

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
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 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

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2026
 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2026
 General Certificate of Education (Adv. Level) Examination, 2026

කෘෂි විද්‍යාව I
 விவசாய விஞ்ஞானம் I
 Agricultural Science I

08 E I

පැය දෙකයි
 இரண்டு மணித்தியாலம்
 Two hours

Instructions:

- * Answer **all** the questions.
- * Write your **Index Number** in the space provided in the answer sheet.
- * Instructions are given on the back of the answer sheet. Follow those carefully.
- * In each of the questions 1 to 50, pick one of the alternatives from (1), (2), (3), (4), (5) which is **correct** or **most appropriate** and **mark your response on the answer sheet with a cross (X)** on the number of the correct option in accordance with the instructions given on the back of the answer sheet.

1. An equipment used in intercultivation would be
 (1) plough. (2) harrow. (3) subsoiler. (4) rotavator. (5) weeder.
2. In the maximum and minimum thermometer, the liquid used to measure the minimum temperature is
 (1) Mercury. (2) Acetone. (3) Ethanol. (4) Kerosene. (5) Methanol.
3. A free-living soil bacterium that involves in nitrogen fixation is
 (1) *Azotobacter*. (2) *Rhizobium*. (3) *Anabaena*. (4) *Thiobacillus*. (5) *Pseudomonas*.
4. Biofertilizers contain
 (1) NPK only. (2) microbes only.
 (3) micronutrients only. (4) both nutrients and microbes.
 (5) both macro and micronutrients.
5. Among the following crops, drip irrigation is best suited for
 (1) onion. (2) soybean. (3) lettuce. (4) bell pepper. (5) carrot.
6. A crop plant that is commonly propagated by grafting is
 (1) mango. (2) tea. (3) rubber. (4) lemon. (5) rambutan.
7. In plant propagation, rooting hormone is used in
 (1) bulbils. (2) air layering. (3) patch budding.
 (4) wedge grafting. (5) rhizomes.
8. Crop water requirement is highest at
 (1) germination stage. (2) seedling stage.
 (3) flowering stage. (4) ripening stage.
 (5) harvesting stage.
9. Among the following greenhouse gases, the gas having the **lowest** global warming potential would be
 (1) CH₄. (2) CO₂. (3) N₂O. (4) SF₆. (5) CFC.

10. Raising farm animals in Sri Lanka is primarily important to
 - (1) provide animal power required for agriculture.
 - (2) get manure to fertilize crop fields.
 - (3) provide protein rich foods to the people.
 - (4) provide animals for religious activities.
 - (5) earn foreign exchange.
11. The main function of the Gizzard of a hen would be
 - (1) production of the egg shell.
 - (2) secretion of albumin for egg production.
 - (3) temporary storage of food consumed by the hen.
 - (4) maintaining a good microbial population to help gut health.
 - (5) support mechanical digestion of feed.
12. 'Leibig's Law of the Minimum' states that
 - (1) Plant growth is controlled by the nutrient in shortest supply.
 - (2) Plant growth depends on total nutrients available.
 - (3) All nutrients are equally important.
 - (4) Water is the only limiting factor.
 - (5) Light controls plant nutrition.
13. Examples for protein supplements in animal feeds are
 - (1) maize, soybean and rice bran.
 - (2) broken rice, wheat bran and dhal husk.
 - (3) coconut poonac, soybean meal and fish meal.
 - (4) fish meal, meat meal and bone meal.
 - (5) sorghum, maize and rice.
14. An advantage of vegetative propagation is that it produces
 - (1) genetically diverse plants.
 - (2) large fruits.
 - (3) true-to-type plants.
 - (4) drought-tolerant plants.
 - (5) plants with large canopy.
15. Adding iodine to table salt is an example for
 - (1) adulteration.
 - (2) enrichment.
 - (3) fortification.
 - (4) preservation.
 - (5) seasoning.
16. An example for a bacterial disease found in cattle is
 - (1) salmonellosis.
 - (2) brucellosis.
 - (3) foot and mouth disease.
 - (4) milk fever.
 - (5) bloat.
17. Pasture conservation in Sri Lanka is necessary to
 - (1) improve the nutritive value of poor quality local grasses.
 - (2) make use of surplus production of pasture.
 - (3) improve the palatability of grasses.
 - (4) avoid waste of pasture during the rainy season.
 - (5) ensure a continuous supply of adequate feeds to animals.

