



BIOLOGY

BOOKS - HT Olympiad Previous Year Paper

OUR ENVIRONMENT

Multiple Choice Questions

1. Manisha took some vinegar in a test tube and added some baking soda to it. Then she lit a matchstick and brought it near the mouth of the test tube. The flame of matchstick got extinguished.

Which of the following is correct conclusion regarding the given experiment?

- A. Carbon dioxide gas does not support burning.
- B. Air contains carbon dioxide.
- C. Oxygen gas present in the air is necessary for burning.
- D. Oxygen gas can extinguish fire.

Answer: A



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2. Read the following statements.

(i) The ozone layer is present in the troposphere.

(ii) Density of air decreases with increasing altitude

(iii) Air is an element that surrounds the Earth and makes it hospitable for living organisms.

(iv) Exosphere is the uppermost layer of the atmosphere.

Which of the given statements are correct?

A. (i) and (ii) only

B. (ii) and (iv) only

C. (i) and (iii) only

D. (iii) and (iv) only

Answer: B



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3. The given box contains some waste items.

Aluminium can, Vegetable peel, Broken glasses, Leftover of fruits, Cowdung, Tea leaves, Copper utensil, Plastic chair

Which of the following options correctly identifies the number of waste items that are biodegradable and non-biodegradable respectively?

A. 4, 4

B. 3, 5

C. 5, 3

D. 6, 2

Answer: A



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4. Which of the following actions will help in reducing pollution?

(i) Drinking water from bottles made of glass or metals.

(ii) Using unleaded petrol in cars.

(iii) Spraying pesticides on plants to kill pests.

(iv) Carrying cotton or jute bags for shopping instead of polybags.

A. (i) and (ii) only

B. (iii) and (iv) only

C. (i), (ii) and (iii) only

D. (i), (ii) and (iv) only

Answer: D



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

Statement 1: Biomedical wastes are disposed off by incineration.

Statement 2: Landfills are usually present outside the city so that the rotting garbage does not pollute land or water.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.

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

Answer: B



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6. Match column with column II and select the correct option from the codes given below.

Column I

- (a) Floods
- (b) Groundwater
- (c) Ocean
- (d) Precipitation
- (e) Clouds

Column II

- (i) Aquifers
- (ii) Salt water
- (iii) Rain
- (iv) Condensation
- (v) Excess rain

A.

(a) – (i), (b) – (ii), (c) – (iii), (d) – (iv), (e) – (v)

B.

(a) – (v), (b) – (i), (c) – (ii), (d) – (iii), (e) – (iv)

C.

(a) – (i), (b) – (v), (c) – (iii), (d) – (ii), (e) – (iv)

D.

(a) – (v), (b) – (i), (c) – (iii), (d) – (ii), (e) – (iv)

Answer: B



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7. Which of the following statements are true about acid rain?

(i) Acid rain has harmful effects on the living beings.

(ii) Acid rain mainly comprises of H_2SO_4 and HNO_3

(iii) Acid rain causes damage to the ozone layer.

(iv) Acid rain causes damage to buildings and monuments.

A. (i) and (ii) only

B. (i) and (iii) only

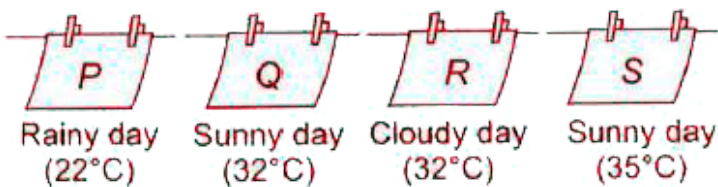
C. (i), (iii) and (iv) only

D. (i), (ii) and (iv) only

Answer: D

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8. Four identical wet towels were hung out on clothesline to dry under different conditions.



Arrange them in order, beginning with the towel that would take the shortest time to dry.

