



The Open University of Sri Lanka
M.Sc. in Environmental Science
Environmental Pollution- BYP9503/NEP1209- Level 9- 2018/19
Assessment Test I (Open Book Test)

Duration: 1 hour 30 minutes
Date : 01st of June 2019

Reg. No.:
Time : 1.00 pm - 2.30 pm

Answer **all** questions on this paper itself.

1.(a) Man- made activities have led to increase in levels of pollutants in the atmosphere. These are Primary and secondary pollutants and harmful for humans and vegetation.

(i) Distinguish between primary and secondary pollutants.

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(ii) Select from the pollutants given below,
Carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), Sulphur oxides (SO_x), methane (CH₄)

Primary pollutants:

Secondary pollutants:

(iii) Identify the **one** man-made source of each of the primary pollutants.

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(iv) List the possible secondary air pollutant(s) that can be produced from the above primary air pollutants and two environmental effects due to those secondary pollutants.

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(b) Compare photochemical smog (or brown smog) with industrial smog (or grey smog) in terms of their composition.

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2. In an undisturbed eco system, all substances are processed through an intricate network of biogeochemical cycles during which substances are taken in by plants, move through food chain to complex organisms which decompose to simpler forms to be used again by plants. Pollution occurs when the environment is overloaded beyond the capacity of these normal processing systems due to various sources.

(a) Explain the term, 'pollution' with special reference to water pollution.

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(b) Write **two** natural and **two** man-made sources of water pollution.

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(c) Compare point sources and non-point sources of pollution and write **one** example of each type.

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(d) Stating the sources of water pollution due to nutrients, briefly describe the phenomenon, 'eutrophication' and its impact on water quality.

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- (e) Briefly explaining the term, 'bio-magnification', describe how toxic organic pollutants can be bio-magnified along the food chain with the help of suitable examples.

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- 3.(a) Relate the following cities/locations in the world to the type of pollution that occurred and the pollutant:

	Type of pollution	Pollutant
Bhopal (India)
Minamata Bay (Japan)
Chernobyl (former USSR)

- (b) Briefly explain the diseases caused by bacterial pathogens present in polluted water.

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(c) Identifying the source, briefly explain how water pollution affects the ecosystem. Limit your answer to **three** sources.

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(d) Soil is an essential component of terrestrial ecosystems, sustaining all living organisms. However, it is under threat and its quality is diminishing leading to low crop production.

Defining the term, soil degradation, briefly explain the two processes, physical and chemical degradations.

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