



LEVEL - 2

Year 2016-17

1. Study the given table and select the correct option regarding P, Q and R.

Reproductive parts other than seeds	Roots	Q	R
Example of plants	P	Ginger	Bryophyllum

- A. P is modified to store food as in sweet potato or peepal.
 B. Q is always underground and modified to store food.
 C. R is non-green and non-photosynthetic and performs the function of reproduction only.
 D. P could be dahlia or turnip.

2. Which of the following animals' breathing organ is not hidden in the given word grid?

G	O	S	W	H
I	P	P	S	O
L	U	N	G	S
L	T	I	H	R
S	K	I	N	S
Q	S	P	O	R

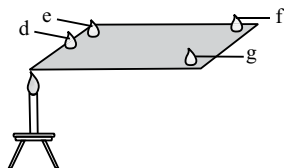
- A. Whale
 B. Scoliodon
 C. Grasshopper
 D. Earthworm

3. The given diagram shows three gears arranged to work in a mechanical system. If gear Q moves in an anticlockwise direction, in which direction would gears P and R move?



- A. P-Anticlockwise, R-Clockwise
 B. P-Clockwise, R-Clockwise
 C. P-Clockwise, R-Anticlockwise
 D. P-Anticlockwise, R-Anticlockwise
4. One afternoon Ravi and Mohit were playing in park. All of a sudden, Ravi felt uneasy and started to bleed through nose. What should Mohit do immediately to handle the situation?
- A. He should blow some warm air on a handkerchief and put it over Ravi's mouth.
 B. He should make Ravi sit on a bench or chair with his head held back.
 C. He should block Ravi's nose with a piece of cloth to stop the bleeding.
 D. He should apply some antiseptic within Ravi's nose using some cotton.

5. d, e, f and g are drops of wax placed on a rectangular piece of metal. When the metal frame is heated at the point shown in the diagram, the drops of wax will melt. Which of the following shows the order in which the drops of wax will melt?

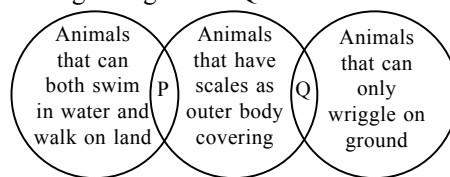


- A. d, e, f and g
 B. d, e, g and f
 C. g, f, e and d
 D. g, f, d and e

6. One night, Lissy watched a constellation over a period of several hours. She found that the constellation seemed to move across the sky. Which of these can explain this?

- A. Some constellations are moving constellations.
 B. As the Earth rotates, constellations seem to move.
 C. The outer portions of the galaxy rotate very slowly around the Earth.
 D. All constellations move randomly through the sky.

7. Refer to the given Venn diagram and select the correct option regarding P and Q.



- A. P - Siberian crane, Q - Alligator
 B. P - Crocodile, Q - Rattle snake
 C. P - Seal, Q - Turtle
 D. P - Salmon, Q - Lizard

8. Which of the following is not a reflex action?

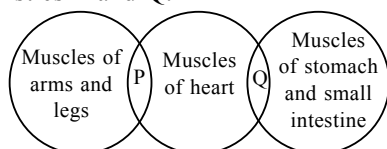
- A. Stepping back when toe is pricked by a sharp nail.
 B. Contraction of pupils of the eyes when exposed to bright light all of a sudden.
 C. Coughing or sneezing on intake of an irritant material.
 D. Recalling and writing the mugged up content in exam paper.

9. Refer to the given figure indicating three types of forces, X, Y and Z and select the incorrect option.

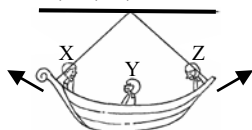


- A. An astronaut floats in space due to absence of force Z.
 B. When we use pulley to lift a bucket of water from well (pulling vertically downward) then pulley makes X in opposite direction of Z making it easier to lift the bucket.
 C. Force Y is responsible for wearing and tearing of tyres of vehicles.
 D. We can walk only on those surfaces which offer no Y.

10. Refer to the given Venn diagram and identify characteristics P and Q.



- A. P-Voluntary in nature, Q-Never take rest
 B. P-Presence of striations, Q-Involuntary in nature
 C. P-Get fatigued easily, Q-Non-striated
 D. P-Involuntary in nature, Q-Never take rest
11. The diagram shows three people taking a ride at a fair as shown here. As the boat swings back and forth, which of the following statement(s) is/are true about the three persons, X, Y, and Z ?



