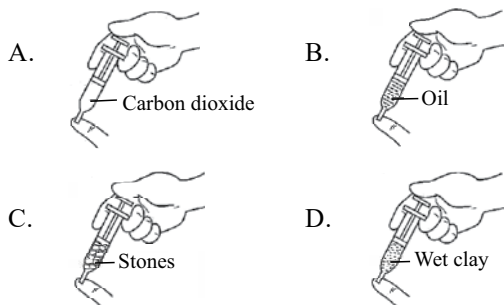




LEVEL - 2

Year 2019-20

1. Ravi filled four identical syringes with different substances as shown in the given figures. In which syringe will the plunger move the fastest when pushed in?

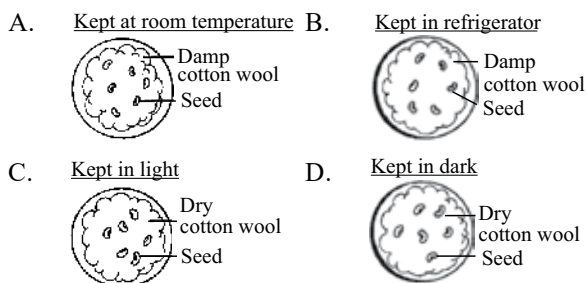


2. What is common among the given diseases?

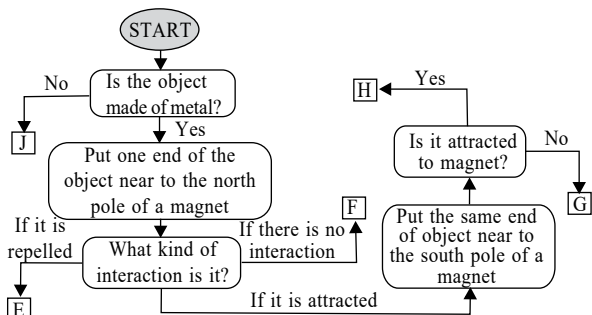
Beri-beri, Scurvy, Goitre

- A. These are deficiency diseases that can be cured by intake of citrus fruits.
B. These are deficiency diseases that are non-communicable.
C. It is possible to prevent these diseases through vaccination.
D. These diseases are caused due to the deficiency of vitamin B complex.

3. Amyra set up an experiment as shown in the given figures. In which of the following petri dishes would the seeds germinate successfully?

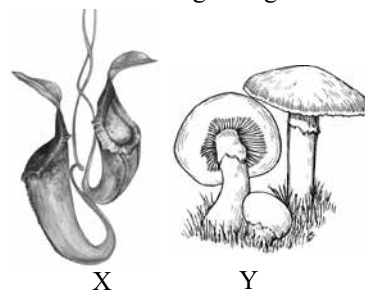


4. Virat made use of the given flow chart to find out whether aluminium (object) works like a magnet or is a magnetic or a non-magnetic material. The points J, E, F, G and H are called 'exit points'. Which 'exit point' would Virat get for the aluminium?



- A. E
B. F
C. G
D. H

5. Identify X and Y shown in the given figures and select the correct statement regarding them.



- A. Both X and Y can make their own food.
B. X cannot make its own food but Y can make its own food.
C. X depends partly on animals for food and can also make its own food, while Y cannot make its own food.
D. X cannot make its own food at all, while Y depends on decaying matter for food.

6. Read the given statements and select the correct option.

Statement 1 : Moon is a very silent place.

Statement 2 : Air is present on the Moon.

- A. Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.
B. Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1.
C. Statement 1 is correct but statement 2 is incorrect.
D. Both statements 1 and 2 are incorrect.

7. Five friends ate some dishes in the lunch as shown in the given table.

	Fruits	Jeera rice	Vegetable salad	Pulses	Cheese burger	Butter
Monica	✓	✓	✓	✓	✗	✓
Manav	✗	✓	✗	✓	✗	✗
Hitesh	✗	✗	✗	✓	✗	✗
Gauri	✗	✗	✗	✗	✓	✗
Arhan	✓	✗	✓	✗	✗	✗

Refer to the given table and select the option that correctly answers the following questions.