A. P, Q, R, S

B. P, R, Q, S

C. R, P, Q, S

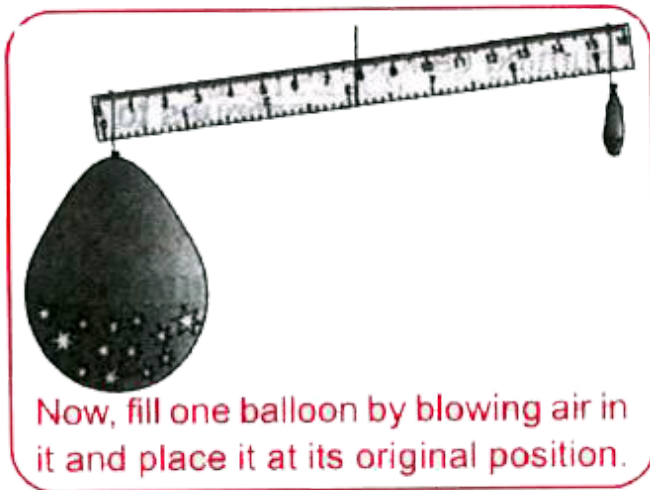
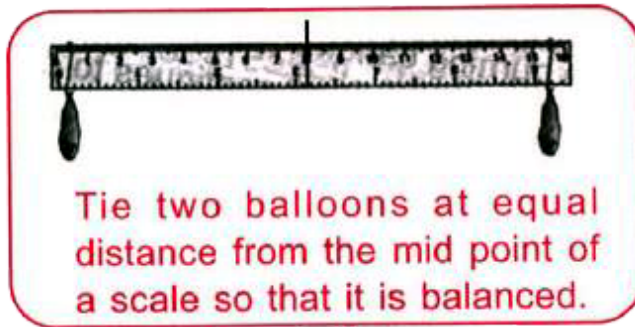
D. S, Q, R, P

Answer: D



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9. Study the following experiment.



What could be inferred from the above experiment?

A. Air contains dust particles.

B. Air does not have fixed volume.

C. Air has mass.

D. Air exerts pressure.

Answer: C



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10. Refer to the different sources of water given below.

(i) Tube well (ii) River (iii) Ocean (iv) Well (v) Pond (vi) Sea

Which of the following options shows the correct number of surface water sources (P) and groundwater sources (Q)?

A. $\begin{matrix} P & Q \\ 4 & 2 \end{matrix}$

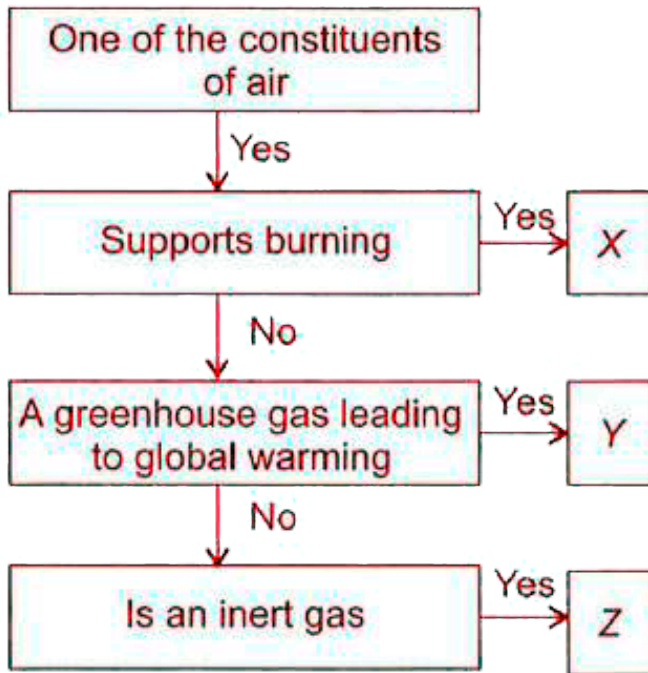
- B. P Q
3 3
- C. P Q
2 4
- D. P Q
5 1

Answer: A



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



- A. X Y Z
 O_2 CO_2 He
- B. X Y Z
 CO_2 O_2 N_2
- C. X Y Z
 N_2 CO_2 O_2
- D. X Y Z
 O_2 He CO_2

Answer: A



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12. Which of the following is a correct match?

A. Waste from farmyards and food courts - Non-biodegradable waste

B. Pesticides, pharmaceuticals and heavy metal sludge - Biodegradable waste

C. Peels of fruits and vegetables, tea leaves - Organic waste

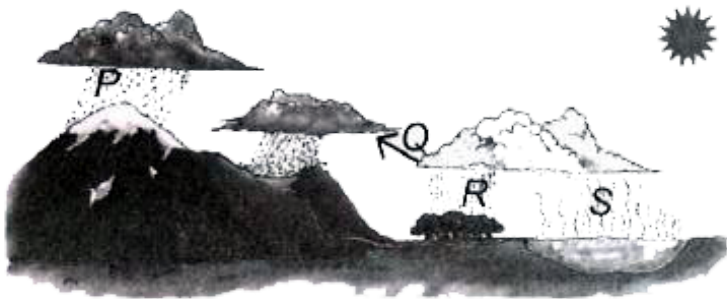
D. Mineral wastes from mining and rubber waste -

Kitchen waste

Answer: C

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13. Refer to the diagrammatic representation of water cycle and identify P, Q, R and S.