- (i) X experiences the most potential energy when the boat swings left.
 (ii) Z experiences the most potential energy when the boat swings right.
 (iii) Y experiences the most potential energy as the boat passes the rest position during swinging.
- A. (i) only B. (ii) only
 C. (i) and (ii) only D. (i), (ii) and (iii)

12. X is a plant whose seeds are dispersed by wind whereas Y is a plant whose seeds are dispersed by animals. Which of the following holds true regarding plants X and Y?

- A. The seeds of plant X may have either wings or hair like structures.
 B. The fruits of plant Y may or may not be edible.
 C. The seeds of plant X are dispersed in a small radius around parent plant whereas seeds of plant Y are dispersed to very far off places.
 D. Both A and B

13. Starting from the first letter strike out every alternate letter to get the name of a sedimentary rock formed when large rounded clasts get cemented together in a matrix.

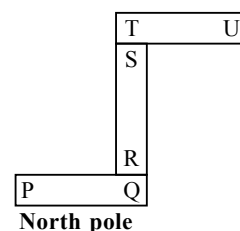
- A. PQSUTAURJTKZOIWTLEM
 B. MORBTSUIVDWIXAYNZ
 C. SGQRPA MNLIGTKET
 D. LCYOMNEGTLUOJMG EKRIASTPEQ

14. Identify the incorrect statement from the following.

- A. Matter exists in different forms.
 B. Matter can be changed from one form to another.

- C. A new substance is formed in a chemical change.
 D. Ice is heavier than water.

15. The given diagram shows arrangement of three magnets where their poles in contact stick to each other.



- Which of the following arrangements is not possible with above given magnets?

- A.

Q	P	S	R
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 B.

T	U	Q	P
---	---	---	---

 C.

S	R	U	T
---	---	---	---

 D.

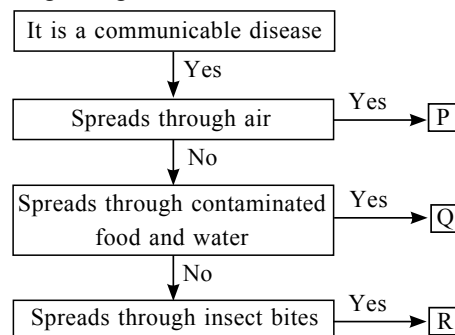
P	Q	T	U
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16. Refer to the given relationship based on eating habit and select the option which satisfies the same relationship.

Wildebeest :: Eagle :: Bear

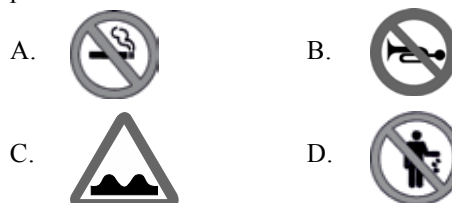
- A. Crocodile :: Vulture :: Wolf
 B. Zebra :: Leopard :: Crow
 C. Elephant :: Sparrow :: Giraffe
 D. Kangaroo :: Hippopotamus :: Snake

17. Refer to the given flow chart and select the correct option regarding P, Q and R.

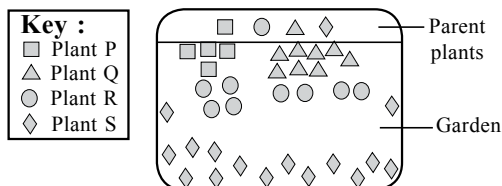


- A. P could be tuberculosis or leprosy, caused by virus.
 B. Q could be cholera or typhoid, caused by bacteria.
 C. R could be malaria or sleeping sickness, caused by Anopheles mosquito.
 D. P, Q and R are non-infectious but contagious diseases.

18. Which of the following signs does not warn against pollution?



19. Raman planted four plants P, Q, R and S near the boundary of his garden. The diagram shows the distribution of these plants in the garden area after a certain time period.



Which one of the plants is most likely to be dandelion?

