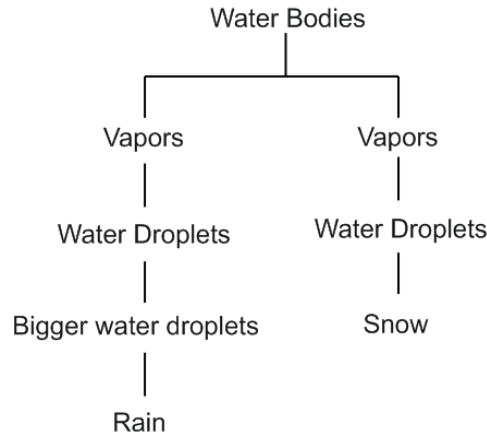


## QUIZ: AIR, WATER AND SOIL

Consider the figure given below to answer question 1 & 2.



- The processes taking place for transporting water from water bodies to rain is/are
  - Distillation
  - Condensation
  - Evaporation
  - (iii) Only
  - (i) Only
  - (iii) and (ii) only
  - (i) and (iii) only
- In nature, conversion of water from water bodies to snow involves the process/es of
  - Condensation and evaporation only
  - Evaporation, condensation & precipitation
  - Condensation only
  - Precipitation only
- Fossil fuels are widely used as a source of heat and for cooking. Also, It is one of the main sources of air pollution. The gas/es formed as a result of burning of fossil fuels and causing air pollution is/are
  - Carbon dioxide
  - Nitrogen oxides
  - Sulphur dioxide

(iv) Hydrogen sulphide

- (a) (i) only
- (b) (i) and (ii) only
- (c) (i), (ii) and (iv) only
- (d) (ii) and (iii) only

4. Which of the following causes acid rain?

- (a) Presence of carbon dioxide in air
- (b) Presence of sulphur dioxide in air
- (c) Precipitation of water droplets in air
- (d) Presence of particulate matter in air

5. Which of the following is **not** responsible for pollution of water?

- (a) Release of chemical waste from chemical industries to water bodies.
- (b) Release of hot water into water bodies.
- (c) Release of sewage.
- (d) Natural fish breeding in a water body.

6. Breaking of rocks into small particles is responsible for the formation of soil. This soil from rocks reaches far off places by

- (i) Fast flowing water
- (ii) The Sun
- (iii) Strong winds
- (iv) Growing of lichens on the surface of soil

- (a) (i) and (ii) only
- (b) (ii) and (iv) only
- (c) (i) and (iii) only
- (d) (i), (ii) and (iv) only

**Answers:**

**1. (c)**

**Options:**

- (a) The water from water bodies evaporates and then condenses to form rain.
- (b) Same as (a)
- (c) Correct. Same as given in questionnaire sheet.

**Explanation:** Water evaporates from water bodies due to the heat of the sun and rises up in the form of water vapours in the air. The hot air moves up and becomes cool due to water vapours. It causes condensation of water vapours to tiny water droplets. The tiny water droplets become bigger and heavier by condensation. It causes rain.

**2. (b)**

**Options:**

- (a) Water evaporates from water bodies to form vapours (Evaporation). The vapours condense to form water droplets (Condensation). Snow is not formed up to this stage.
- (b) Correct. Same as given in the questionnaire sheet.
- (c) Only condensation causes the vapours to condense to liquid water.
- (d) In precipitation, water vapours get converted to water droplets. So other processes are missing here.

**Explanation:** Formation of bigger and heavier water droplets involves evaporation & then condensation of vapors to water droplets. When the temperature is low enough, the precipitation of water droplets occur, causing snowfall.

**3. (d)**

**Options:**

- (a) Carbon dioxide present in the atmosphere is continuously consumed by plants and it is not considered as a pollutant.
- (b) (i) Same as in (a) above.  
(ii) In addition to nitrogen oxides, other gases also cause air pollution.
- (c) (i) Same as in (a)  
(ii) Same as in (b) (ii)  
(iii) Hydrogen sulphide is not a pollutant gas.
- (d) Correct. Same as in questionnaire sheet.

**Explanation:** Oxides of nitrogen and sulphur are formed due to burning of fossil fuels in air as some compounds containing nitrogen and sulphur are present in them.

**4. (b)**

**Options:**

- (a) As carbon dioxide is being continuously absorbed by plants in photosynthesis, it is not an air pollutant.
- (b) Correct. As given in questionnaire sheet.
- (c) Precipitation of water droplets in air leads to rain.
- (d) Particulate matter is not acidic in nature.

**Explanation:** Sulphur dioxide, being acidic in nature, forms sulphurous acid and then sulphuric acid by its reaction with water.

**5. (d)**

**Options:**

- (a) Chemical waste may consists of various harmful chemicals which dissolve in water. The use of this water is harmful when it is used for different purposes.
- (b) Release of hot water into water bodies damages various life forms found in water bodies.
- (c) Sewage contains harmful and undesirable substances and bacteria.
- (d) Correct. Same as in questionnaire sheet. Fish require unpolluted water to breed and survive.

**Explanation:** Release of chemical waste, hot water and sewage into water stream are the sources of water pollution.

**6. (c)**

**Options:**

- (a) The reason (i) is only one factor for small particles of rock to reach for off places.
- (b) The reason (ii) i.e., the Sun is a source of heat and then breaking of rock into smaller pieces. (iv) Growing of lichens releases certain substances that cause rock surface to powder down and form thin layer of soil.
- (c) Correct. Same as in questionnaire sheet.
- (d) (i) It is one of the factors for the soil to reach far off places.
  - (ii) Same as (b) (ii)
  - (iv) Same as (b) (iv)

**Explanation:** Fast flowing water carries with it big and small particles of rock downstream. These rock pieces rub against each other and other rocks and get broken into smaller and smaller pieces. Strong winds also erode rocks down and also carries sand from one place to another.