18. The government institution, primarily responsible for regulating farmer organizations and solving problems of tenant farmers would be
- (1) Department of Agriculture.
 - (2) Irrigation Department.
 - (3) Department of Agrarian Development.
 - (4) Paddy Marketing Board.
 - (5) Sri Lanka Mahaweli Authority.
19. Midday wilting in crop plants is mainly due to
- (1) high temperature.
 - (2) high light intensity.
 - (3) high transpiration.
 - (4) high evaporation.
 - (5) high humidity.
20. The most suitable method to produce disease-free plants would be, propagation by
- (1) seeds.
 - (2) stem cuttings.
 - (3) layering.
 - (4) micro-propagation.
 - (5) grafting.
21. The factors that are essential for successful seed germination would be
- (1) light and O_2 .
 - (2) moisture and O_2 .
 - (3) CO_2 and moisture.
 - (4) light and temperature.
 - (5) temperature and CO_2 .
22. 'Mendel's First Law' states that
- (1) genes always remain together.
 - (2) traits are controlled only by environment.
 - (3) alleles segregate during gamete formation.
 - (4) only dominant traits are inherited.
 - (5) all offspring are identical.
23. Controlled Environment Agriculture (CEA) can be practiced in
- (1) low country dry zone only.
 - (2) low country wet zone only.
 - (3) mid country intermediate zone only.
 - (4) upcountry wet zone only.
 - (5) any part of the country.
24. An example for a physical method used in pest management in crop fields would be
- (1) removal of stubbles and left over plant parts.
 - (2) solarization of soil.
 - (3) application of fungicides.
 - (4) use of bioagents.
 - (5) deep ploughing the field.
25. "When the first crop reaches its maturity stage, a second crop is introduced into the same field before the first crop is harvested". This cropping system is best identified as
- (1) mixed cropping.
 - (2) intercropping.
 - (3) crop rotation.
 - (4) strip cropping.
 - (5) relay cropping.

26. Following are two statements related to soil water.

A - Gravitational water is the water that drains downward through soil due to pull of gravity.

B - Hygroscopic water is a thin layer of water bound to the soil particles due to adhesion.

Of the above statements

- (1) A is correct and B is incorrect.
- (2) B is correct and A is incorrect.
- (3) both A and B are correct but they are not interrelated.
- (4) both A and B are correct and A is further explained by B.
- (5) both A and B are correct and B is further explained by A.

27. When a soil has reached the field capacity

- (1) the water in soil is held in macropores by capillary forces.
- (2) the water in soil is held in micropores by capillary forces.
- (3) gravitational water has fully drained from micropores.
- (4) the water in soil is held in macropores and micropores by capillary forces.
- (5) the water in soil is held in macropores and micropores by gravitational forces.

28. Following are three statements regarding soil organic matter.

A - Soil organic matter serves as the primary energy source for microbial activity.

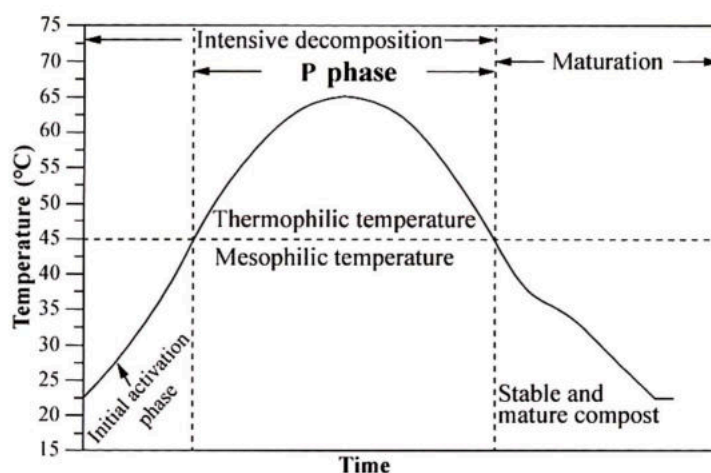
B - Humus is the black unstable part of soil organic matter.

