(c) Depletion of ozone layer:

- Spread of air borne diseases E.g. Tuberculosis.
- Acid rain.
- Global warming.

(d) Industrial worker can be protected against harmful chemical fumes by:

- using protective masks to protect them from harmful fumes.
- Good ventilation systems in industries i.e. air circulation.
- Close chambers for chemical processes.

2. (a) Ozone layer formation:

\[ \text{O}_2(g) \xrightarrow{\text{uv. light}} 2\text{O}_3(g) \]

\[ \text{O}_2(g) + \text{O}_3(g) \rightarrow 3\text{O}_3(g) \]

(b) Causes of depletion of ozone layer:

(a) Natural destruction.
(b) Artificial destruction.
(a) Artificial destruction

- Through gases e.g. CFC’s

\[ \text{Cl}_2 \text{CF}_2 \xrightarrow{u.v} \text{Cl} + \text{Cl} \text{CF}_2 \]

\[ \text{Cl} + \text{O}_3 \rightarrow \text{ClO} + \text{O}_2 \]

\[ \text{ClO} + \text{O} \rightarrow \text{Cl} + \text{O}_2 \]

This is a chain reaction which later leads to the destruction of ozone layer.

(b) Natural destruction

Using Nitrous oxide

\[ \text{NO} + \text{O}_3 \rightarrow \text{NO}_2 + \text{O}_2 \]

\[ \text{NO}_2 + \text{O} \rightarrow \text{NO} + \text{O}_2 \]

\[ \text{O}_3 + \text{O} \rightarrow 2\text{O}_2 \]

(c) Harmful effects of ozone layer depletion

- It may result to skin cancer due to UV-rays.

- Damage immune system leading to increase in viral infection.