Total No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No.....

Faculty of Science/Engineering

End Sem Examination Dec 2024

CA3AE02 Environmental Science

Programme: BCA/BCA-MCA (Integrated) Branch/Specialisation: Computer Application

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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	PO	CO	PSO
Q.1	i.	What is the primary goal of environmental education? (a) To increase profit for companies (b) To promote awareness and understanding of environmental issues (c) To limit access to natural resources (d) To focus solely on wildlife conservation	**1**	1	8	1	
	ii.	Which of the following practices is associated with organic farming? (a) Use of synthetic pesticides (b) Genetically modified organisms (GMOs) (c) Crop rotation and diversification (d) Heavy irrigation techniques	**1**	1	8	1	
	iii.	Which of the following factors primarily contributes to human population growth? (a) Increased mortality rates (b) High birth rates and decreased death rates (c) Migration away from urban areas (d) Natural disasters	**1**	1	8	1	
	iv.	How do greenhouse gases contribute to global warming? (a) By blocking sunlight from reaching the earth (b) By increasing the earth's albedo (c) By promoting the formation of clouds (d) By absorbing and re-emitting infrared radiation	**1**	1	8	1	

v.	Which of the following best describes the impact of soil erosion on agriculture? (a) Loss of nutrient-rich topsoil and reduced crop yields (b) Increased soil fertility (c) Enhanced water retention in the soil (d) Improved crop diversity	**1**	1	8	1
vi.	How does climate change contribute to conflicts over water resources? (a) By increasing the availability of freshwater (b) By causing more predictable rainfall patterns (c) By exacerbating droughts and altering precipitation patterns (d) By improving agricultural yields	**1**	1	8	1
vii.	What process do plants use to convert sunlight into energy? (a) Respiration (b) Photosynthesis (c) Decomposition (d) Fermentation	**1**	1	8	1
viii	What pH level typically indicates acid rain? (a) 7 (b) 8 (c) 6.5 (d) 5.6 or lower	**1**	1	8	1
ix.	What is one benefit of creating sustainable habitats? (a) Enhanced biodiversity (b) Increased resource depletion (c) Greater environmental degradation (d) Reduced quality of life	**1**	1	8	1
x.	Which of the following is a common type of hybrid vehicle? (a) Diesel-only vehicle (b) Natural gas vehicle (c) Hydrogen fuel cell vehicle (d) Plug-in hybrid electric vehicle (PHEV)	**1**	1	8	1
Q.2	i. State some methods of promoting public awareness.	**2**	1	8	1
	ii. Write one sustainable development measurement method and the categories on which it based on.	**3**	2	9	2
	iii. Write the differences between organic farming vs. sustainable agriculture.	**5**	4	9	4
OR	iv. Briefly discuss five major threats to sustainability.	**5**	4	9	4

Q.3	i. Explain the main causes of ozone layer depletion.	**2**	2	9	2
	ii. Discuss the various strategies for effective water conservation. Write some ways for water harvesting method and two major objectives of rainwater harvesting.	**8**	3	8	3
OR	iii. Discuss the three mechanism of Kyoto protocol. What are the major types of carbon foot-print?	**8**	3	8	3
Q.4	i. What are the main human and environmental factors contributing to desertification?	**3**	2	9	2
	ii. State and explain the different types of natural resources based on their origin and availability. Describe the main causes of drought.	**7**	4	9	4
OR	iii. Analyze the benefits and challenges of solar energy use. What is geothermal energy?	**7**	4	9	4
Q.5	i. What is a noise pollution? Write four different contributor of noise pollution.	**4**	2	9	2
	ii. Schematically represent and explain the structure and component of ecosystem.	**6**	3	8	3
OR	iii. State and explain the major classes of nuclear waste. What precautions are needed after disposal of nuclear waste?	**6**	3	8	3
Q.6	Attempt any two:				
	i. Write and explain the major categories of green building rating system in world.	**5**	2	9	2
	ii. What are the 5R's in green technology? Explain three technologies used in green construction.	**5**	2	9	2
	iii. What is known as green computing? Write some benefits of green computing to the environment.	**5**	2	9	2

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Scheme of Marking

MEDI-CAPS UNIVERSITY Knowledge is Power	Faculty of Science End Sem Examination Dec 2024 CA3AE02 Environmental Science Programme: BCA | Branch/Specialisation:

Note: The Paper Setter should provide the answer wise splitting of the marks in the scheme below.