C - Warmer temperatures accelerate microbial activity and facilitate rapid buildup of soil organic matter content.

Of the above, the correct statement/s would be

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

● Following diagram demonstrates the different phases of composting. Use this diagram to answer question No.29.



29. During the phase P in the above diagram

- (1) plant pathogens and weed seeds will be destroyed.
- (2) decomposition of phytotoxic compounds takes place.
- (3) all microbes die due to high temperature.
- (4) death of all microbes and decomposition of phytotoxic compounds take place.
- (5) death of plant pathogens and weed seeds, and decomposition of phytotoxic compounds take place.

30. Following are two statements regarding the benefits of land preparation.

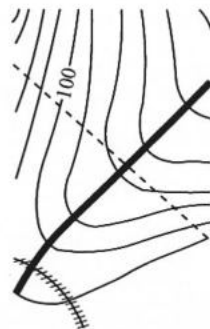
A - Land preparation improves productivity of soil.

B - Turning the soil incorporates plant materials into soil and improves organic matter content in the soil.

Of the above statements

- (1) A is correct and B is incorrect.
- (2) B is correct and A is incorrect.
- (3) both A and B are incorrect.
- (4) A is correct and it is further explained by B.
- (5) B is correct and it is further explained by A.

● Use the following diagram to answer question no. 31.



31. The most suitable drainage system for the land shown in above diagram would be

- (1) radial method.
- (2) parallel grid method.
- (3) random method.
- (4) herringbone method.
- (5) rectangular method.

32. The external conditions that maximize the rate of photosynthesis in crop plants are

- (1) low light intensity and high CO_2 concentration.
- (2) high light intensity and optimum water supply.
- (3) optimum temperature and low CO_2 concentration.
- (4) high light intensity and high O_2 concentration.
- (5) optimum water supply and high O_2 concentration.

33. An inert solid growing medium used in soilless cultivation can be best described as a medium that

- (1) provides physical support only to the plants.
- (2) actively supplies nutrients to the plants.
- (3) enhances microbial activity.
- (4) buffers pH.
- (5) releases micro nutrients only.

34. Following are few practices related to an agroecosystem.

A - Destruction of habitats of the organisms that are helping in maintaining natural balance.

B - Facilitation to enhance the biodiversity in the crop field through applying eco-friendly agronomic practices.

C - Improving the population of natural enemies in the field by maintaining host plants.

D - Repetitive cultivation of same crop in the same field, over a period of time.

Of the above, Crop pest population can be increased in a field mainly due to

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

35. Weeds are highly efficient at capturing resources, grow faster and more resilient than crops. They primarily compete with crops in the soil for
- (1) nutrients, light, and air.
 - (2) water, temperature and air.
 - (3) nutrients, light and root space.
 - (4) nutrients, water and root space.
 - (5) water, temperature and root space.
36. Plant diseases spread by various ways causing losses in the crops. The most common biological factors that spread diseases in the field are
- (1) honeybee and whitefly.
 - (2) whitefly and seeds.
 - (3) thrips and honeybee.
 - (4) dragonfly and fruit fly.
 - (5) seeds and dragonfly.
37. The efficacy of an insecticide depends on its active ingredients. The insecticides belong to the groups of organophosphates and carbamates are
- (1) Dimethoate and Carbaryl, respectively.
 - (2) Endosulfan and Dimethoate, respectively.
 - (3) Carbaryl and Endosulfan, respectively.
 - (4) Allethrin and Dimethoate, respectively.
 - (5) Atrazine and Endosulfan, respectively.
38. From the following statements, the correct statement regarding thermal processing of food is
- (1) pasteurization involves heating food to specific temperature for a short time to kill pathogens.
 - (2) canning uses heat to suppress microorganisms, creating a vacuum seal for long term storage.
 - (3) ultra-high-temperature (UHT) processed milk must be kept under refrigeration .
 - (4) blanching is used primarily to sterilize food before canning or freezing.
 - (5) in sterilization, high-acid foods are heated to a higher temperature compared to low-acid foods.
39. Following are three statements regarding fruit maturity measurements.
- A - The firmness meter is used to measure the hardness of mango fruits.
- B - The brix meter is used to measure the acidity level of pineapple.
- C - The Vernier caliper is used to measure the diameter of bananas.
- Of the above, the correct statement/s would be
- (1) A only.
 - (2) A and B only.
 - (3) A and C only.
 - (4) B and C only.
 - (5) All A, B and C.
40. Ethylene is commercially used in fruit industry for ripening of fruits. The correct statement regarding the impact of ethylene application is
- (1) it increases the respiration rate of non-climacteric fruits.
 - (2) it accelerates the ripening process of non-climacteric fruits.
 - (3) it decreases the natural ethylene production in non-climacteric fruits.
 - (4) it increases the respiration rate of climacteric fruits.
 - (5) it decreases the natural ethylene production in climacteric fruits.