- (a) Who among them had a balanced meal?
(b) Who among them ate only body building food?
(c) Who among them ate only protective food?

	a	b	c
A.	Monica	Arhan	Gauri
B.	Arhan	Manav	Hitesh
C.	Monica	Hitesh	Arhan
D.	Hitesh	Arhan	Manav

8. Which of these natural resources is a source of lumber used for building a house?

A. Ores
B. Coal
C. Trees
D. Grasses

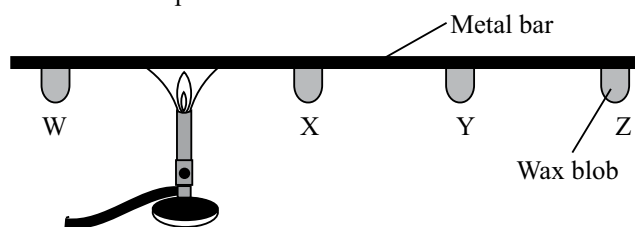
9. Which of the following is an incorrect match?

Characteristics of seeds

Mode of dispersal

- A. Light, have hair or wings - Air
B. Spongy or have fibrous covering - Water
C. Have hooks or spines - Air
D. Burst open and scatter when dry - Explosion

10. Some candle wax is fixed on a metal bar. A flame is then placed below the bar as shown in the figure. Which wax blob among W, X, Y and Z will be the last to drop?



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

11. Read the given statements regarding the lever and select the incorrect ones.

- (i) In a beam balance, fulcrum is in the middle.
(ii) A nutcracker is an example of third-class lever.
(iii) In tongs, the fulcrum and the load are at the two ends.
(iv) See-saw is an example of first class lever.
A. (i), (iii) and (iv) only
B. (ii) only
C. (iii) and (iv) only
D. (i) and (ii) only

12. Greenhouse gases cause global warming. Which of the following is a greenhouse gas?

- A. Oxygen
B. Nitrogen
C. Carbon dioxide
D. Magnesium oxide

13. Keshav conducted an experiment where 4 identical metal balls were allowed to roll down 4 similar curves with surfaces of different texture. The time taken for the ball to come to a complete stop for each of the different surfaces was recorded in the given table.

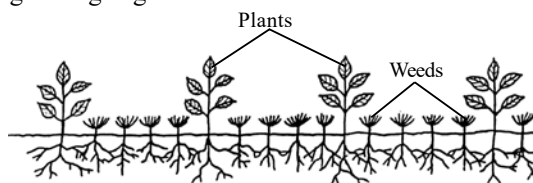


Surface	Time taken for ball to stop (seconds)
L	24
M	19
N	28
O	12

Which curve has the roughest surface?

- A. L
B. M
C. N
D. O

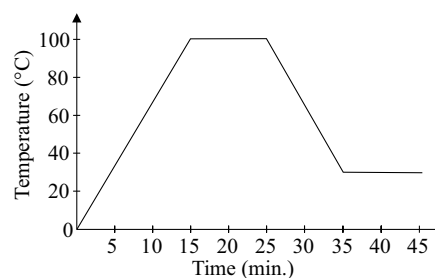
14. The given diagram shows some plants and weeds growing together.



Due to the presence of weeds, for which of the following do plants need to compete?

1. Water
2. Nutrients
3. Space
A. 1 and 2 only
B. 1 and 3 only
C. 2 and 3 only
D. 1, 2 and 3

15. Taniya heated a beaker of iced water until it started boiling. She boiled it for few minutes and then left it to cool down at room temperature. She recorded the temperature of water at intervals of five minutes and used the results to draw the graph as shown in the given figure. Approximately how long did the boiling water take to cool to the room temperature?



- A. 20 minutes
B. 10 minutes
C. 15 minutes
D. 30 minutes

16. Select the correct statement.
- Uranus is the second largest planet in the solar system.
 - Neptune takes about 165 Earth years to orbit around the Sun.
 - The distinguishing feature of Venus is the 'Great Red Spot' on its surface.
 - Mercury is the hottest planet in the solar system.

