

**2 0 2 2**

( CBCS )

( 3rd Semester )

**ENVIRONMENTAL SCIENCE**

THIRD PAPER

**( Introduction to Environmental Pollution )**

( Revised )

*Full Marks : 75*

*Time : 3 hours*

*The figures in the margin indicate full marks for the questions*

**( SECTION : A—OBJECTIVE )**

( Marks : 10 )

Tick (✓) the correct answer in the brackets provided :

1×10=10

- 1.** The substances which become pollutant when their concentration reaches beyond a threshold value in the environment are

- (a) primary pollutants (    )
- (b) quantitative pollutants (    )
- (c) qualitative pollutants (    )
- (d) anthropogenic pollutants (    )

- 2.** A reservoir that takes up a chemical element or compound from another part of its natural cycle is

- (a) sink (    )
- (b) tank (    )
- (c) basin (    )
- (d) None of the above (    )

**3.** The size of particulate matter that is thought to be more damaging to human health is

(a)  $PM_{2.5}$  ( )

(b)  $PM_{10}$  ( )

(c)  $PM_{5.5}$  ( )

(d)  $PM_5$  ( )

**4.** Which of the following is a secondary air pollutant?

(a) Sulphur dioxide ( )

(b) Smog ( )

(c) Carbon monoxide ( )

(d) Carbon dioxide ( )

**5.** The wastewater directly discharged from the identifiable untreated urban and industrial sewage into the water bodies is an example of

(a) point source pollution ( )

(b) non-point source pollution ( )

(c) metal pollution ( )

(d) nutrient pollution ( )

**6.** Water bodies with poor nutrient status and productivity is

(a) oligotrophic ( )

(b) mesotrophic ( )

(c) eutrophic ( )

(d) hypertrophic ( )

**7.** A soil pH of 3.0 would be a typical of which of the following?

- (a) Acidic soil (    )
- (b) Saline soil (    )
- (c) Alkaline soil (    )
- (d) Silty soil (    )

**8.** Which of the following is **not** an impact of soil salinity?

- (a) Detrimental effect on plant growth and yield (    )
- (b) Damage to infrastructure (    )
- (c) Sedimentation problem (    )
- (d) Eutrophication (    )

**9.** The permissible sound limit in silent zone during night time is

- (a) 70 dB (    )
- (b) 60 dB (    )
- (c) 50 dB (    )
- (d) 40 dB (    )

**10.** The term 'radioactivity' was coined by

- (a) Henri Becquerel (    )
- (b) Wilhelm Roentgen (    )
- (c) Marie Curie (    )
- (d) Martha Jefferson (    )

**( SECTION : B—SHORT ANSWER )**

( Marks : 15 )

Write short notes on the following :

3×5=15

UNIT—I

1. Types of contaminants

**OR**

2. Functions of sink

UNIT—II

3. Aerosols

**OR**

4. Sink of air pollutant

UNIT—III

5. Types of eutrophication

**OR**

6. Differentiation between point source and non-point source of pollution by giving examples

UNIT—IV

7. Saline soil

**OR**

8. Sources of soil pollution

UNIT—V

9. Control measures of noise pollution

**OR**

10. Ionizing radiation

( SECTION : C—DESCRIPTIVE )

( Marks : 50 )

Answer the following :

10×5=50

UNIT—I

1. What do you mean by environmental pollution? Describe the nature and types of pollutants. 2+8=10

**OR**

2. Write short notes on the following : 5×2=10
- (a) History and origin of environmental pollution
- (b) Sources of pollution

UNIT—II

3. Discuss the different sources and types of air pollutants. Elaborate on the effects of air pollution. 5+5=10

**OR**

4. Write short notes on the following : 5×2=10
- (a) Effects of particulate matter and SO<sub>2</sub> on materials and plants
- (b) Photochemical smog

UNIT—III

5. What is water pollution? Describe the major sources and types of water pollution by giving appropriate examples. 2+8=10

**OR**

6. Give detailed accounts on the following : 5×2=10
- (a) Problems of pesticides
- (b) Indicators of water pollution

UNIT—IV

7. What is acidic soil? Give an account on the formation, effect and reclamation of acidic soil. 2+8=10

**OR**

8. Give detailed accounts on the following : 5×2=10  
(a) Alkaline soil  
(b) Remedial measures of soil pollution

UNIT—V

9. Give an elaborate account on the sources of noise pollution, intensity of noise and its measurements. Discuss the effects of noise pollution. 5+5=10

**OR**

10. Write short notes on the following : 5×2=10  
(a) Effects of radioactive pollution  
(b) Management of radioactive waste

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