

OL/2021(2022)/81-E-I, II

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව
 இலங்கைப் பரீட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம்
 Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka

81 E I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2021(2022)
 கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2021(2022)
 General Certificate of Education (Ord. Level) Examination, 2021(2022)

කෘෂි හා ආහාර තාක්ෂණය I, II
 விவசாயமும் உணவுத் தொழினுட்பவியலும் I, II
Agriculture and Food Technology I, II

පැය තුනයි
 மூன்று மணித்தியாலம்
Three hours

අමතර කියවීමේ කාලය - මිනිත්තු 10 යි
 மேலதிக வாசிப்பு நேரம் - 10 நிமிடங்கள்
Additional Reading Time - 10 minutes

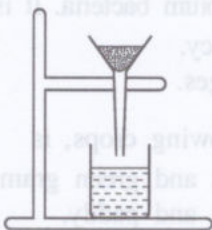
Use additional reading time to go through the question paper, select the questions and decide on the questions that you give priority in answering.

Agriculture and Food Technology I

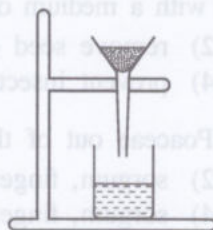
Instructions:

- * Answer **all** questions.
- * In each of the questions **1 to 40**, pick one of the alternatives (1), (2), (3), (4) which is **correct or most appropriate**.
- * Mark a cross (X) on the number corresponding to your choice in the given answer sheet.
- * Further instructions are given on the back of the answer sheet. Follow them carefully.

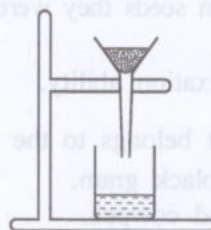
1. According to the folklore the area which is known as 'Wellassa' in Sri Lanka as there were one lakh of paddy field plots is situated in,
 (1) Central province. (2) North-Western province.
 (3) Sabaragamuwa province. (4) Uva province.
2. The districts Anuradhapura, Polonnaruwa and Trincomalee receive the highest annual rainfall by
 (1) North-Eastern monsoons. (2) conventional rains
 (3) South-Western monsoons. (4) cyclonic rains
3. Three statements regarding soil are stated below.
 A - If the H^+ concentration is greater than OH^- concentration in soil solution, the soil is acidic.
 B - Calcium carbonate can be added to neutralize soil acidity.
 C - In the wet zone of Sri Lanka, the redish brown soil is abundant.
 Out of these, the correct statements are
 (1) A and B only. (2) A and C only. (3) B and C only. (4) All A, B and C.
4. The apparatus of an experiment done by a few students regarding soil types are shown in the diagrams given below. Same amount of four various types of dried soil are put in each funnel and same volumes of water are added into them. In which apparatus has the soil sample that contains the highest sand percentage out of those?



(1)



(2)



(3)

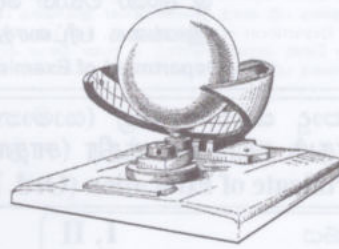


(4)

5. The number of Agro-ecological zones that Sri Lanka was divided into is
 (1) 7. (2) 14. (3) 27. (4) 46.

6. The equipment shown in the diagram is

- (1) a microscope.
 (2) a sunshine recorder.
 (3) an anemometer.
 (4) an automatic rain guage.



7. A farmer gives the hay, obtained from his paddy cultivation as cattle feed. He produces bio gas using the excreta of those cattle and uses the by products of the bio gas unit as manure to the crop cultivation. This farming method is known as

- (1) crop rotation farming. (2) conservation farming.
 (3) animal crop rotation farming. (4) integrated farming.

8. Three statements regarding the effect of light on crop cultivation are stated below.

A - The time duration of light of the day affects the inflorescence of some plants.

B - Red light affects on the branching of plants and seed germination.

C - When the light intensity increases, the photosynthesis increases due to the closing of stomata.
 Out of the above, correct statements are

- (1) A and B only. (2) A and C only. (3) B and C only. (4) All A, B and C.

9. In soil-less culture, 'Albert solution' is used,

- (1) to reduce acidity in soil. (2) to control pests in crops.
 (3) to provide required nutrition for the crops. (4) to induce the rooting of stem cuttings.

10. Cultivating two or more types of crops in a same land, establishing another type of crop among the prevailing crop which are in the floral stage and prior to the end of the life cycle is known as

- (1) mixed cropping. (2) multiple cropping.
 (3) relay cropping (4) inter-cropping.

11. Three statements regarding soil water are stated below.

A - When soil is saturated with water, that soil becomes to the field capacity.

B - Capillary water helps the growth of plants.

C - The hygroscopic water is not removed even in arid conditions.

Out of the above statements, the correct statement/s is/are

- (1) A only. (2) A and B only. (3) A and C only. (4) B and C only.

