 B. *Vallisneria*, Hydrilla, *Acacia*
 C. Maple, Bladderwort, Cotton
 D. Lemna, *Eichhornia*, *Dandelion*

39. Which of the following can be obtained by using the letters given in the box? (You can use each letter more than once.)

TNMHCSIREUA

- A. A natural disaster that can be measured on Richter scale.
 B. An enormous water wave that is caused by an earthquake in the ocean floor and creates havoc in coastal areas.
 C. A strong tropical storm with fast spinning winds.
 D. Both B and C

40. Disturbance in water cycle can lead to which of the following natural disasters?

- A. Floods B. Drought
 C. Volcanic eruption D. Both A and B

41. Which of the following activities cause water pollution?

- A. Oil spills from ship
 B. Bathing of animals and washing clothes in river water
 C. Dumping human dead bodies and things like diyas, ashes, flowers, etc., into local water bodies on the name of rituals
 D. All of these

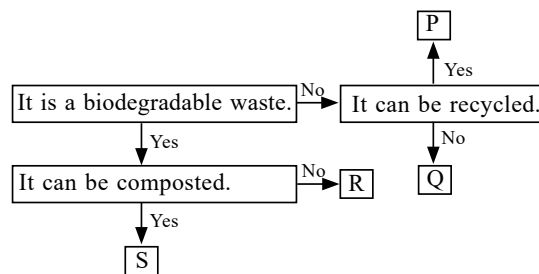
42. It is possible to listen to radio programmes and watch programmes telecasted on television due to the presence of _____ layer in atmosphere.

A. Exosphere B. Ionosphere
C. Stratosphere D. Troposphere

43. Match column I with column II and select the correct option from the given codes. (There can be more than one match for column I.)

Column I	Column II
(a) Soil formation	(i) Indiscriminate felling of trees
(b) Soil erosion	(ii) Terrace farming
(c) Soil conservation	(iii) Embankments
	(iv) Overgrazing
	(v) Afforestation
	(vi) Weathering
A. (a) – (v), (b) – (ii), (vi), (c) – (i), (iii), (iv)	
B. (a) – (vi), (b) – (i), (iv), (c) – (ii), (iii), (v)	
C. (a) – (iii), (b) – (ii), (v), (c) – (i), (iv), (vi)	
D. (a) – (ii), (b) – (i), (vi), (c) – (iii), (iv), (v)	

44. Refer to the given flow chart and identify wastes P, Q, R and S.



	P	Q	R	S
A.	Plastic container	Urine bag	Dead body of animals	Tea leaves
B.	Newspaper	Glassware	Rotten fruit	Syringe
C.	Aluminium foil	Ear bud	Wooden spoon	Discarded human organ in a transplant
D.	Credit card	Cotton balls	Cooked beans	Human excreta

45. Which of the following joints we use for nodding to say yes?

A. Pivot joint B. Gliding joint
C. Hinge joint D. Ball and socket joint

ACHIEVERS SECTION

46. Aashi grouped plants on the basis of their seed dispersal mode. By mistake, she put one wrong plant in each group. Identify the odd member out and select the correct option regarding this.

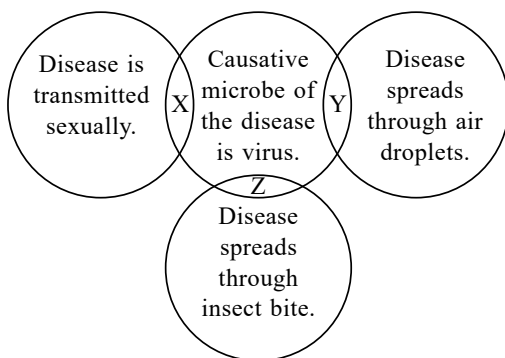
Group I : Maple, Lotus, *Dandelion*

Group II : Blackberry, Litchi, Coconut

Group III : Cocklebur, *Geranium*, Pea

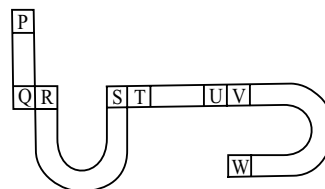
- A. Lotus is incorrectly placed in group I and should be replaced with *Euphorbia*.
B. Litchi in group II should be interchanged with *Geranium* in group III.
C. Blackberry is incorrectly placed in group II and should be replaced with cotton.
D. Cocklebur is incorrectly placed in group III and should be replaced with Lupin.

47. Refer to the given Venn diagram and select the incorrect statement regarding X, Y and Z.

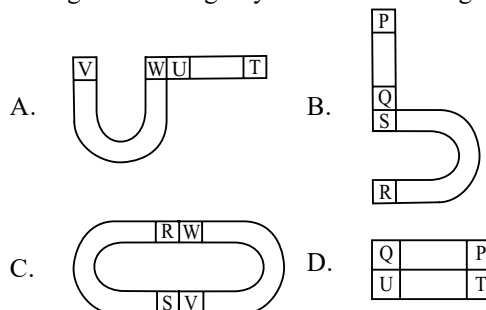


- A. X could be an incurable disease that damages immune system of the infected person.
B. Disease Y could be effectively treated by antibiotics.
C. Z could be a disease in which blood platelet count of a person goes down significantly.
D. Both X and Y could be communicable diseases, of which Y could get cured on its own.

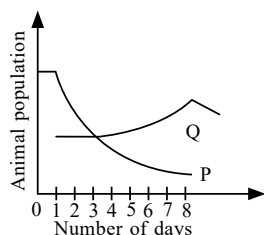
48. The diagram below shows how four magnets are attracted to one another. The poles of the four magnets are marked P to W.



Which one of the following could be another possible arrangement using any two of these magnets?



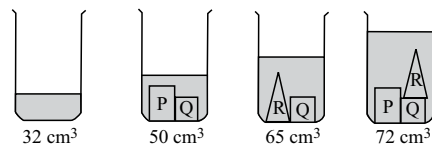
49. The population of animal P in a certain community was constant until a population of animal Q was subsequently introduced into that community. The interaction between the two



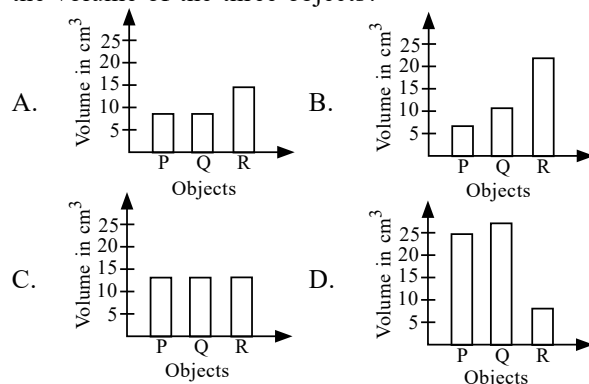
populations is represented in the given graph. Which of the following can be inferred from the given graph?

- Q could be a carnivore who is the predator of P who could be a herbivore or a carnivore.
- P could be a herbivore who feeds on some specific plants whereas Q could be an omnivore who not only feeds on those specific plants but also feeds on P.
- Q could be an exotic animal species which competitively drove out the entire population of animal species which is the only prey of P.
- All of these

50. Shweta wanted to find out the volumes of three objects, P, Q and R. She put them into a beaker of water in different combinations as shown below.



Which of the following bar graphs correctly shows the volume of the three objects?



SPACE FOR ROUGH WORK