



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

**Higher National Diploma in (Agriculture)
First Year, 1st Semester Examination – 2017
AG-1101-Agro-meteorology and principles of crop production.**

Instructions for Candidates:

Answer part I and part II on this paper itself and will be collected after 01 hour.
Two hours for part III

**No. of pages : 06
No. of questions : 07
Time allowed : Three (03) hours.**

Part-I

Question No.01

Circle the number of the correct answer on this paper

- (i). Select the correct statement regarding Agro-ecological classification of Sri Lanka.
 - a) Intermediate zone is divided in to 15 regions
 - b) The country is divided into 46 agro-ecological regions.
 - c) Wet zone is divided into 20 regions
 - d) Dry zone is divided into 12 regions

- (ii). Which of the following is considered as a result of Global warming?
 - a) Increase Bio diversity
 - b) Increase the land area
 - c) Reduce the sea level
 - d) Ground water pollution

- (iii). Select the correct statement regarding “short day plants” from the following
 - a) They need short day time for seed germination.
 - b) Short day condition is needed for the flowering of these plants.
 - c) They need short night time period for vegetative growth.
 - d) Short day condition is needed for dormancy breaking of these plants.

- (iv). Which of the following is an impact of low RH condition?
 - a) Reduce leaf growth in plants.
 - b) Increase fungal disease problem in plants.
 - c) Reduce transpiration in plants.
 - d) Increase the population of Aphids.

- (v). Which of the following is not considered as an important factor when determining the rainfall distribution of Sri Lanka?
- Central hill part of the country
 - In-land water bodies
 - Presence of Indian Ocean.
 - Island nature of the country
- (vi). Select the correct statement:
- Transpiration is not affected by wind in plants.
 - Photosynthesis is increased by mild wind in plants.
 - Light colour has no effect on crop production.
 - Light intensity is determined by the colour of the light.
- (vii). Which of the following cannot be considered as an objective of seed treatment?
- Prevent pest and disease problems.
 - Reduce storability.
 - Reduce seed dormancy.
 - Induce nitrogen fixing ability.
- (viii). Temperature of an area is influenced/affected by:
- Topography of the area.
 - Water bodies available in the area
 - Land use of the area
 - All the above are correct
- (ix). Select the correct statement regarding “Dry land preparation method” from the following.
- It is suitable for areas where irrigation water is freely available
 - It is commonly practiced in upland areas.
 - It helps to control weed successfully
 - None of the above statement is correct.
- (x). Select the “micro nutrient” from the following.
- Mg
 - S
 - Cu
 - Ca

- (xi). Select the correct statement regarding “immobile nutrients” from the following.
- These nutrients move from young parts to matured part of plants during deficiency.
 - Mg, P & K are immobile nutrients.
 - Deficiency symptoms of these nutrients will be expressed in young plant parts.
 - None of the above is correct.
- (xii). Select the correct statement from the following:
- Integrated Pest Management practices are not suitable for large scale cultivations
 - Integrated Pest Management practices are not successful in modern agriculture.
 - Integrated Pest Management is more expensive than other methods
 - Integrated Pest Management does not allow total killing of pests in an area.
- (xiii). Which of the following is considered as a benefit of “coir dust” in preparation of planting medium?
- It gives most of the micro and macro nutrients.
 - It is rich in micro organisms
 - It has high water holding capacity
 - It has high Cation Exchange Capacity
- (xiv). Which of the following is not a “Potassium deficiency symptom?”
- Twisted leaf
 - Small sized fruit
 - Dry plant top
 - Yellowing of young leaves.
- (xv). Select the correct statement regarding Raised-bed nurseries from the following:
- Raised-bed nurseries are suitable for low rainfall areas
 - Raised-bed nurseries are more suitable for poor drainage area.
 - Raised-bed nurseries are mostly suitable for sandy textured soils.
 - None of the above is correct.
- (xvi). Which of the following cannot be considered as a recent climatic change?
- Increase in maximum and minimum ambient temperatures.
 - Drought and Flood condition
 - Change in rainfall pattern
 - Sea level decrease.

(Total 16 marks)

Part-II

Question No. 02

(i) What do you understand by the term “Green House Effect”? (03 marks)

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(ii) Name three (03) natural greenhouse gases. (03 marks)

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(iii) Based on the rainfall amount name the three (03) climatic zones in Sri Lanka.

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(iv) What are the uses of agro-ecological classification? (03 marks)

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Question No.03

(i) What are the objectives of nursery management in agriculture? (02 marks)

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(ii) Give three (03) advantages of transplanting compared to direct seeding as a crop establishment method. (03 marks)

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(iii) Name three (03) weed control methods used in agriculture and give one (01) advantage of each method.

(03 marks)

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(iv) Name four (04) techniques used to minimize post-harvest losses in Agriculture Commodities. (04 marks)

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Part-III.

Time allowed two (02) hours

Question No.04

- (i) Define the terms “weather” and “climate”. (06 marks)
- (ii) Briefly explain the importance of rainfall/precipitation on crop production (09 marks)

Question No.05

- (i) “Proper land preparation is the initial step for successful agriculture.” Briefly explain this statement? (07 marks)
- (ii) What are the impacts of light on crop production? (08 marks)

Question No.06

- (i) Write short notes on the following:
 - a. Non-chemical pest and disease control methods. (05 marks)
 - b. Techniques used to increase the fertilizer use efficiency (05 marks)
 - c. Instruments maintained in an agro-meteorological station and their uses. (05 marks)

Question No.07

- (i) What are the advantages of vegetative propagation compared to seed propagation? (06 marks)
- (ii) Name the vegetative propagation methods used in agriculture and give crop example for each method. (09 marks)