Q.1	i)	b) To promote awareness and understanding of environmental issues.	**1**
	ii)	c) Crop rotation and diversification.	**1**
	iii)	b) High birth rates and decreased death rates.	**1**
	iv)	d) By absorbing and re-emitting infrared radiation.	**1**
	v)	a) Loss of nutrient-rich topsoil and reduced crop yields.	**1**
	vi)	c) By exacerbating droughts and altering precipitation patterns.	**1**
	vii)	b) Photosynthesis	**1**
	viii)	d) 5.6 or lower.	**1**
	ix)	a) Enhanced biodiversity.	**1**
	x)	d) Plug-in hybrid electric vehicle (PHEV).	**1**
Q.2	i.	State some methods of promoting public awareness. minimum four statement, (½ * 4 =2)	**2**
	ii.	Sustainable development measurement method Methods name 1 The categories on which it's based on 2	**3**
	iii.	Differences between Organic Farming vs. Sustainable Agriculture. Minimum 5 point. Each point carry 1 mark (1 x 5 =5)	**5**
OR	iv.	Briefly discuss five major threats to Sustainability Each point carry one marks (1 x 5 =5)	**5**
Q.3	i.	Causes of ozone layer depletion (two causes) 2 x 1 =2	**2**
	ii.	Strategies for effective water conservation (min. 4 strategies) 4 Ways of water harvesting methods 2 Objectives of rainwater harvesting. 2	**8**
OR	iii.	The three mechanism of Kyoto Protocol. (3 x 2 =6) 6 major types of Carbon foot-print 2	**8**

Q.4	i.	factors contributing to desertification Human factors (minimum four point) 2 Environmental factors 1	**3**
	ii.	Types of natural resources- Based on origin 2 Based on Availability 2 Describe the main causes of drought 3	**7**
OR	iii.	The benefits and challenges of solar energy use. 3+2=5 What is Geothermal energy? 2	**7**
Q.5	i.	What is a noise pollution? 2 Write four different contributor of noise pollution. ½ x 4 =2	**4**
	ii.	Schematic representation of ecosystem 3 Explanation of every component of ecosystem 3	**6**
OR	iii.	Classes of nuclear waste. (three classes) 1 x 3 =3 Precautions after disposal of nuclear waste (min. 3 point) 3	**6**
Q.6			
	i.	Green building rating system in world (five categories) 1 x 5 =5	**5**
	ii.	The 5R's in green technology 2 Three technologies used in green construction 3	**5**
	iii.	What is known as green computing? 2 Some benefits of green computing to the environment. 3	**5**

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Marking Scheme
CA3AE02 Environmental Science

Q.1	i)	b) To promote awareness and understanding of environmental issues.		**1**
	ii)	c) Crop rotation and diversification.		**1**
	iii)	b) High birth rates and decreased death rates.		**1**
	iv)	d) By absorbing and re-emitting infrared radiation.		**1**
	v)	a) Loss of nutrient-rich topsoil and reduced crop yields.		**1**
	vi)	c) By exacerbating droughts and altering precipitation patterns.		**1**
	vii)	b) Photosynthesis		**1**
	viii)	d) 5.6 or lower.		**1**
	ix)	a) Enhanced biodiversity.		**1**
	x)	d) Plug-in hybrid electric vehicle (PHEV).		**1**
Q.2	i.	State some methods of promoting public awareness. minimum four statement, (½ * 4 =2)		**2**
	ii.	Sustainable development measurement method Methods name 1 Mark The categories on which it's based on 2 Marks		**3**
	iii.	Differences between Organic Farming vs. Sustainable Agriculture. Minimum 5 point. Each point carry 1 mark (1 x 5 =5)		**5**
OR	iv.	Briefly discuss five major threats to Sustainability Each point carry one marks (1 x 5 =5)		**5**
Q.3	i.	Causes of ozone layer depletion (two causes) 2 x 1 =2		**2**
	ii.	Strategies for effective water conservation (min. 4 strategies) 4 Ways…….methods (Minimum 2 methods) 2 Marks Objectives of rainwater harvesting. (one each object) 2 Marks		**8**
OR	iii.	The three mechanism of Kyoto Protocol. (3 x 2 =6) 6 major types of Carbon foot-print 2 Marks		**8**
Q.4	i.	factors contributing to desertification Human factors (minimum four point) 2 Marks Environmental factors 1		**3**
	ii.	Types of natural resources- Based on origin 2 Marks Based on Availability 2 Marks Describe the main causes of drought (1 Mark for each cause) 3 Marks		**7**
OR	iii.	The benefits (Minimum 3 benefits each carry 1 mark) (1 Mark*3) 3 Marks Challenges (Minimum 2 each carry 1 mark) (1 Mark*2) 2 Marks What is Geothermal energy 2 Marks		**7**
Q.5	i.	What is a noise pollution? 2 Marks Write four different contributor of noise pollution. ½ x 4 =2		**4**
	ii.	Schematic representation of ecosystem 3 Marks Explanation of every component of ecosystem 3 Marks		**6**
OR	iii.	Classes of nuclear waste. (three classes) 1 x 3 =3 Precautions after disposal of nuclear waste (min. 3 point) 3 Marks		**6**
Q.6				
	i.	Green building rating system in world (five categories) 1 x 5 =5		**5**
	ii.	The 5R's in green technology 2 Marks Three technologies used in green construction 3 Marks		**5**
	iii.	What is known as green computing? 2 Marks Some……. the environment. **At least 3 benefits 1 mark for each** (1 Mark*3)		**5**

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