A. P - Condensation, Q - Precipitation, R- Transpiration,

S- Evaporation

B. P - Precipitation, Q - Condensation, R - Transpiration,

S- Evaporation

C. P - Evaporation, Q - Condensation, R - Precipitation,

S - Transpiration

D. P - Precipitation, Q - Evaporation, R - Condensation,

S - Transpiration

Answer: B



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14. Kanika noticed that her potted plant was not growing healthily. She put few earthworms into the pot. After a few weeks, she noticed that her plants looked healthier. What could be the possible reason for this?

- A. The earthworms ate up the pests in the soil.
- B. The earthworms helped the plant to take in water.
- C. The earthworms allowed the plant to make food faster.
- D. The earthworms increased the air and nutrient content of the soil.

Answer: D



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15. Read the following statements and select the option that correctly identifies true (T) and false (F) ones.

(i) Fog is formed when the water vapour condenses into tiny droplets of water in the air.

(ii) The atmospheric pressure is measured with the help of anemometer.

(iii) Places near the sea are expected to be less humid than the places that are far away

(iv) The condition of lack of food in a region for a long period of time is called famine.

A. *i* *ii* *iii* *iv*
T *F* *F* *T*

B. *i* *ii* *iii* *iv*
T *F* *T* *F*

C. i ii iii iv
 F F T T

D. i ii iii iv
 F T F T

Answer: A



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Achievers Section Hots

1. The different steps of vermicomposting are given below randomly.

(i) Spread sand on the floor of the pit

(ii) Place red worms in the pit (iv) Sprinkle water to keep it moist

(v) Dig a pit in a suitable place

(vi) Add vegetable peels and fruit waste in the pit

Which of the following represents the correct sequence of steps?

A. (v) → (vi) → (i) → (iii) → (ii) → (iv)

B. (v) → (i) → (vi) → (iii) → (iv) → (ii)

C. (v) → (i) → (iii) → (vi) → (ii) → (iv)

D. (v) → (ii) → (iii) → (iv) → (i) → (vi)

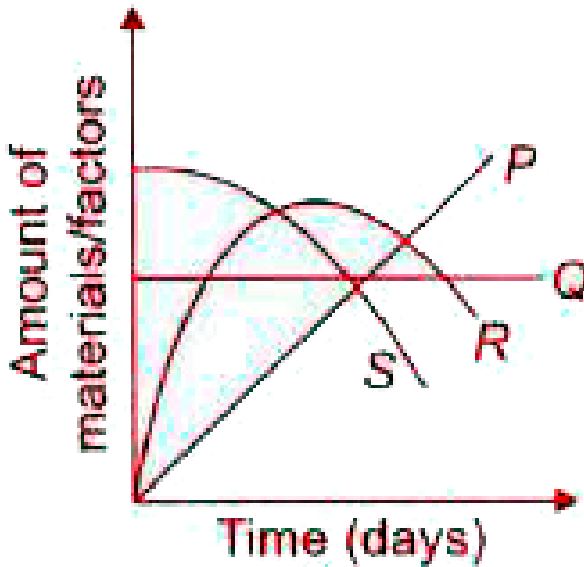
Answer: B



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2. Dustbin containing discarded material was left uncovered for some time. Amount of different materials

and factors related to them changed during these days which were plotted in the given graph.



Select the correct option regarding this.

A. Q could be tin can.

B. P could be decomposer microbes and R could be fruits and vegetables peel.

C. P could be organic waste whereas S could be discarded syringe.

D. All of these

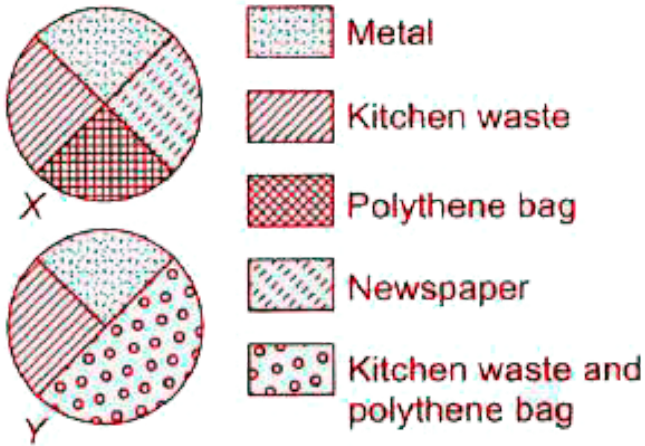
Answer: A



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3. Refer to the given pie charts based on waste segregation methods X and Y and select the correct

option.