17. Select the incorrect match.

Animal	Locomotory organs
(P) Pigeon	- Wings, legs
(Q) Locust	- Wings, legs
(R) Salmon	- Webbed feet, hind limbs
(S) Snake	- Fins, spiracles
A. P and R only	
B. S only	
C. R and S only	
D. Q and R only	

18. Acid rain could cause

- Erosion of stone statues and buildings
 - Global warming
 - Depletion of the ozone layer
 - Threat to the life of aquatic beings.
- (i) and (ii) only
 - (i) and (iv) only
 - (i) and (iii) only
 - (ii) and (iii) only

19. Which of the following statements regarding the Taj Mahal is incorrect?

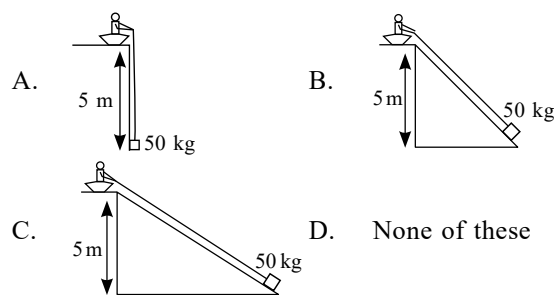
- It was designed by Ustad Ahmad Lahori.
- It is situated on the bank of river Ganga.
- Emperor Shah Jahan built it in the memory of his wife Mumtaz Mahal.
- None of these

20. Which of the following is correct regarding the animal shown here?



- It reproduces by laying eggs.
- It withdraws its body into a shell on sensing danger.
- It breathes through its skin and blowholes.
- None of these

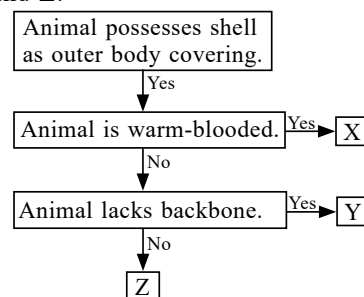
21. Rainav was trying to lift the same object in different ways as shown in the given figures. The weight of the object is 50 kg and he is standing on a 5 m high platform. In which of the following situations the least effort is required? (Assume the friction between the object and incline is negligible.)



22. Which of the following changes is caused by expansion?

- Opening the tightly sealed metal lid of a bottle jar by running hot water over the lid.
- The tube of a cycle tyre bursts on its own when cycle is left in Sun for a long time.
- Rising of mercury in a thermometer while measuring body temperature during fever.
- All of these

23. Refer to the given flow chart and identify animals X, Y and Z.



- | | X | Y | Z |
|----|-----------|-----------|--------|
| A. | Hamster | Hedgehog | Clam |
| B. | Armadillo | Oyster | Turtle |
| C. | Pangolin | Porcupine | Snail |
| D. | Platypus | Crocodile | Pila |

24. There are two forces P and Q. Force P is responsible for falling of a fruit that gets detached from tree on the ground whereas force Q is responsible for slowing down a ball rolling on the ground.

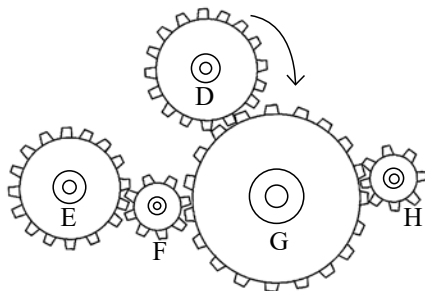
Which of the pupils stated the correct applications of these forces?

	Pupil	Force P	Force Q
A.	Rajiv	It helps any object to float on water.	It helps us to walk.
B.	Rakesh	It helps us to stay on ground.	It helps us to write with a pencil or pen.
C.	Ajay	Electric air purifiers use this force to purify polluted air of factories.	Car brakes can be applied because of this force.
D.	Sanjay	It helps the astronauts to float in space.	Any stretchable object regains its original shape after removing the applied force.

25. On the basis of habitat, monkey belongs to (i) group of animals whereas Arctic tern belongs to (ii) group of animals.