- A. Plant P B. Plant Q
C. Plant R D. Plant S
20. Four beakers with copper sulphate at the bottom are shown below. Each beaker is left undisturbed for some time. In which beaker would the copper sulphate dissolve first?
- P

100 cm³ of water
5 g of copper sulphate crystals

Q

100 cm³ of water
5 g of powdered copper sulphate

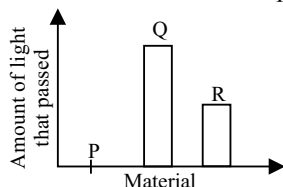
R

50 cm³ of water
5 g of copper sulphate crystals

S

50 cm³ of water
5 g of powdered copper sulphate
- A. P B. Q
C. R D. S
21. Select the incorrect statement.
- A. Jupiter is the largest planet which takes about 12 years to orbit once around the Sun.
B. Neptune appears bluish in colour due to the presence of helium gas.
C. Mars contains a lot of rusted iron that makes it look red.
D. Jupiter, Saturn, Uranus and Neptune have more than one moon but Mercury and Venus do not have any moon.

22. Raj shone torchlight on three objects P, Q and R one at a time and measured the amount of light that passed through each one of them by using light sensors. The given graph shows the result of his experiment.



Which of the following options correctly identifies P, Q and R?

- | P | Q | R |
|---------------------|---------------------|------------------|
| A. Frosted glass | Mirror | Cellophane paper |
| B. Cardboard | Clear plastic sheet | Tracing paper |
| C. Window pane | Aluminium foil | Sand paper |
| D. Cellophane paper | Tracing paper | Mirror |
23. Seema carried out an experiment to find out how fast water can pass through four different types of soil. She placed each type of soil into a pot and put a dish

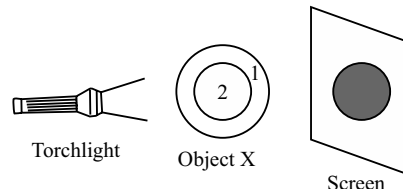
at the bottom of pot to collect the water. She used a stopwatch to measure the time taken for water to reach the level, she had marked in each dish.

She tabulated the results as shown here.

Type of soil	W	X	Y	Z
Time (in sec)	40	60	20	110

Which soil is best suited for rice cultivation?

- A. W B. X
C. Y D. Z
24. The object X is made up of two materials 1 and 2. When the light is shone on it, it casts a shadow on screen as shown in the picture.



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

- | Material 1 | Material 2 |
|---------------------------|---------------------|
| A. Aluminium foil | Thermocol |
| B. Cardboard | Clear plastic sheet |
| C. Clear cellophane paper | Styrofoam |
| D. Thermocol | Cardboard |
25. Which of the given graphs correctly shows the level of noise produced by three activities P, Q and R given in the box?
- P - Puja whispering into Reema's ears.
Q - A group of children burning the crackers.
R - A plane taking off.
- A.

B.

C.

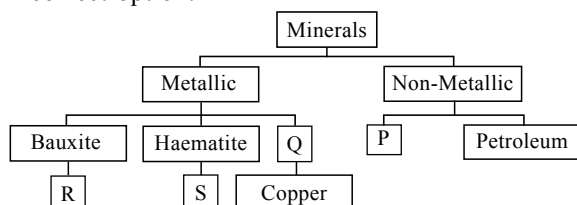
D.
26. Which of the following statements is/are incorrect?
- (i) Milky Way is a spiral-shaped galaxy.
(ii) Planet Venus has 63 Moons.
(iii) Satellites are small heavenly bodies that revolve around the Sun.
(iv) One revolution of the Earth is completed in about $365\frac{1}{4}$ days. This time period is called a solar year.
- A. (i) and (iv) only B. (ii) and (iii) only
C. (i) and (ii) only D. (iii) and (iv) only

27. Rohan categorised simple machines used at his home into two groups as shown here. Which of the following can be categorised in group 1 and 2 respectively?

- A. Stapler, Wheelbarrow
B. Crowbar, Broom
C. Badminton racquet, Bottle opener
D. Nutcracker, Shovel

Group 1	Group 2
Scissor	Tweezers
Seesaw	Fishing rod
Pliers	Ice tong
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28. Refer to the given classification chart and select the correct option.



- A. P is a non-renewable fuel source which is also responsible for environmental pollution and global warming.
B. Q could be pyrite or calamine.
C. R and S are good conductors of heat and electricity hence used in making utensils, wires, etc.
D. Both A and C

29. Which of the things listed below are biodegradable ?

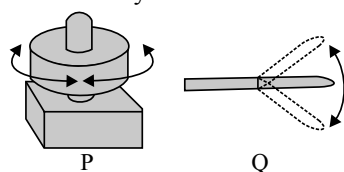
- (i) Log (ii) Plastic toys
(iii) Gold necklace (iv) Roasted chicken
(v) Credit card (vi) Apple

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

30. Raju, a farmer got his field checked for soil toxicity. The report showed high level of toxic chemicals in his field. How can these toxic chemicals in the soil be harmful?

