Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER– 1st / 2nd (NEW SYLLABUS) EXAMINATION – SUMMER 2015

Subject Code: 2110007 **Date: 29/05/2015**

Subject Name: Environmental Studies

Time: 10.30am-01.00pm **Total Marks: 70**

Instructions:

1. **Q: 1 is Compulsory. Attempt any 4 questions from Q: 2 to Q: 7.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** Choose the most appropriate answer for the following multi choice questions: **07**

1. In ecological pyramids, pyramid of energy is _____.
(a) an inverted pyramid only
(b) a spindle shaped pyramid only
(c) an upright pyramid only
(d) none of the above

2. The range of temperature variation in mesosphere is _____.
(a) 20^0C to -56^0C (b) -2^0C to -90^0C (c) -56^0C to -2^0C (d) -90^0C to 1200^0C

3. The rate of biomass per unit area per unit time is known as _____.
(a)biomagnification (b)biomes (C) saprophytes (d) productivity

4. Mortality rate is defined as _____.
(a) Number of births per one thousand people in a particular year
(b) Number of deaths per one thousand people in a particular year
(c) Number of births per one thousand people in a city
(d) Number of deaths per one thousand people in a city

5. Solid or liquid particle in the air smaller than 1 µm is known as _____.
(a) Flyash (b) Aerosol (c) Soot (d)Mist

6. _____ is a green house gas.
(a) Nitrogen (b) Oxygen (c) Argon (d) Water vapour

7. The area where freshwater from the river mixes with sea water is known as _____.
(a) an estuary (b) a fresh water reservoir (c) a lake (d) a stream

(b) Choose the most appropriate answer for the following multi choice questions: **07**

1. Eutrophication is caused due to the nutrients like _____ & _____.
(a) calcium and sodium (b) phosphorous and nitrogen (c) carbon and oxygen
(d) None of the above

2. The percapita water availability _____ if the utilizable water resources is decreased and the population is increased.
(a) increases (b) decreases (c) remain unchanged (d) may increase or decrease

3. Chipko movement is associated with _____.
(a) illiteracy (b) soil conservation (c) water conservation (d) forest conservation

4. Autecology is defined as _____.
(a) the study of abiotic environment (b) the study of communities (c) the study of population of single species (d) the study of living and nonliving environment

5. The provisions for environmental protection include _____.
(a) prevention and control of water pollution act (b) prevention and control of air pollution act (c) environmental protection act (d) all of the above

6. Fluorosis is _____.
(a) decolorisation of teeth (b) reduction of fluids in body (c) a respiratory disease (d) none of the above

7. Saprotrophs feed on _____.
(a) fresh vegetables (b)dead microbes (c)rotten organic material (d)live plants

Q.2	**(a)**	What are the objectives and guiding principles of environmental education? Discuss the significance of environmental education in engineering curriculum.	**07**
	(b)	Write a brief note on 'Energy flow in Ecosystem'. State and explain ecological pyramids.	**07**
Q.3	**(a)**	Classify forests and write the ecological and economic importance of forests. What are the causes and effects of deforestation?	**07**
	(b)	Justify Land as a resource. What are the causes, effects and control measures for land degradation?	**07**
Q.4	**(a)**	Explain green house effect with a schematic diagram? Discuss various green house gases and describe their role in global warming.	**07**
	(b)	Give the classification of water pollutants. Explain eutrophication with its sources and control measures.	**07**
Q.5	**(a)**	Explain the important theories of population growth? Discuss the causes, effects and control measures of population explosion.	**07**
	(b)	Discuss the advantages and limitations of conventional and nonconventional energy resources. What are the environmental implications of conventional energy resources?	**07**
Q.6	**(a)**	Describe Environmental Ethics with the objectives and limitations. Explain the role of NGOs to impart environmental protection.	**07**
	(b)	Give the classification of air pollutants and discuss the ambient air quality standards of important air pollutants.	**07**
Q.7	**(a)**	What is an ecosystem? Enlist major ecosystems and describe marine ecosystem in detail.	**07**
	(b)	Describe 'Environmental Protection Act, 1986'with its objectives.	**07**

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