(i)	(ii)
A. Aquatic	Aerial
B. Aerial	Arboreal
C. Aquatic	Arboreal
D. Arboreal	Aerial

26. Refer to the given figure.



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

- A. E - Anticlockwise, F - Clockwise, G - Anticlockwise, H - Clockwise
 B. E - Clockwise, F - Anticlockwise, G - Clockwise, H - Anticlockwise
 C. E - Anticlockwise, F - Anticlockwise, G - Clockwise, H - Clockwise
 D. E - Clockwise, F - Clockwise, G - Anticlockwise, H - Anticlockwise

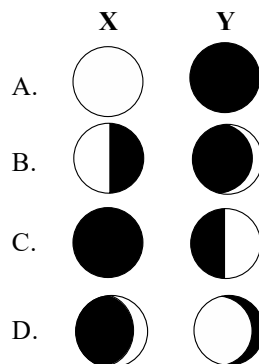
27. Navya performed an experiment to test the properties of four different objects and tabulated her results as follows.

Property	Objects			
	L	M	N	O
Can be attracted by magnet	✗	✓	✗	✗
Can be beaten into sheets	✗	✓	✗	✗
Floats on water	✓	✗	✓	✗
Waterproof	✓	✓	✗	✓

Based on the above given information, which of the following best represents objects L, M, N and O?

L	M	N	O
A. Iron ball	Thermocol bead	Glass bead	Plastic ball
B. Glass bead	Plastic ball	Iron ball	Thermocol bead
C. Thermocol bead	Iron ball	Wooden log	Glass marble
D. Rubber ball	Plastic ball	Thermocol bead	Iron ball

28. Dravya observed a waxing Gibbous Moon in the night sky of 15th February. Which of the following phases of Moon must have appeared on 8th February (X) and 22nd February (Y)?



29. Shaurya suffers from bleeding gums and swollen joints whereas his brother Anant complains of bad vision in dim light. Which of the following statements holds true regarding them?

- A. Shaurya is suffering from vitamin C deficiency and should take more of citrus fruits in his diet.
 B. Anant is suffering from an iron deficiency and should take more of spinach, apple, etc., in his diet.
 C. Shaurya is suffering from vitamin A deficiency and should take more of green leafy vegetables.
 D. Anant is suffering from vitamin B₁ deficiency so he should take more of carrots and papaya.

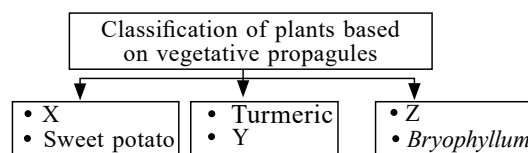
30. Artificial satellites do not help in

- A. Communication
 B. Weather forecasting
 C. Navigation
 D. Producing high tides.

31. Which of the following is a correct match?

- A. Odissi - Manipur
 B. Kuchipudi - Andhra Pradesh
 C. Chhau - Karnataka
 D. Kathakali - Tamil Nadu

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



Select the option that correctly identifies the plants that can be placed at X, Y and Z respectively.

- A. *Dahlia*, *Zamikand*, *Kalanchoe*
 B. Mint, Tapioca, Onion
 C. Garlic, *Colocasia*, Water hyacinth
 D. *Asparagus*, *Begonia*, Ginger

33. Read the given paragraph.

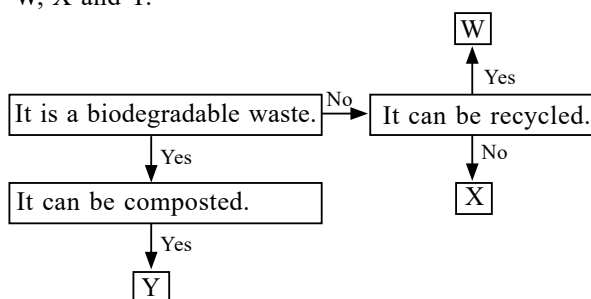
L is a dome shaped and largest part of brain whereas M is a structure that connects forebrain to spinal cord. Now, refer to the activities listed below.