- A. They may enter any nearby waterbody due to runoff and cause algal bloom.
B. They are absorbed by food plants growing in the soil making them unfit for consumption.
C. They may get evaporated in the air causing air pollution.
D. Both A and B

31. Figures P and Q represent the movement of two types of joints in our body.



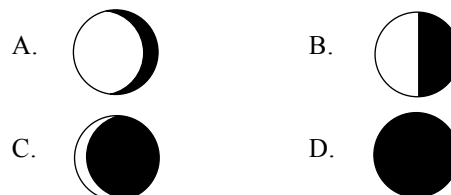
Select the correct statement regarding them.

- A. Movement of bones having joint P can be

compared to the movement of a joystick on computer.

- B. Bones having Q joint can show movement in only one plane.
C. Joint P is present in our elbows and knees.
D. Joint Q is present between our backbone and skull.

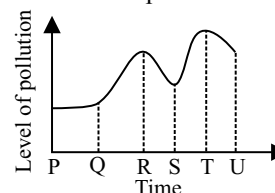
32. Preeti looked at the night sky of 13th August and observed a Full Moon. What shape of Moon will she most probably observe on 26th August?



33. The celestial bodies which revolve around the Sun between the orbits of Mars and Jupiter are called

- A. Asteroids B. Comets
C. Meteors D. Meteorites.

34. The given graph shows the changes in level of pollution in an area over a time period.



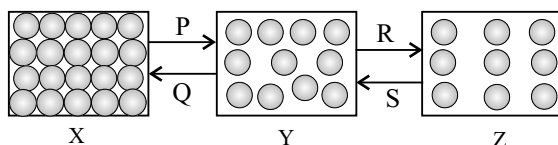
Which of the following can be inferred from the given graph?

- A. At point P a lot of forest land was cleared for human consumption whereas at point Q large scale afforestation was done.
B. At point R a new factory was set up in the area.
C. People cut down the use of fossil fuels in the interval S – T as compared to its earlier usage.
D. Intervals R – S and T – U indicate activities like use of bioinsecticides and biopesticides instead of chemicals in farming, use of public transport instead of private transport, etc.

35. The strong storms in the Atlantic and northeastern Pacific oceans are called P whereas in northwestern Pacific Ocean they are called Q. In the Indian Ocean and south Pacific Ocean they are called R. Identify P, Q and R in the given paragraph.

- A. P-Hurricanes, Q-Typhoons, R-Cyclones
B. P-Typhoons, Q-Hurricanes, R-Cyclones
C. P-Cyclones, Q-Typhoons, R-Hurricanes
D. P-Hurricanes, Q-Cyclones, R-Typhoons

36. The given figure shows three states X, Y and Z in which a matter can exist.



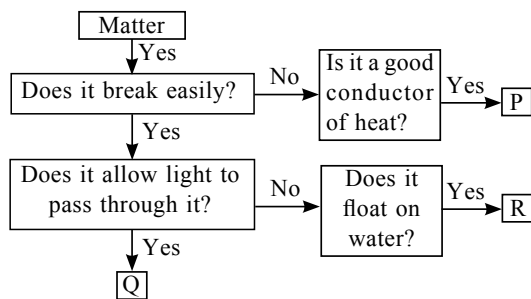
Identify these states and processes (P, Q, R and S) and select the incorrect option regarding them.

- A. Process R is responsible for drying of wet clothes when put on clothesline.
 B. Process S is responsible for formation of clouds in the atmosphere.
 C. A naphthalene ball converts from its X state to Y state and *vice versa* by involving processes P and Q.
 D. During processes P and R, heat energy is used to overcome the force of attraction between the particles.

37. Read the given statements and select the option that correctly fills blanks in any three of these.

- (i) A _____ is a bandage tightly tied over the wound to stop bleeding.
 (ii) A crack or break in a bone is called a _____.
 (iii) _____ is a bandage passing over the shoulder to support an injured upper limb.
 (iv) A strip of rigid material that is used to hold a broken bone in position is called _____.
 (v) Throwing water on fire caused by defective wiring can cause _____.
 A. (i)-Sling, (iv)-Compression, (v)-Discolouration
 B. (ii)-Fracture, (iii)-Sling, (v)-Electrocution
 C. (ii)-Sprain, (iv)-Splint, (v)-Electroplating
 D. (i)-Tourniquet, (iii)-Splint, (iv)-Sling

