

**POST GRADUATE DIPLOMA IN
ENVIRONMENT AND SUSTAINABLE
DEVELOPMENT (PGDESD)**

Term-End Examination

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December, 2017

MED-007 : AGRICULTURE AND ENVIRONMENT

Time : 2 hours

Maximum Marks : 50

Note : Attempt *five* questions in all. All questions carry equal marks. Question no. 1 is **compulsory**.

1. (a) Define the following terms : 3
- (i) Botanical pesticides
 - (ii) Seed gene bank
 - (iii) Plantation crops
- (b) Expand the following (any *three*) : 3
- (i) NPV
 - (ii) GATT
 - (iii) CFC
 - (iv) EXIM

- (c) State whether the following statements are true or false : 4
- (i) A system can be considered sustainable over a defined period, if the outputs do not decrease when the inputs are not increased.
 - (ii) Biological processes like anaerobic digestion and alcoholic fermentation involve enzymatic breakdown of biomass by micro-organisms at low pressure and high temperature.
 - (iii) Rill erosion in its advanced stage is called sheet erosion.
 - (iv) *Bt* cotton is a transgenic cotton in which a special type of protein called *cry* protein is produced by introducing a bacterial gene.
2. (a) Why is the cultural control method considered an important component of IPM ? Explain any two cultural techniques. 5
- (b) Discuss the role of women in agriculture. 5

3. (a) "Fertilizers are important components of intensive agriculture but they can pollute the environment." Comment on the statement giving suitable examples. 5
- (b) Briefly explain ecological security. List the factors that threaten it. 5
4. (a) Discuss the effect of climate change on agriculture. 5
- (b) Name a greenhouse gas produced from rice fields. How is it produced and what preventive measures should be taken to reduce its production? 5
5. Explain the various causes responsible for the loss and spoilage of perishable agricultural produce. Suggest at least five ways of controlling these losses. 10
6. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Watershed Management
- (b) Aquaculture
- (c) Sustainability Indicators
- (d) Organic Farming