- p. Recalling mugged up content
- q. Problem solving
- r. Breathing
- s. Running
- t. Heartbeat

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

- | | |
|-------------|----------------|
| A. L - p, r | B. L - p, s |
| M - s, t | M - q, r |
| C. L - p, q | D. L - p, r, s |
| M - r, t | M - q |

34. Refer to the given flow chart and identify wastes W, X and Y.



- | | W | X | Y |
|----|-------------------|----------------|---------------------------------------|
| A. | Plastic container | Melamine | Tea leaves |
| B. | Wooden chair | Glassware | Dead body of animals |
| C. | Aluminium foil | Plastic bottle | Discarded human organ in a transplant |
| D. | Wooden pencil | Cotton balls | Human excreta |

35. Which of the following is not a part of Qutub complex?

- A. Alai Darwaza
- B. Iron Pillar
- C. Char Minar
- D. Tomb of Imam Zamin

36. Which of the following is an incorrect statement?

- A. Inner ear is the main site of hearing.
- B. Retina is a layer of light sensitive receptors.
- C. Cerebellum maintains balance and posture of the body.
- D. None of these

37. Aashu and Brijesh are hammering a nail into two pieces of wood to join them together. Samiha covers her ears, because she finds the hammering sound loud and noisy. She tells them that they are wasting

energy because most of the energy they are using in hammering is getting lost. Aashu disagrees with what Samiha said. Brijesh explains that some of the energy is used in producing sound, but not lost. Aashu then added that energy can never be lost or destroyed. Who is/are right?

- A. Brijesh only
- B. Aashu only
- C. Samiha only
- D. Aashu and Brijesh only

38. Select the correct statement from the following.

- A. Milky way is the only spiral shaped galaxy in the Universe.
- B. Planet Venus is the hottest planet of our solar system.
- C. Satellites like Moon are small heavenly bodies that revolve around a star.
- D. A solar year consists of 363 days.

39. Which of the following statements is correct?

- A. Quartzite is formed from sandstone.
- B. Marble is formed of clay particles that have been hardened together under high pressure.
- C. Gneiss is formed from basalt.
- D. Obsidian is formed due to slow cooling down of lava.

40. Which of the following will not cause soil pollution?

- A. Fruit peel
- B. Polythene bag
- C. A pen made of plastic
- D. Both A and C

41. Refer to the given features regarding animal P.

- (i) Forelimbs adapted for flying
- (ii) Body covered with feathers
- (iii) Light and hollow bones
- (iv) Streamlined body

P could be

- A. Sparrow
- B. Bat
- C. Eel
- D. Opossum.

42. Component of air that is utilised during respiration is present in what percentage in air?

- A. 78%
- B. 21%
- C. 1%
- D. 0.03%

43. Which of the following setups represents a second class lever?

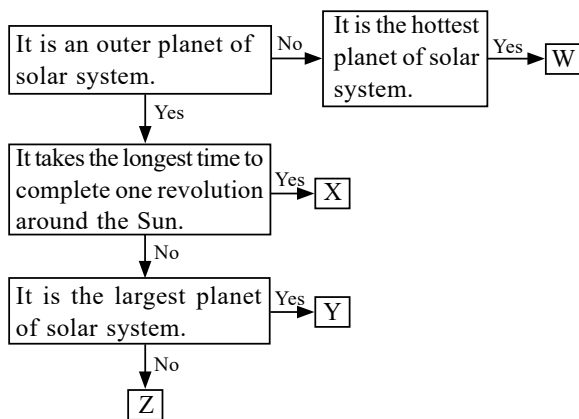
- | | |
|---|---|
| A. $\frac{L}{\Delta} \frac{F}{\Delta} \frac{E}{\Delta}$ | B. $\frac{F}{\Delta} \frac{L}{\Delta} \frac{E}{\Delta}$ |
| C. $\frac{L}{\Delta} \frac{E}{\Delta} \frac{F}{\Delta}$ | D. None of these |

44. Select the correct statements.
- Tremors that follow massive earthquakes are called aftershocks.
 - Mt. Etna is a dormant volcano.
 - Earthquake is measured on the Vernier scale.
 - Breaking of dam can cause floods.
- (i) and (ii) only
 - (i) and (iv) only
 - (ii) and (iv) only
 - (ii) and (iii) only

