

THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY  
END-SEMESTER EXAMINATION (SPECIAL PAPER) – December 2006

EN/NC-001 – ENVIRONMENTAL STUDIES

Instructors – Dr. N.Tejo Prakash

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4/1

Time: 3 Hours

Maximum Marks: 60

READ THE INSTRUCTIONS BEFORE ANSWERING THE QUESTIONS

- STRICTLY FOLLOW SERIAL ORDER IN ANSWERING QUESTIONS
- ALL PARTS OF THE QUESTION SHOULD BE ATTEMPTED AT ONE PLACE ONLY

1 WRITE SHORT NOTES ON

- A Biochemical oxygen demand. (2)
- B Carrying capacity and biotic potential. (2)
- C Biological and cultural needs of human beings. (2)
- D Minamata Disease. (2)
- E Vermiculture. (2)
- F Point and Non-point sources of air (OR) water pollution. (2)

2 A State the importance of water cycle. (3)

- B What are biogeochemical cycles and their basic types? (3)
- C Discuss schematically the path of nitrogen molecule in nitrogen cycle from atmosphere to land and back again. (2)

3 A Differentiate between primary succession and secondary succession with suitable examples (3)

- B How does NPP differs from GPP? How does ratio of productivity (P) and respiration (R) changes with succession? (3)
- C Distinguish between grazing food chain and detritus food chain. (2)

4 A What are ecological pyramids? Discuss pyramid of number and pyramid of biomass in any ecosystem. (3)

- B Differentiate between food chain and food web. Why is concept of food web ecologically more viable than the concept of a simple food chain. (3)
- C How is flow of energy linked to the laws of thermodynamics. (2)

5 A Discuss the strategies to be adopted for water management in irrigation and municipal sectors. (3)

- B What are the three systems that provide food resources for human consumption? Name three major crops that provide major component of world's food. (3)
- C List advantages of modern agricultural techniques. (3)

6 A The ecological uses of forests surpass commercial uses. Justify. (3)

- B Categorize the energy resources based on (a) commercial and non-commercial; and (b) conventional and non-conventional resources. (3)
- C Mention the risks involved in considering nuclear power as a major energy resource for future. (2)

7 A What are the various chemical reactions involved in ozone depletion? (3)

- B Discuss the various methods used for the disposal of municipal solid waste. (3)
- C What are the consequences of noise pollution? (2)