

Enrollment No.....



**Faculty of Engineering**  
**End Sem (Even) Examination May-2022**  
**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. What is the most commonly cited definition for, and accepted thinking about, sustainable development? **1**  
 (a) Brundtland world committee on environment and development  
 (b) Brundtland world commission on environment and sustainable development  
 (c) Brundtland world commission on environment and development  
 (d) Brundtland world on committee environment and sustainable development
- ii. Environment (protection) Act, enacted in the year- **1**  
 (a) 1976 (b) 1980 (c) 1986 (d) 1988
- iii. Emissions trading is also sometimes called- **1**  
 (a) 'Cap-and-trade' (b) 'Casp-and-trade'  
 (c) 'Capable-and-trade' (d) None of these
- iv. Who discovered the ozone layer? **1**  
 (a) Carl Sagan & G.M.B Dobson  
 (b) Carl Sagan & Charles Fabry  
 (c) Henri Buisson & Charles Fabry  
 (d) G.M.B Dobson
- v. The land area which can be used for farming is called- **1**  
 (a) Derelict land (b) Arable land  
 (c) Reclaimable land (d) None of these
- vi. Which of the following is a secondary air pollutant? **1**  
 (a) SPM (b) SO<sub>2</sub> (c) NO<sub>2</sub> (d) PAN
- vii. Ecosystem is smallest unit of- **1**  
 (a) Ionosphere (b) Biosphere (c) Lithosphere (d) Atmosphere
- viii. Which one is not a factor of the abiotic environment? **1**  
 (a) Sunlight (b) Decomposers (c) Water (d) Temperature

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- ix. What is the need of hybrid vehicle? **1**  
 (a) Regenerative braking  
 (b) Emissions are greatly decreased  
 (c) Dependency on fossils fuels can be decreased  
 (d) All of these
- x. Short term exposure of VOC's can cause- **1**  
 (a) Headaches (b) Dizziness  
 (c) Visual disorders (d) All of these
- Q.2 i. What is the significance of environmental education? **2**  
 ii. "Environmental law is crucial for environmental management". Comment the given statement. **3**  
 iii. Discuss five principles of sustainable development. **5**
- OR iv. What is an EIA? Explain EIA with flow chart. **5**
- Q.3 i. Define carbon footprint. How to reduce it? **2**  
 ii. What is solid waste? Discuss solid waste disposal methods with its advantages and disadvantages. **8**
- OR iii. Define greenhouse effect. How it is associated with global warming? Discuss its effects and write the ways to reduce global warming. **8**
- Q.4 i. What is desertification? Discuss its effects. **3**  
 ii. Define water pollution. Discuss its effects and mitigation measures. **7**
- OR iii. What is the need of alternative sources of energy? Differentiate between renewable and non-renewable resources of energy. **7**
- Q.5 i. Write the difference between food chain and food web. **4**  
 ii. Define Ecology. Discuss structure and function of an ecosystem. **6**
- OR iii. What is biodiversity? Classify it with examples. **6**
- Q.6 Attempt any two:  
 i. What is green building? Discuss its rating systems. **5**  
 ii. Define hybrid car. Discuss the types of hybrid vehicles. **5**  
 iii. Write a short note on:  
 (a) VOC (b) Needs of green computing **5**

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## Marking Scheme

### EN3HS03 Environmental Sciences

Q.1	i.	What is the most commonly cited definition for, and accepted thinking about, sustainable development?	1
	ii.	(c) Brundtland world commission on environment and development Environment (protection) Act, enacted in the year- (c) 1986	1
	iii.	Emissions trading is also sometimes called- (a) 'Cap-and-trade'	1
	iv.	Who discovered the ozone layer? (c) Henri Buisson & Charles Fabry	1
	v.	The land area which can be used for farming is called- (b) Arable land	1
	vi.	Which of the following is a secondary air pollutant? (d) PAN	1
	vii.	Ecosystem is smallest unit of- (b) Biosphere	1
	viii.	Which one is not a factor of the abiotic environment? (b) Decomposers	1
	ix.	What is the need of hybrid vehicle? (d) All of these	1
	x.	Short term exposure of VOC's can cause- (d) All of these	1
Q.2	i.	Significance of environmental education 1 mark for each (1 mark * 2)	2
	ii.	“Environmental law is crucial for environmental management” 1 mark for each point (1 mark * 3)	3
	iii.	Five principles of sustainable development. 1 mark for each principle (1 mark * 5)	5
OR	iv.	What is an EIA Explanation flow chart	1 mark 2marks 2marks
Q.3	i.	Definition carbon footprint Reduction two points 0.5 mark for each (0.5 mark * 2)	1 mark 2

	ii.	Solid waste Solid waste disposal methods with its advantages and disadvantages	1 mark 7 marks	8
OR	iii.	Definition greenhouse effect Association with global warming Effects Reduction methods	1 mark 2 marks 2.5 marks 2.5 marks	8
Q.4	i.	Desertification Its effects 1 mark for each point (1 mark * 2)	1 mark 2 marks	3
	ii.	Definition water pollution Its effects Mitigation measures	1 mark 3 marks 3 marks	7
OR	iii.	Need of alternative sources of energy Difference b/w renewable and non-renewable resources of energy	2 marks 5 marks	7
Q.5	i.	Difference between food chain and food web. 1 mark for each point (1 mark * 4)		4
	ii.	Definition Ecology. Structure of an ecosystem Function of an ecosystem	1 mark 3 marks 2 marks	6
OR	iii.	Biodiversity and classification it with examples Definition Classification Examples	1 mark 3 marks 2 marks	6
Q.6		Attempt any two:		
	i.	Definition green building Its rating systems	1 mark 4 marks	5
	ii.	Definition hybrid car Types of hybrid vehicles	1 mark 4 marks	5
	iii.	Write a short note on: (a) VOC (b) Needs of green computing	2.5 marks 2.5 marks	5

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