Your Roll No.....

P G Diploma in Environment Monitoring and Impact assessment

Annual Examination-2010

Paper No.: PGDEMIA-101

Ecology & Environment

Time: 2 1/2 hours **Maximum Marks: 70**

This paper is divided into three sections. Attempt questions from each section as per the instructions.

Section-I

Attempt all the objective type questions: **10x1**

1. The 'Principle of limiting factors' was given by:
   a. V.E. Shelford
   b. Justus Lubig
   c. Ernst Haeckel
   d. Karl Fredrick

2. Those species which play a role affecting many other organisms in an ecosystem are called:
   a. Native Species
   b. Immegrant species
   c. Keystone Species
   d. Indicator Species

3. Bacteria convert N_2 into usable forms (NO_3^-, NH_4^+) for plants through the process of:
   a. Nitrogen Fixation
   b. Nitrification
   c. Denitrification
   d. None of the these

4. Define the term "population".
5. Define the term "Sere".
6. Give one example each of mutualism and commensalism?
7. The rate at which biomass is synthesised by plants per unit area and time is called:
   a. Gross primary production
   b. Net primary production
   c. Secondary productivity
   d. Net Productivity

8. Define the term "nutrient cycling" ?
9. Which among the following is the property of population?
   a. Size
   b. Dispersion
   c. Age structure
   d. All of the above
10. Define the term "Nudation".

Section- II

Write short notes on any SIX questions: **6x5=30**

Q.1. Define the terms eurothermal and stenothermal. How do these terms relate to principle of tolerance?

Q.2. Define food chain, food web and trophic levels?

Q.3. How does detritus food chain differ from the grazing food chain?

Q.4. Briefly discuss exponential model of population growth?

Q.5. Explain briefly the models of successions?

Q.6 Briefly describe the edaphic factors?

Q.7. What are the bases of ecological studies?

Q.8. How do consumers renew their energy and nutrient supplies?

Section III

Attempt any THREE questions: **3x10=30**

Q.1. Explain how sunlight is the original source of energy for all life?

Q.2. Describe three general patterns of dispersion?

Q.3. Describe the whole mechanism of succession?

Q.4. How does length and intensity of light affect the physiology of a plant? Describe some phenomenons which are influenced by length for light?

Q.5. Explain how the first and second law of thermodynamics are operational in living system.