38. Refer to the given flow chart and select the correct option regarding P, Q and R.



- | P | Q | R |
|-------------------|----------------|-----------------|
| A. Iron rod | Sand paper | Eraser |
| B. Spectacle lens | Styrofoam cup | Steel tumbler |
| C. Wooden door | Aluminium foil | Cardboard |
| D. Gold earrings | Window pane | Thermocol plate |

39. Terrace farming is done in hilly areas. It helps in reducing soil erosion occurring due to rains because

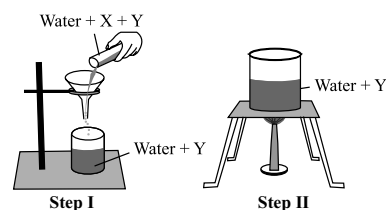
- A. It reduces the speed of flowing water
 B. It does not allow rain water to hit directly on crop plants

- C. It stagnates the rainwater which can be used by crop plants later on
 D. Both A and C

40. Match column I with column II and select the correct option.

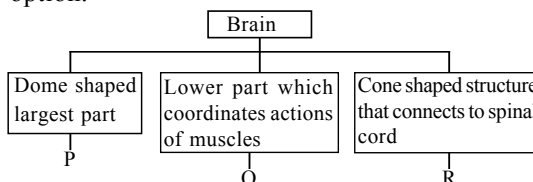
Column I	Column II
(a) Arctic tern	(i) Migrates from sea to river to reproduce
(b) Salmon	(ii) Migrates to escape harsh winter
(c) African antelope	(iii) Migrates to escape drought during summer
(d) Eel	(iv) Migrates from river to sea to reproduce
A. (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)	
B. (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)	
C. (a)-(i), (b)-(iv), (c)-(ii), (d)-(iii)	
D. (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)	

41. The given setup shows the separation process of a mixture containing water, X and Y. X and Y respectively are _____.



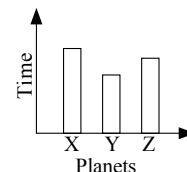
- A. Mud and Salt
 B. Salt and Sugar
 C. Sugar and Salt
 D. Mud and Clay

42. Refer to the given flow chart and select the incorrect option.



- A. Part P will help a student think, learn and recall her lessons.
 B. Part Q will help a child to learn the art of riding a bicycle.
 C. Part R controls our breathing and heartbeat even when we are asleep.
 D. Part Q will help a person retract his hand when touched by a hot object.

43. A ball of mass 'm' was dropped from height 'h' on 3 different planets X, Y and Z one at a time. The given graph shows the comparative account of time taken by the ball to reach the surface of these planets when dropped from the same height.



Which of the following holds true regarding this?

- A. The ball will weigh heaviest on planet X and lightest on planet Y.
 B. It will be easier to lift a load on planet X as compared to planets Y and Z.
 C. The layer of atmosphere is most likely to be absent on planet Y but present on planets X and Z.
 D. Both A and C

44. Match column I with column II and select the correct option.

Column I	Column II
(a) Circular transparent area in the front portion of eye	(i) Optic nerve
(b) The coloured part of eye	(ii) Retina
(c) An opening in the centre through which light enters the eye	(iii) Iris
(d) Layer of eye containing cells sensitive to light and colour	(iv) Pupil
(e) Nerve that carries impulses from eye to brain	(v) Cornea
A. (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i), (e)-(v)	
B. (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii), (e)-(v)	

- C. (a)-(v), (b)-(iii), (c)-(iv), (d)-(ii), (e)-(i)
 D. (a)-(ii), (b)-(v), (c)-(iii), (d)-(i), (e)-(iv)

45. Two persons X and Y went to see a doctor for their respective diseases. The given box shows what they communicated to the doctor about their illness.

Person X : "I have swollen gums that bleed when I brush my teeth or eat anything. My joints are also swollen and keep paining."

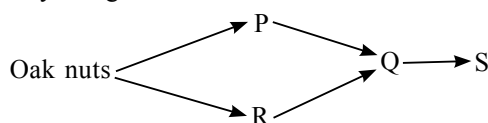
Person Y : "I am unable to see properly in dim light."

What can be concluded about these persons?

