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முழுப் பதிப்புரிமையுடையது]  
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Open Competitive Examination for Recruitment to the Post of Farm Manager,  
Extension Officer and Technological Officer of Grade III of  
Sri Lanka Technological Service for the  
Department of Export Agriculture – 2015 (2016)

(02) General Test I  
(Technological and Subject affiliated Test)

Three hours

● Answer all questions.

1. Agriculture plays an important role in the economy of Sri Lanka and it mainly contributes to ensure food security of the country.
  - (i) (a) What was the contribution of agriculture sector to the gross domestic production of Sri Lanka in 2014?
  - (b) What was the growth rate of agriculture sector of Sri Lanka in 2014 compared to the year 2013?
  - (c) What is the year that the name of Department of Minor Export Crops was changed to Department of Export Agriculture?
  - (d) Name the district where the first research center of the Department of Export Agriculture was established in Sri Lanka.
  - (e) State the number of zones/regions in Sri Lanka according to the following categories.
    - I. Agro-climatic zones
    - II. Agro-ecological regions
  - (ii) (a) What are the main forms of nitrogen absorbed by the plants, from chemical or organic fertilizers applied to the soil?
  - (b) What is the importance of the nitrogen fixing bacteria?
  - (c) What is the main issue of having high levels of nitrate ions in water?
  - (d) Explain the process of photosynthesis in plants.
  - (iii) (a) What are the main functions of phosphorous in metabolism in plants?
  - (b) What are the main functions of potassium during plant growth?
  - (iv) (a) What is meant by 'climate change'?
  - (b) What are the main impacts of climate change on crop production?
2. (i) (a) What is the ministry that the Department of Export Agriculture belongs to?
- (b) List the **four** main operational divisions of the Department of Export Agriculture.
- (ii) State the scientific name of each of the following export agricultural crops.
 

(a) cinnamon	(b) clove	(c) cardamom	(d) black pepper
(e) nutmeg	(f) arecanut	(g) betel	(h) cocoa
(i) vanilla	(j) ginger		
- (iii) Explain the importance of using fertilizer for the growth and yield of the following crops.
 

(a) cinnamon	(b) black pepper
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- (iv) State the cultivated areas and suitable soil conditions for each of the following crops.
 

(a) cinnamon	(b) arecanut	(c) turmeric	(d) nutmeg	(e) cocoa
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3. Various propagation methods have contributed for the existence of various plants at the global level.
- (i) Define the followings.
    - (a) Apical dominance
    - (b) scion
    - (c) stock
    - (d) sexual propagation
    - (e) Asexual propagation
  - (ii) Explain the advantages and disadvantages of sexual propagation of plants.
  - (iii) Characteristics of a pest damage seen in cinnamon cultivation is depicted below.

“Adult moth lays eggs in the bases of the cinnamon plant and caterpillar (larvae) eats into the plant stem near the soil surface. This pest damage is most common in old mature cinnamon plantations. The pest damage would result in death of new shoots, collapsing of some mature shoots from the base and retardation of new shoot formation. The whole bush will die at the end”

    - (a) State the common name of the pest causing the damage.
    - (b) State the scientific name of this pest.
    - (c) What are the methods to control this pest?
  - (iv)
    - (a) Briefly describe ‘Integrated Pest Management’.
    - (b) State the scientific name of the causal agent of each of the following diseases.
      - I. White root disease of cinnamon
      - II. Bacterial leaf blight of betel
    - (c) State separately, a method through which each of these causal agents identified in (iv)(b) above can be controlled.
4.
  - (i) Explain how the provision of fertilizer subsidy has affected the agriculture sector of Sri Lanka.
  - (ii)
    - (a) State **five** main challenges faced by small holder farmers of Sri Lanka.
    - (b) Explain ways that each of those challenges identified in (ii)(a) above could be tackled to ensure sustainable agricultural development.
  - (iii) Explain how the agricultural economy of Sri Lanka could be developed through organic farming.
  - (iv) Explain how the present national agricultural policy of Sri Lanka should be modified to suit the future.
5.
  - (i) Five main export crops of Sri Lanka are listed below.
    - I. cinnamon
    - II. black pepper
    - III. cardamom
    - IV. clove
    - V. nutmeg
    - (a) State the main export destination country for each of the above crops, from Sri Lanka.
    - (b) State the main chemical compound **or** volatile oil found in each of these crops.
  - (ii) What are the advantages of cultivating export crops using organic farming methods?
  - (iii)
    - (a) Briefly describe the selection process of planting materials of black pepper for field planting.
    - (b) Briefly describe the process of field establishment of betel.
  - (iv)
    - (a) What is meant by ‘Agricultural extension service’?
    - (b) Describe how the agricultural extension service could be used effectively for the success of the export agriculture sector of Sri Lanka.

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