

**POST GRADUATE DIPLOMA IN PLANTATION  
MANAGEMENT (PGDPM)**

**Term-End Examination**

00481

December, 2014

**MAM-002 : CROP PRODUCTION TECHNOLOGY**

*Time : 3 hours*

*Maximum Marks : 100*

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**Note :** Answer any *ten* questions. All questions carry equal marks.

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1. (a) Fill in the blanks :

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- (i) 'Katte' mosaic virus in cardamom is transmitted by the banana aphid scientifically called as \_\_\_\_\_ .
- (ii) Darjeeling tea is produced from tea plantations in the \_\_\_\_\_ region of India.
- (iii) \_\_\_\_\_ was the scientist who first developed propagation by budding in rubber.
- (iv) In South India, \_\_\_\_\_ is the popular coffee variety.

(b) What are the following estate operations generally called :  $5 \times 1 = 5$

- (i) Cutting back the main stem of shade trees as in tea estates, to encourage lateral growth/spread.
- (ii) Application of plant protection chemicals from air, for protecting top canopy.
- (iii) Practice by which a live organism is controlled or managed by another organism.
- (iv) Removing new growths in the primary branches of coffee bush to increase aeration.
- (v) Time required between start of organic management and certification, as in spices.

2. (a) Mention the recommended spacing for planting and plant population per hectare under Kerala conditions, for the following crops :  $3 \times 2 = 6$

- (i) Pepper – on slopes
- (ii) Tea – by single hedge planting
- (iii) Robusta Coffee

(b) Briefly state the most suitable soil required for the following crops :  $2 \times 2 = 4$

- (i) Clove
- (ii) Coffee

3. (a) What purpose/service do the following provide :  $5 \times 1 = 5$

- (i) Bee-hives in cardamom estates
- (ii) Pheromone traps for pest control
- (iii) Humus in soil
- (iv) Organic Agriculture
- (v) Biofertilizers

(b) Give the correct expansions for the following abbreviations :  $5 \times 1 = 5$

- (i) FOAM
- (ii) NPOP
- (iii) APEDA
- (iv) INDOCERT
- (v) MRL

4. What are the following meant for ? Answer in 2-3 sentences.  $5 \times 2 = 10$

- (a) Trap Crops
- (b) In-conversion Organic Tea
- (c) Budwood nursery of Rubber
- (d) Paddyng of flower buds in Coffee
- (e) Organic recycling in Cashew

5. State briefly how do the following pests inflict damage (nature of damage) on the crops mentioned below : 5×2=10

- (a) Thrips and Shoot borer in Cardamom
- (b) White grubs in Tea
- (c) Termites on Rubber
- (d) Mealy bugs on Coffee
- (e) Coreid bug on Coconut

6. (a) State briefly the factors influencing utilization of nutrients in tea. 3

(b) List four major weeds in tea plantations and explain the control of weeds using herbicides. 4

(c) Explain briefly the importance/advantages of vegetative propagation in coffee. 3

7. (a) How does soil reaction influence growth of rubber trees ? State the optimum range of soil reaction scale for rubber. 3

(b) What are silt pits ? How do these help in rubber cultivation ? 3

(c) What are cover crops ? Name two leguminous cover crops for young rubber plantations and explain the need and use of cover crops in rubber estates. 4

8. How do the following climatic/geographic factors influence the growth of plants :  $4 \times 2 \frac{1}{2} = 10$
- (a) Wind on Tea
  - (b) Lightning on Rubber
  - (c) Altitude on Coffee
  - (d) Sunlight on fruit bearing in Cashew
9. (a) State the fertilizer (NPK) recommendations per annum and method of application in  $3+3=6$   
(i) Rubber and (ii) Pepper.
- (b) Briefly explain the drought management in coconut, with special reference to Kerala. 4
10. Write short notes on any *two* of the following :  $5+5=10$
- (a) Integrated Nutrient Management (INM) practices for Pepper
  - (b) Pruning of Coffee bushes
  - (c) High Density Planting in Cashew
11. State what is organic certification for spices. Explain the need for organic certification and state its procedural formalities. 10

12. Which are major fungal diseases of coconut ?  
Mention their causal organisms, describe  
symptoms and suggest control/management  
measures for one of these diseases. 10
13. Discuss the concept of Good Agricultural  
Practices. Indicate the principle of GAP. Explain  
the standards required for crop production with  
special reference to spices. 10
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