

# ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009 **ENVIRONMENT AND ECOLOGY** SEMESTER - 4

				[Full Marks: 70
	A ** 1			Fill Marks 70
'I'V	: 3 Hours l			I run mans. / v

# GROUP - A

1			(Multiple Choice	e Type g	Juestions )
1.	Cho	ose th	e correct alternatives for the	following	: 10 × 1 = 10
	ij	The	most potentially renewable e	nergy res	ource is
		a)	sunlight	<b>b</b> )	wind
		<b>c</b> )	tidal energy	d)	biomass.
	ii)	The	causes of eutrophication is		
		a)	increase of pathogens	bj	increase of COD
		c)	increase of BOD	d)	increase of algal productivity.
**	ш)	Ped	lology is related to		
		a)	sun	<b>b</b> )	sotl
	• .	c)	noise	d)	home.
	iv)	'Mo	ontreal Protocol' is related to		
•		a) ^	water pollution	b)	air pollution
	•.	c)	land pollution	d)	noise pollution.

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v)	Blue	baby syndrome is relate	d to		2000				
	a)	nitrate	<b>b)</b>	sulphate					
	<b>c</b> )	phosphate	ď)	carbonate.					
vi)	Which of the following is a denitrifying bacteria?								
	a)	Rhizobium	<b>b</b> )	Nitrobacter					
	<b>C)</b>	Pseudomonas	<b>d</b> )	Anabaena.					
vii)	Mina	amata disease is associa	ted with	pollution.					
	a)	Hg	<b>b</b> )	Cd					
	c)	<b>As</b>	d)	Pb.					
viii)	Env	ergy flow of an Ecosyster	m is						
	a)	Unidirectional	· b)	Bidirectional					
	c)	Cyclic	<b>d</b> )	None of these.					
ix)	The temperature range of troposphere is								
	aj	- 2' to - 92'C	<b>b</b> )	15° to - 56°C					
	c)	- 56' to 2'C	d)	- 92° to 1200°C.					
x)	ESP	<b>is</b>	Y						
	a)	Electrostatic precipitate	or						
	b)	Electrostatic producer							
	<b>c</b> )	Electron source precipi	tator						
	d)	Electrostatic production	n.						



#### GROUP - B

### (Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$ 

- 2. Give an idea of formation of Acid Rain. Mention any three harmful effects of it. 2 + 3
- 3. How do you give an idea of Environmental Impact Assessment?
- 4. Analyse the various methods of disposal of solid wastes.
- 5. Write down the effects of noise pollution on health.
- 6. Distinguish between sulphurous smog and photochemical smog.

#### GROUP - C

## (Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$ 

- 7. a) What is greenhouse effect? Explain with the help of neat diagram.
  - b) State the different greenhouse gases and sources.
  - c) What are the different effects of greenhouse gases?

6 + 4 + 5

- 8. a) Mention the sources of ground water pollution.
  - b) Explain with the help of a neat diagram, the waste water treatment.
  - c) What is biological oxygen demand and why is it less than the value of theoretical oxygen demand?

    3 + 8 + 4
- 9. a) What are the factors governing the impact of air pollution on human body?
  - b) What are the major toxic trace metals present in particulate matter? Indicate their sources and effect on human health.
  - c) Explain the effect of carbon monoxide and hydrocarbon on human health.
  - d) Indicate both the critical and chronic effects of arsenic, lead and ionized radiation on animals. 2 + 4 + 3 + 6



- 10. a) Define noise pollution.
  - b) Mention the sources of noise pollution.
  - c) Explain the various noise control methods at its source, path as well as receiving end. 2 + 4 + 9
- 11. Write notes on any two of the following:

 $2 \times 7\frac{1}{2}$ 

- a) Filter Bag Unit for controlling Air Poliution.
- b) Food chain & Food web
- c) Montreal Protocol
- d) Renewable energy source.

END