A. Method Y is more environmentally conscious method because polythene bags are disposed of with kitchen waste.

B. Method X is more environmentally conscious method because polythene bags are disposed of separately.

C. Method Y is more environmentally conscious method because newspapers are not generated.

D. None of these

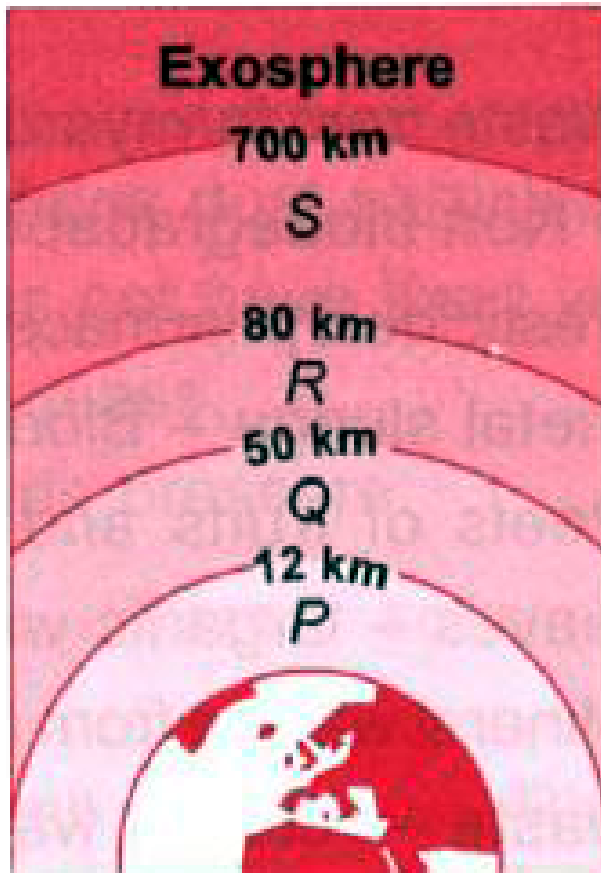
Answer: B



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4. Refer to the given figure representing different layers of Earth's atmosphere and select the incorrect statement

regarding it.



Layers of atmosphere

A. Wind, storm and snow are formed in P layer of atmosphere.

B. Q is the atmospheric layer where most clouds are formed as, 99% of the water vapours are present in this layer.

C. In atmospheric layer R meteors burn up.

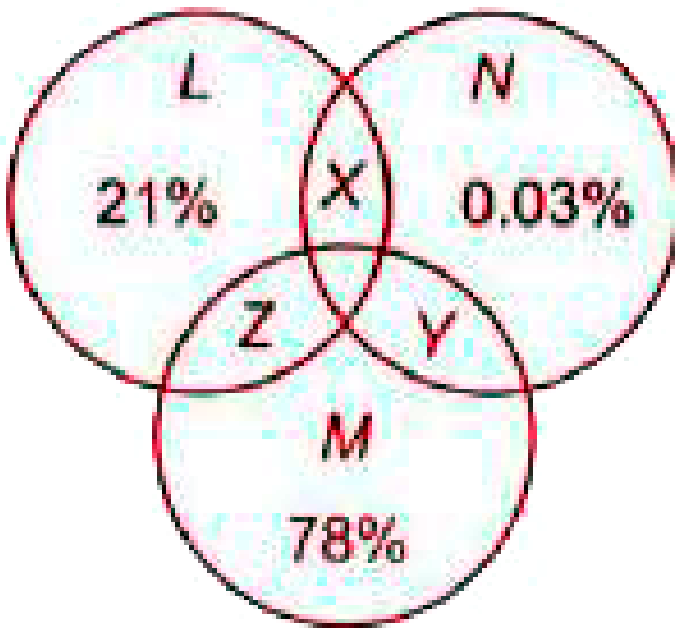
D. In atmospheric layer S temperature increases with height.

Answer: B



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5. Study the given Venn diagram and identify the gases (L, M and N) present in our atmosphere.



Select the incorrect option regarding characteristics X, Y and Z of these gases.

- A. X- Support life on Earth
- B. Y-Do not support combustion

C. Z- Form compounds that are components of acid rain

D. None of these

Answer: D

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