Air Pollution
(English Medium)

Exercise 106:

Solution 1(a):

The reasons for air pollution are as follows:

1. Smoke exhausting vehicles: Smoke exhausted by scooters, trucks, motor cars etc. spreads pollution in the air. The upper layer of the air gets polluted because of the poisonous gases produced from fuels used for jet planes, rockets and missiles.
2. Smoke coming out of industries: Because of the use of chemical substances in industries, carbon particles and poisonous gasses like carbon monoxide, sulphur dioxide and hydrogen sulphide are produced and mix with the air, and so, they pollute the air. Woods and coal are used as fuel in many industries. Because of this, carbon dioxide and carbon monoxide are produced and they spread pollution in the air.
3. Deterioration of substance: When the vegetables, fruits, foods excreta of animals, dead bodies of animals lie unattended for a long time, they get deteriorated and gases like ammonia, carbon dioxide and hydrogen sulphide with very foul smell as well as microorganisms are produced and they spread pollution in the air.
4. Dust Particles: the dust particles, carbon particles, pollen grains, hair, wool and fine threads of cotton etc. mix in the air and pollute the air. In addition, the flying particles present in industries producing cement and lime and pottery (ceramic) industries, coal mines mix in the air and spread pollution.
5. Radiation: Atomic energy is used in different works and so, radioactive pollution has increased. Harmful radiations spread in the atmosphere because of the experiments of armaments like atom bombs.

Exercise 108:

Solution 1(a):

Fukushima Daiichi was a nuclear disaster at theFukushima Nuclear Power Plant on 11 March 2011 which resulted in a meltdown of three of the plant's six nuclear reactors. The failure occurred when the plant was hit by a tsunami which was triggered by a magnitude of 9.0 Tōhokuearthquake. The plant began releasing substantial amounts of radioactive

material on 12 March, and became the largest nuclear incident since the Chernobyl disaster in April 1986 and the second (after Chernobyl) to measure Level 7 on the International Nuclear Event Scale, initially, releasing an estimated 10-30% of the earlier incident's radiation.

Exercise 109:

Solution 1(a):

Carbon dioxide gas is exhaled by living beings.

Solution 1(b):

People inhale oxygen and exhale carbon dioxide gas. The proportion of carbon dioxide gas goes on increasing while the proportion of oxygen gas goes on decreasing in a closed hall. Thus, air becomes polluted. Hence, we feel suffocation in the closed hall where many people gather.

Solution 1(c):

Doctors and nurses are always in contact with patients. It might be possible that the disease causing microorganisms are present in the exhaled air by patients.

Exercise 110:

Solution 1(a):

All the living beings exhale carbon dioxide during respiration. Hence, the proportion of carbon dioxide increases in the atmosphere due to the crowd of people and the automobile exhausts. Thus, atmosphere becomes polluted by dust, disease causing microorganisms and harmful gases. To protect themselves from this polluted air, Raju and Riaz cover their faces with a handkerchief.

Exercise 112:

Solution 1(a):

Acidic oxides present in polluted air get dissolved in rainwater. They fall down on the ground as acid rain. This water affects the aquatic animals and plants when it flows into the sea.

Exercise 113:

Solution 1(a):

The following measures should be taken to save the world from the devil-like pollution:

1. PUC vehicles should be checked on a regular basis.
2. Pure engine oil should be used.
3. Plant more trees and stop deforestation.
4. The exhausted gases from vehicles and factories should be treated before releasing into the atmosphere.
5. Rules of pollution control should be followed properly.

Exercise 114:

Solution 1:

PUC means pollution under control. This certificate is must for automobiles to check emission.

Solution 2:

The fuels used in automobiles are petroleum products. They pollute the atmosphere on burning. The engine of the vehicle and the fuel both are checked. If they meet emission standards then PUC certificate is issued. Such automobiles having PUC certificate do not pollute atmosphere beyond a certain limit.

Solution 3:

CNG is advisable as pollution created by CNG is lesser than both diesel and petrol.

Solution 4:

The following care should be taken of vehicles to reduce pollution:

1. Pure engine oil and fuel should be used.
2. The engine of the vehicles should be checked on a regular basis.
3. PUC should be done for every vehicle.

Exercise 116:

Solution 1:

During photosynthesis, green plants utilize carbon dioxide from the atmosphere and release oxygen. Thus, these trees reduce the amount of carbon dioxide and increase the amount of oxygen in the atmosphere. Hence, trees help us to control air pollution.

Solution 2:

Factories and mills should be built away from residential areas because chemical substances and fuels in factories produce harmful gases such as carbon dioxide, carbon monoxide, oxides of nitrogen and sulphur. To keep residences away from such a polluted atmosphere, factories and mills should be built away from residential areas.

Solution 3:

The following measures can be taken to reduce pollution:

1. Stop deforestation,
2. Plant more trees,
3. Use of non-conventional energy sources such as solar energy, wind energy.
4. PUC of vehicles should be done on regular basis.
5. Follow the laws of pollution control.