12. A student puts the seeds of tomato, papaw and passion fruit in a nursery as soon as they were removed from the fruits. But they were not germinated for a long time. The reason for this may be

- (1) the embryos of seeds are immaturated.
 (2) the seed coats are impermeable to air and water.
 (3) the embryos are inactive.
 (4) the seed coats contain growth inhibitors.

13. Before planting soya bean seeds they were mixed with a medium of rhizobium bacteria. It is done to

- (1) prevent diseases. (2) remove seed dormancy.
 (3) improve nitrogen fixation ability. (4) prevent insect damages.

14. The group of crops that belongs to the family Poaceae out of the following crops, is

- (1) paddy, maize and black gram. (2) sorgum, finger millet and green gram.
 (3) meneri, gingelly and cowpea. (4) sorgum, finger millet and paddy.

15. The irrigation method that requires the most amount of water used in crop cultivation is
 (1) Strip irrigation. (2) Basin irrigation.
 (3) Furrow irrigation. (4) Flood irrigation.
16. Three statements on the advantages of sprinkler irrigation are given below.
 A - Suitable even for the slope lands.
 B - Suitable for tall crops.
 C - Fertilizer can be applied with water.
 Out of these, the correct statement/s is/are
 (1) A only. (2) A and B only. (3) A and C only. (4) B and C only.
17. The standard width of a nursery bed is
 (1) 50 cm. (2) 100 cm. (3) 150 cm. (4) 200 cm.
18. A secondary land preparation equipment which is being operated by mechanical power is
 (1) rotavator. (2) Japanese reversible plough.
 (3) mould board plough. (4) disc plough.
19. What is the most suitable type of bed to plant sweet potato and peanut?
 (1) raised beds (2) ridges and furrows
 (3) sunken beds (4) single planting holes
20. Out of the following, alien invasive plants are
 (1) *Cymbopogon* (Mana) and *Wedelia*.
 (2) *Vernonia* (Monara kudumbiya) and water hyacinth
 (3) *Atawara* and *Cyperus rotundus* (Kalanduru).
 (4) *Parthenium* and Giant mimosa
21. The insect pest that harms to the plant leaves of the crops in family cucurbitaceae is
 (1) dragonfly. (2) Aulachophora. (3) stem boarer. (4) Lady bird beetle.
22. The casual agent of leaf mosaic disease of crops ladies fingers and papaw is
 (1) a bacteria. (2) a fungus. (3) a virus. (4) a nematode.
23. Isolated circular patches in a paddy field with plants which are turned yellow, dried and burnt were seen. The pest caused this is,
 (1) paddy bug. (2) aphid.
 (3) brown plant hopper. (4) thrip
24. Out of the following what is the Indian dairy cattle breed?
 (1) Jersey (2) Ayrshire (3) Sindhi (4) Kilari
25. What is the feature out of the following that can be seen in European cattle breeds?
 (1) large dew lap (2) high hump (3) long fur (4) movable skin
26. To identify which disease is the strip cup test done in dairy farming?
 (1) foot and mouth disease. (2) mastitis.
 (3) haemorrhagic septicaemia. (4) milk fever.
27. A food component that can be used to provide carbohydrate when preparing animal food rations is
 (1) maize. (2) coconut poonac. (3) shell powder. (4) soya bean meal.
28. The purpose of mixing fine sand with finger millet (kurakkan) seeds before sowing is
 (1) to expedite seed germination. (2) to remove seed dormancy.
 (3) to minimize pest damages in the field. (4) to spread the seeds uniformly in field.
29. The ability of a consumer to obtain a required food item of good quality in required amount when necessary is identified as
 (1) food equilibrium. (2) food preservation.
 (3) food conservation. (4) food security.

30. Rooting of stem cuttings is successful, when planting in a solar propagator. It is because
 (1) the temperature and humidity prevailing inside is high.
 (2) rain water does not enter into it.
 (3) pests cannot enter into it.
 (4) the air becomes cool, by the water vapour collected inside.
31. A tin of canned fish bought from the market was found inflated in top and bottom. The reason for this could be
 (1) the date of expiry has been passed. (2) the growth of micro-organisms.
 (3) it has been subjected to concentration. (4) the tin was made by thin plates.
32. A fermented milk product is
 (1) condensed milk. (2) pasteurized milk.
 (3) yoghurt. (4) milk powder.
33. The essential micro nutrients for the growth of crops are
 (1) nitrogen, phosphorous and potassium. (2) calcium, magnesium and iron.
 (3) copper, zinc and carbon. (4) zinc, manganese and molybdenum.
34. Dried fish production takes an important place as a fish preservation method. The preservation technique used here is
 (1) drying. (2) spray drying.
 (3) sterilization. (4) blanching.
35. It was observed the edge of a plant leaf turned yellow and had a burnt nature. The reason for this may be
 (1) Nitrogen deficiency. (2) Phosphorous deficiency.
 (3) Potassium deficiency. (4) Magnesium deficiency.
36. Out of these, what is the Vitamin leads the good health of skin and eyes?
 (1) Vitamin A (2) Vitamin B (3) Vitamin C (4) Vitamin D
37. What are the main nutrients of Top Dressing Mixture (TDM) which is used in paddy cultivation?
 (1) nitrogen and potassium (2) phosphorous and potassium
 (3) nitrogen and phosphorous (4) nitrogen, phosphorous and potassium
38. Select the correct statement regarding farm animals out of the following.
 (1) The gestation period of a cow is 305 days.
 (2) When rearing layers, the stage between the period of day old to 8 weeks are called chicks.
 (3) The amount of milk given to a calf is 20% of the birth weight.
 (4) More milk yield can be taken by raring cattle in free range method, than intensive method.
39. The standard certificate that is recognised internationally to maintain the quality of goods and services including food items is
 (1) SLS. (2) IPNS. (3) ISO. (4) GAP.
40. How long before the calving should the 'dry period' be started of a pregnant cow?
 (1) one month (2) two months (3) three months (4) four months