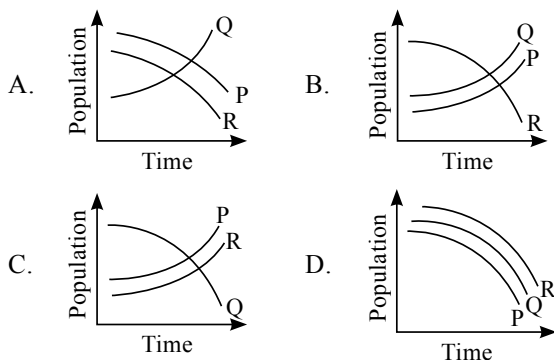
- A. Person X does not take citrus fruits in his diet.
 B. Person Y is suffering from iron deficiency. So he should take lots of green leafy vegetables in his diet.
 C. Person X is suffering from scurvy whereas person Y is suffering from rickets.
 D. Both the persons are diseased due to deficiency of vitamins but person X is having vitamin A deficiency and person Y is having vitamin C deficiency.

ACHIEVERS SECTION

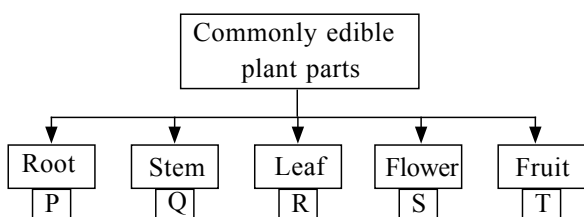
46. Study the given food web.



Which of the following graphs shows how the populations of P, Q and R are likely to be affected if the population of S is increased?



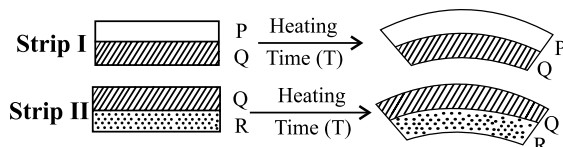
47. Refer to the given flow chart and select the correct option regarding P, Q, R, S and T.



	P	Q	R	S	T
A.	Argemone	Bamboo	Cabbage	Clove	Chenopodium
B.	Tapioca	Lotus	Lettuce	Banana	Brinjal
C.	Mustard	Kale	Castor	Mint	Wheat
D.	Broccoli	Chinaberry	Candytuft	Fennel	Tomato

48. Ritu took two bimetallic strips, I and II (of equal size, length and breadth) made up of metals P and Q; and Q and R, respectively as shown here.

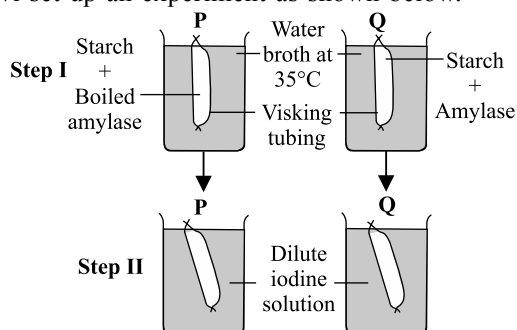
She subjected each bimetallic strip to heating for same time period. The given diagram shows her experiment.



Which of the following cannot be inferred from the above experiment?

- A. Metal P expands more as compared to metals Q and R on heating for the same time period.
 B. Metal R contracts more as compared to metals P and Q on heating for the same time period.
 C. The ascending order of expansion of these metals when subjected to heating is $R < Q < P$.
 D. Both B and C

49. Ravi set up an experiment as shown below.



Which of the following holds true regarding set ups P and Q?

- In set up P, the solution inside Visking tubing will become blue black at step II as all the starch is converted to simple sugars.
- In set up Q, the solution inside Visking tubing will become blue black at step II as starch is not digested at all.
- In set up P, the solution inside Visking tubing will become blue black at step II as starch is not digested by boiled amylase.

- In set up Q, the solution inside Visking tubing will become blue black at step II as all the starch is converted to simple sugars by amylase.

50. Which of the following is not present in the given word grid?

F	B	T	S	U	N	A	M	I
L	F	Y	C	Y	C	L	O	N
O	I	P	W	X	Z	Y	P	Z
O	E	H	U	R	R	I	C	A
D	R	O	U	G	H	T	E	T
P	V	O	L	C	A	N	O	U
J	L	N	E	A	R	T	H	Q

- A strong tropical storm with fast spinning winds called as hurricane in Southern USA.
- Natural disasters caused due to excessive or no rainfall at all in an area
- An opening or rupture in Earth's surface or crust through which hot molten rock, ash and gases escape
- A natural havoc whose intensity is measured on a seismograph

SPACE FOR ROUGH WORK