45. Select the correct statements.
- Vanmahotsav was started by K.M. Munshi.
 - Forests help to increase rainfall.
 - Bo tribe is the largest tribal group of India.
 - Tribal people do not celebrate festivals.
- (i) and (ii) only
 - (i) and (iv) only
 - (i), (ii) and (iii) only
 - (ii), (iii) and (iv) only

ACHIEVERS SECTION

46. Identify planets from the given flow chart and select the incorrect statement regarding them.



- W takes only 88 Earth days to complete one revolution around the Sun.
- X has total 10 known moons and its Indian name is *Arun*.
- Y takes about 12 Earth years to orbit around the Sun whereas Z could take about 84 Earth years to orbit around the Sun.
- Both A and B

47. Study the given table and select the incorrect option regarding W, X, Y and Z.

Animal	Characteristic				
	Wings	Feathers	Scales	Fins	Hair
W	✓	✗	✓	✗	✗
X	✓	✓	✓	✗	✗
Y	✗	✗	✓	✓	✗
Z	✗	✗	✗	✗	✓

- W could be an animal that has six legs, is oviparous and has different stages in its life cycle.
- X and Z are warm blooded animals where X is always oviparous whereas Z may be viviparous or oviparous.
- Y could be a cold blooded, oviparous, aquatic animal like seal or arowana.

- W could be moth, X could be nightingale, Y could be *Scoliodon* and Z could be rat.

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

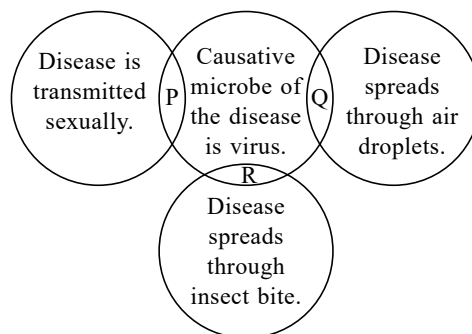
Group I : Maple, Lotus, *Dandelion*

Group II : Blackberry, Litchi, Coconut

Group III : Cocklebur, *Geranium*, Pea

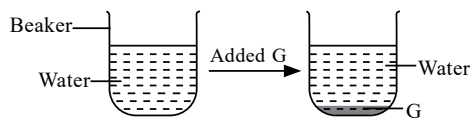
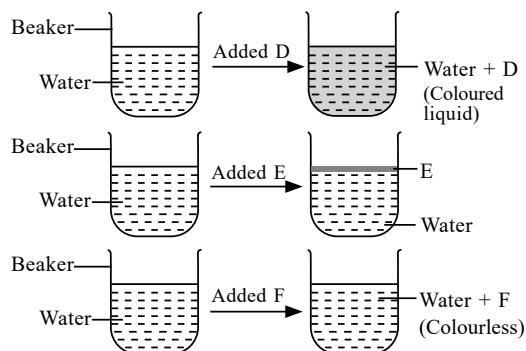
- Lotus is incorrectly placed in group I and should be replaced with *Euphorbia*.
- Litchi in group II should be interchanged with *Geranium* in group III.
- Blackberry is incorrectly placed in group II and should be replaced with cotton.
- Cocklebur is incorrectly placed in group III and should be replaced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

49. Refer to the given Venn diagram and select the correct statement regarding P, Q and R.



- P could be an incurable disease that damages immune system of the infected person.
- R could be a disease in which blood platelet count of a person goes down significantly.
- Both P and Q could be communicable diseases, of which Q could get cured on its own.
- All of these

50. Suraj conducted an experiment as shown in the given figure.



Select the option that correctly identifies D, E, F and G.

	D	E	F	G
A.	Chalk powder	Ink	Oxygen	Turmeric powder
B.	Oil	Chilli powder	Ink	Sand
C.	Ink	Oil	Salt	Sand
D.	Sand	Milk	Oil	Sugar

SPACE FOR ROUGH WORK