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ශ්‍රී ලංකා විද්‍යා දෙපාර්තමේන්තුව
இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka

81 E I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2021(2022)
கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2021(2022)
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කෘෂි හා ආහාර තාක්ෂණය I, II
விவசாயமும் உணவுத் தொழினுட்பவியலும் I, II
Agriculture and Food Technology I, II

Agriculture and Food Technology II

* Answer five questions only, including the first question and four other selected questions.

1. A farmer who lives in the wet zone and engages in crop cultivation and animal husbandry, started organic farming using crop residues, by products and animal waste.
 - (i) Name **two** main cropping seasons of Sri Lanka.
 - (ii) (a) What is the cropping season of cultivation which is based on the South Western monsoon rains?
(b) Write the time duration of South Western monsoon rains.
 - (iii) (a) Mention **two** methods used to sterilize nursery beds in crop cultivation.
(b) Name a common disease in nursery plants.
 - (iv) (a) What are the **two** components used to prepare nursery mixture?
(b) Mention the ratio that those components should be mixed.
 - (v) (a) Name **two** weeds which have under ground stems.
(b) Write **two** agronomical methods that can be used to control weeds in crop cultivation.
 - (vi) (a) Write **two** types of colloids in soil.
(b) Mention **two** mechanical methods that can be used for the conservation of soil in a cultivated land.
 - (vii) Mention **four** advantages of applying organic manure in crop cultivation.
 - (viii) Name **four** environment friendly pesticides that can be used instead of chemical pesticides.
 - (ix) Mention **four** details that should be included in a label of a food pack.
 - (x) Write the causal agent of coccidiosis in poultry.
2. Soil is the major substrate or cultivation medium in agricultural industry.
 - (i) (a) Name **four** soil components.
(b) Classify and state the soil mineral types with their diameters.
 - (ii) Mention **four** agricultural importances of soil texture.
 - (iii) (a) What is soil erosion?
(b) Name **two** soil erosion agents.
(c) Write **three** adverse effects of soil erosion.

[see page six]

3. Water is a limited resource, therefore it must be well-managed for the future generation.
- (i) What is 'irrigation' in crop cultivation?
 - (ii) Mention **three** surface irrigation methods. Out of those, name a suitable irrigation method for perennial fruit crops and illustrate it in a diagram.
 - (iii) Mention **three** adverse effects of poor drainage in a cultivated land.
4. Pest damage is a major factor which affects the productivity of crop cultivation.
- (i) (a) Write **four** crops which cucurbit-fly damages.
(b) Mention the damage done by cucurbit-fly to the crops.
 - (ii) (a) Write **four** damages caused by weeds to the crops.
(b) Mention **four** methods that prevent the immergence of weeds in a cultivation field.
 - (iii) Mention the
(a) causal agent
(b) symptoms and
(c) **two** controlling methods
of bacterial-wilt which the plants of family Solanaceae subjected to
5. The planting material required for cultivation purposes can be obtained using the ability of plants to produce new generations.
- (i) (a) What is vegetative propagation?
(b) Write **four** advantages of vegetative propagation.
 - (ii) Mention **four** favourable features that can be seen in an improved new paddy variety.
 - (iii) Describe the simple ground layering of a jasmine branch that can be bent to the ground level with the help of a named diagram.
6. Man used to follow food preservation methods from the past, because the food is subjected to spoilage and wastage.
- (i) (a) What is meant by food spoilage?
(b) Mention **three** factors that affect food spoilage.
 - (ii) Mention **three** importances of food preservation.
 - (iii) Mention **three** food preservation methods and write an example for each.
7. Animal husbandry of Sri Lanka has a potential of developing due to the availability of suitable various climatic zones to rare farm animals with high productivity.
- (i) Name **four** main cattle rearing zones in Sri Lanka identified by the department of Animal production and health.
 - (ii) (a) Classify animal feed on the fibre content included and give **two** examples for each.
(b) Write **two** practices that should be done to a newly born calf.
 - (iii) (a) Mention **four** advantages of poultry farming in deep litter system.
(b) Write **two** material suitable to be used as the litter in deep litter system.
