

## F.E. (All Branches) (CB) (Sem-I)

Time: 2 Hours

Marks: 60

N.B.:

- (1) Q.1 is compulsory. Attempt any three questions from Q.2 to Q.6.
- (2) Draw neat diagrams wherever necessary.
- (3) Figures to the right indicate full marks.

Q.1 Attempt **any five** from the following:-

15M

- a Define ecosystem. List out any four factors which disturb the energy balance in the ecosystem.
- b What is conventional source of energy? Mention any four drawbacks of conventional sources of energy.
- c What is photochemical smog? Give any four sources and any four bad effects of photochemical smog.
- d State any four sources responsible for water pollution of Ganga river. Mention any two ways for elimination of water pollution of Ganga river.
- e State any six functions of central pollution control board.
- f What is soil pollution? State any four side effects of pollution.
- g Mention any three social and economical aspects of sustainable development.

Q.2 Attempt the following:-

15M

- (a) What is industrial waste water? Mention any three sources and three bad effects of industrial waste water. Mention any two ways for removal of industrial waste water pollution. 5M
- (b) Give the principle, construction, working and schematic diagram of steam turbine power plant. Mention any two advantages and disadvantages of steam turbine power plant. 6M
- (c) What is the importance of environmental education? How does Biomass and energy flow are related in ecological pyramid? 4M

Q.3 Attempt the following:-

15M

- (a) Explain the case study of Fukushima disaster (March, 2011). 5M
- (b) What is environmental degradation? Mention the causes (any four) and bad effects (any four) of depletion of natural water resources. 5M

- (c) What is green building? Explain the concepts and give any four objectives of Green building. 5M

Q.4 Attempt the following:- 15M

- (a) Give the schematic diagram of venturi scrubber used for purification of air pollutants. 6M  
Give the principle, construction, any two advantages and disadvantages of venturi scrubber.
- (b) What is indoor air pollution? Mention any four sources and four bad effects of indoor air pollution. 5M
- (c) Write a short note on case study on Narmada Bachao Andolan. 4M

Q.5 Attempt the following:- 15M

- (a) Explain the concept of flat plate collector with the help of its principle, construction, working, advantages (any two) and disadvantages (any two). 6M
- (b) Define noise pollution. Mention any three sources and three adverse effects of noise pollution. 4M
- (c) What do you mean by Solid waste? What are the different sources (any four) responsible for the solid waste? Explain composting in brief. 5M

Q.6 Attempt the following:- 15M

- (a) Give the neat and labeled diagram for photovoltaic cell. Give the principle, construction, working, advantages (any two) and disadvantages (any two) involved in photovoltaic cell. 6M
- (b) What is e-pollution? State any four sources and any four bad effects of e-pollution. 5M  
What are the preliminary actions to be taken to avoid e-pollution?
- (c) What is acid rain? Give the reactions taking place in the environment during acid rain. 4M  
Give any two bad effects of acid rain.

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