

CSB-2017

Date:

NO:

GSA

PART-II

Section-I

Question no. 2:

(A)

Answer: Environmental

Pollution:

**Definition:** Environmental pollution can be defined as the contamination of any feature of the environment or any discharge of pollutants into environment that causes or may cause acute (short-term) or chronic (long-term) detriment to the Earth's ecological balance.

**Factors Responsible for Environmental Pollution are Natural and Anthropogenic:**

The sources/factors responsible for environmental pollution can be classified into two main categories:

**1. Natural Factors/Sources:** are **Natural**: The natural factors/sources responsible for environmental pollution refer to the various activities or sources which occur naturally and are responsible for the release of pollutants using any medium i.e. air, water, or land.

### a. Volcanic Eruption:

Volcanic eruptions emit a series of toxic gases (e.g.  $\text{SO}_2$ ,  $\text{CO}_2$ ,  $\text{H}_2\text{S}$ ) as well as particulate matter (Diagram A).  
 Cloud containing toxic gases →

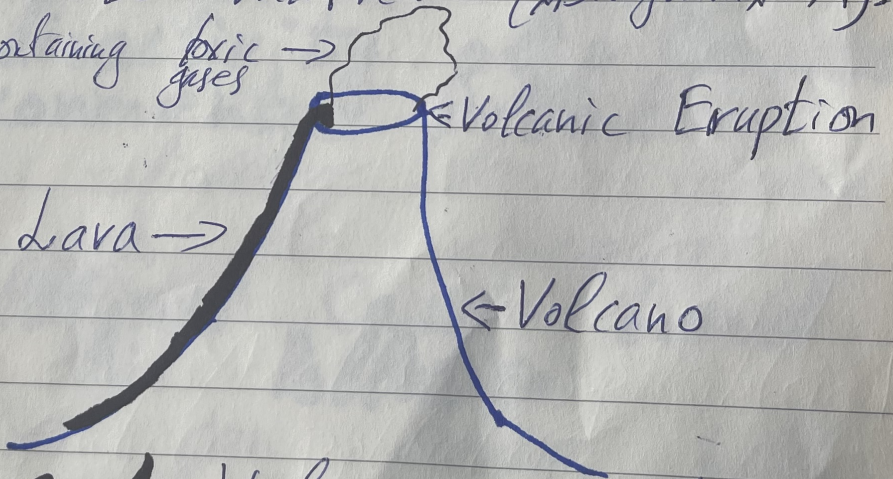
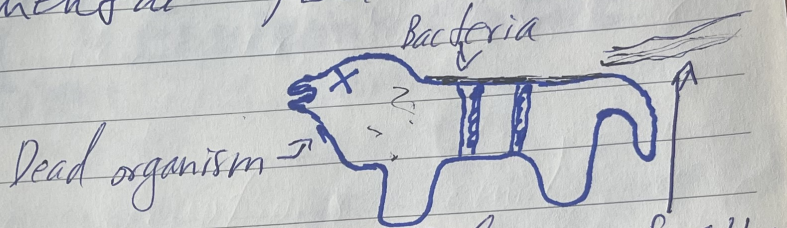


Figure A: Volcanic eruption.

**b. Bacterial and Microbial Activity:** The decaying process of dead living organisms is carried out by bacteria. This decaying process can release a variety of gases (e.g.  $CH_4$ ) into the atmosphere (Figure B). This causes environmental pollution.



**Figure B:** Environmental pollution due to bacterial activity.

**c. Radioactivity also Causes Environmental Pollution:**

The radioactive decay releases radon into the atmosphere.

**d. Wildfires Cause Land and Air Pollution:**

Wildfires can cause both land and air pollution.

## 2. Anthropogenic Factors are not Natural;

The factors which contribute to environmental pollution because of human activities are called anthropogenic factors.

### (i) Burning of Fossil Fuels Causes Environmental Pollution:

The burning of fossil fuels causes environmental pollution (Figure C).

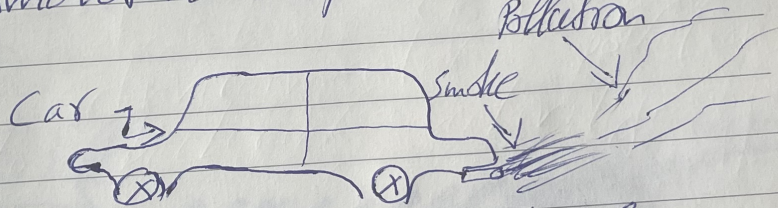


Figure C: Environmental pollution due to burning of fossil fuels.

### (ii) Chlorofluorocarbons (CFCs) are Hazardous for Environment:

Chlorofluorocarbons (CFCs) are released from the following sources:

- (i) Refrigerators,

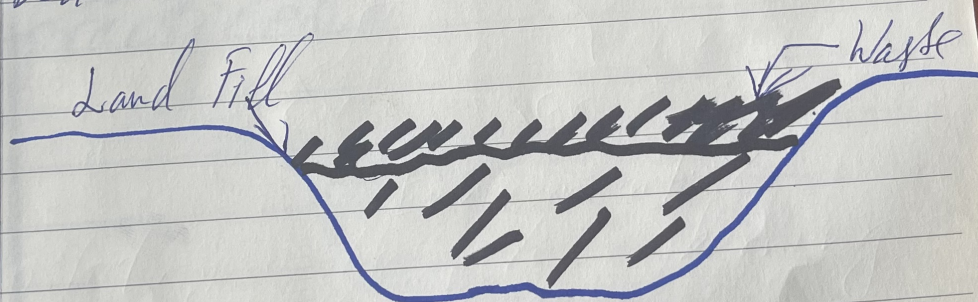
(ii) Air conditioners;

(iii) Fire extinguishers, and

(iv) Paints.

They disrupt the whole process of the natural greenhouse effect as they have a very high global warming potential.

(iii) **Waste Deposition in Land Fills:** We deposit waste in landfills (Figure D). It results in the pollution of land as well as water bodies.



**Figure D:** Waste deposition in landfills.

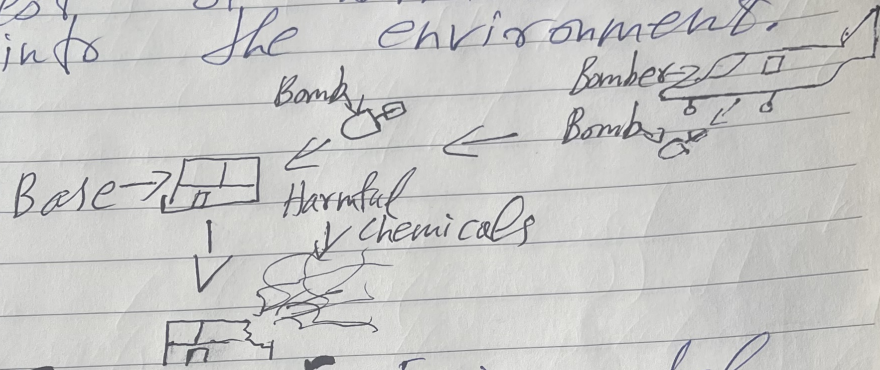
(iv) **Military Practices Lead to Environmental**

**Pollution:** Military practices, including war, are also

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a major cause of environmental pollution (Figure E). When a bomb explodes, it releases a lot of harmful chemicals into the environment.



**Figure E:** Environmental pollution due to military practices.