



**Enrollment No.....**  
**Faculty of Engineering**  
**End Sem (Even) Examination May-2018**  
**EN3HS03 Environmental Sciences**  
 Programme: B.Tech. Branch/Specialisation: All

**Duration: 3 Hrs.****Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Organic farming is the technique for raising crops through uses of? **1**  
 (a) Manures (b) Bio fertilizers  
 (c) Resistant varieties (d) All of these
- ii. The first major environment protection act to be promulgated in India **1**  
 was:  
 (a) Water act (b) Air act  
 (c) Environment Protection act (d) Noise pollution act
- iii. Acid rain caused by increasing atmospheric concentration of: **1**  
 (a) O<sub>3</sub> & dust (b) SO<sub>2</sub>&NO<sub>2</sub> (c) SO<sub>3</sub> &CO (d) CO<sub>2</sub> & CO
- iv. Carbon footprint can be reduced by \_\_\_\_\_ **1**  
 (a) Drive a low carbon vehicle (b) Carpooling  
 (c) Eat locally and organic food (d) All of these
- v. Sound becomes a hazardous noise pollution if its level is above **1**  
 (a) 30 dB (b) 80 dB (c) 120 dB (d) 150 dB
- vi. Floods can be prevented by\_\_\_\_\_. **1**  
 (a) Afforestation (b) Cutting the forests  
 (c) Tilling the land (d) Removing the top soil
- vii. Biodiversity is conserved by: **1**  
 (a) In- situ conservation (b) Ex-situ conservation  
 (c) Legal means (d) All of these
- viii. The term ecosystem was first proposed by: **1**  
 (a) A.G. Tansley (b) P.A. tweeter  
 (c) A.G. Raman (d) C.P. Tansley
- ix. “Renault Kangoo” hybride vehicle is an example of.....? **1**  
 (a) Combined Hybrids (b) Parallel Hybrids  
 (c) Series Hybrids (d) plug-in hybrids

- x. Which one is not related with green computing? **1**  
 (a) Recyclability (b) Wireless system  
 (c) Energy efficiency (d) Environmental friendly

- Q.2 i. Define the term sustainable development. **2**  
 ii. What are three E’S of sustainable development? **3**  
 iii. Discuss objectives and constitutions of water act 1974. **5**  
 OR iv. Difference between organic farming and sustainable agriculture. **5**

- Q.3 i. What is stone leprosy? Give its reaction. **2**  
 ii. State the ways to manage solid waste. **3**  
 iii. What do you understand by Kyoto protocol? Discuss various **5**  
 mechanisms.  
 OR iv. What is Carbon footprint? How to reduce the Carbon footprint (any six **5**  
 ways).

- Q.4 i. Define the term water resources. **2**  
 ii. Discuss the use of alternate energy sources. **3**  
 iii. State the various techniques for controlling air pollution. **5**  
 OR iv. What is noise pollution? Express the units of measurement of noise. **5**  
 Discuss the adverse effects of noise pollutants on human health.

- Q.5 i. Define food chains. **2**  
 ii. Discuss ecological succession with its type. **3**  
 iii. What is ecosystem? Explain the flow of energy through the atmosphere **5**  
 and its utilization in an ecosystem.  
 OR iv. What do you understand by ‘conservation of Biodiversity’? State and **5**  
 explain the two basic approaches to the wildlife conservation.

- Q.6 i. What is HVAC? **2**  
 ii. State the need of green computing. **3**  
 iii. What are the hybrid vehicles? Explain its working and discuss **5**  
 advantages and disadvantages.  
 OR iv. What do you know by GRIHA and LEED rating system? Give some **5**  
 examples of GRIHA and LEED rated buildings in India.

P.T.O.

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**Marking Scheme**  
**EN3HS03 Environmental Sciences**

Q.1	i.	Organic farming is the technique for raising crops through uses of? (d) All of these		<b>1</b>
	ii.	The first major environment protection act to be promulgated in India was: (a) Water act		<b>1</b>
	iii.	Acid rain caused by increasing atmospheric concentration of: (b) SO <sub>2</sub> & NO <sub>2</sub>		<b>1</b>
	iv.	Carbon footprint can be reduced by _____ (d) All of these		<b>1</b>
	v.	Sound becomes a hazardous noise pollution if its level is above (b) 80 dB		<b>1</b>
	vi.	Floods can be prevented by_____ (a) Afforestation		<b>1</b>
	vii.	Biodiversity is conserved by: (d) All of these		<b>1</b>
	viii.	The term ecosystem was first proposed by: (a) A.G. Tansley		<b>1</b>
	ix.	“Renault Kangoo” hybride vehicle is an example of.....? (c) Series Hybrids		<b>1</b>
	x.	Which one is not related with green computing? (b) Wireless system		<b>1</b>
Q.2	i.	Definition sustainable development.		<b>2</b>
	ii.	Three E’S of sustainable development 1 mark each	(1 mark *3)	<b>3</b>
	iii.	Objectives of water act 1974	2 marks	<b>5</b>
		Constitutions of water act 1974.	3 marks	
OR	iv.	Difference between organic farming and sustainable agriculture.		<b>5</b>
		5 points 1 mark each	(1 mark *5)	
Q.3	i.	Stone leprosy	1 mark	<b>2</b>
		Its reaction.	1 mark	
	ii.	Three ways to manage solid waste 1 mark each	(1 mark *3)	<b>3</b>
	iii.	Definition Kyoto protocol	2 marks	<b>5</b>
		Three Mechanisms. 1 mark each (1 mark *3)	3 marks	

OR	iv.	Definition Carbon footprint		<b>2 marks</b>	<b>5</b>
		any six ways to reduce the Carbon footprint			
		0.5 marks each (0.5 mark*6)		<b>3 marks</b>	
Q.4	i.	Definition water resources			<b>2</b>
	ii.	Use of alternate energy sources.			<b>3</b>
	iii.	Either any 5 techniques for controlling air pollution 1 mark each (1 mark *5)			<b>5</b>
		OR			
		Any 2 techniques with detail 2.5 marks each (2.5 marks * 2)			
OR	iv.	Noise pollution		<b>1 mark</b>	<b>5</b>
		Units of measurement of noise		<b>1 mark</b>	
		Six adverse effects 0.5 mark each (0.5 mark * 6)		<b>3 marks</b>	
Q.5	i.	Food chains			<b>2</b>
	ii.	Ecological succession		<b>1 mark</b>	<b>3</b>
		Its type 1 mark each (1 mark *2)		<b>2 marks</b>	
	iii.	Definition Ecosystem		<b>1 mark</b>	<b>5</b>
		Flow chart with detail		<b>4 marks</b>	
OR	iv.	Conservation of Biodiversity		<b>1 mark</b>	<b>5</b>
		Two basic approaches 2 marks each (2 marks *2)		<b>4 marks</b>	
Q.6	i.	HVAC			<b>2</b>
	ii.	Need of green computing.			<b>3</b>
	iii.	Definition hybrid vehicles		<b>1 mark</b>	<b>5</b>
		Its working		<b>2 marks</b>	
		Advantages and disadvantages.		<b>2 marks</b>	
OR	iv.	GRIHA and LEED rating system		<b>3 marks</b>	<b>5</b>
		Any 2 Examples of GRIHA and LEED		<b>2 marks</b>	

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