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14 (ECO-4) 4116

2022

**ECONOMICS**

Paper : ECO-4116

**(Environment and Energy Economics)**

Full Marks : 80

Time : Three hours

***The figures in the margin indicate  
full marks for the questions.***

1. Answer ***all*** the following questions : 5×4=20
- (a) Explain how ozone depletion is harmful for the environment.
  - (b) Explain the significance of food chain in an ecosystem.
  - (c) Explain the difference between the Total Resource Cost Test and the Utility Cost Test of demand side management of energy.
  - (d) What do you mean by environmental indicators ? Give examples.

Contd.

2. Answer **any three** questions from below :

$$10 \times 3 = 30$$

(a) What is "bio-diversity" ? What are the two aspects taken into account in the construction of a bio-diversity index ? Elaborate the *two* indices of bio-diversity. 2+2+6=10

(b) 'Climate change hits the poor hardest.' Elaborate. 10

(c) Define ecosystem. What are the components of an ecosystem ? Discuss the services provided by the ecosystem. 2+2+6=10

(d) Explain Net Present Value based indicator of Cost Benefit Comparison. Differentiate it from the Internal Rate of Return Indicator. 6+4=10

(e) What are the different types of differential rent found in the case of fossil fuel ? Explain the effect of royalty on price and demand of fossil fuel. 4+6=10

3. Answer **any two** questions from below :

$$15 \times 2 = 30$$

(a) What are the guiding principles of environment management ? How do economic instrument of environmental management internalise the cost of environmental damage ?  $5+10=15$

(b) Find out that in the case of extraction of exhaustible resources the net price is equal to royalty in the case of perfect competition.

Also find out how the net price changes in case of monopoly.

Find out the effect of discount rate on depletion path.

$$6+6+3=15$$

(c) Distinguish co-incident, load from diversified load. Explain the alternative electricity generation options.

Explain the objectives of Economic Dispatch. Discuss *two* main techniques of Economic Dispatch.  $2+3+2+8=15$