41. A farmer in Anuradhapura area purchased few Friesian cows from a farm in Nuwara Eliya and fed with adequate amount of high quality feed. However, he noticed that the cows subsequently **did not** come to heat regularly, many inseminations were unsuccessful and milk production dropped sharply. The most valid reason for the above situation would be
- (1) heat stress.
 - (2) infections.
 - (3) poor housing conditions in his farm.
 - (4) poor management practices.
 - (5) prolong dry spells in Anuradhapura area.
42. Following are few statements on cow milk and colostrum.
- A - Milk is white in colour while colostrum is light yellow.
 - B - Compared to milk, colostrum contains more proteins, vitamins and minerals.
 - C - Only milk contains lactose while colostrum contains immunoglobulin.
 - D - Milk is more diluted but colostrum is more concentrated.
- Of the above, the correct statements are
- (1) A and B only.
 - (2) A and C only.
 - (3) B and C only.
 - (4) A, B and D only.
 - (5) B, C and D only.
43. A rice farmer decides to cultivate *Keeri Samba* instead of *Nadu* in coming season in his own land using family labour, and rented machinery. Correct combination of factors of production he used would be
- (1) land and labour.
 - (2) land and entrepreneurship.
 - (3) land, labour, and capital.
 - (4) land, capital and entrepreneurship.
 - (5) land, labour, capital and entrepreneurship.
44. Compared with the demand for manufactured goods, the demand for agricultural goods
- (1) is highly elastic due to availability of many substitutes.
 - (2) is mainly determined by fashion and trends.
 - (3) increases proportionately with income, at all income levels.
 - (4) is generally price inelastic because they are basic necessities.
 - (5) is unaffected by population changes.
45. When the price of a good decreases from Rs. 100 to Rs. 80, the quantity demanded increases from 50 units to 70 units. If all other factors remain constant, the demand curve
- (1) shifts to the right.
 - (2) shifts to the left.
 - (3) becomes perfectly elastic.
 - (4) becomes perfectly inelastic.
 - (5) does not shift.
46. A fish vendor earns a marginal revenue of Rs. 50 for every kilogram of processed fish sold. The marginal cost of processing one additional kilogram of fish is $10 + 5Q$, where Q is the number of kilograms processed. Profit maximizing output level would be
- (1) 6 kg.
 - (2) 8 kg.
 - (3) 10 kg.
 - (4) 12 kg.
 - (5) 15 kg.

47. As a result of the *Ditwah* Cyclone, the changes most likely to occur in the market for agricultural products would be
- (1) increase in supply and decrease in demand.
 - (2) increase in both supply and demand.
 - (3) decrease in supply and no change in demand.
 - (4) decrease in supply and increase in demand.
 - (5) no change in both supply and demand.
48. A agroforestry system can be best described as a system
- (1) more sustainable than natural ecosystem.
 - (2) vulnerable to changing weather and climatic conditions.
 - (3) more established in dry zone of Sri Lanka.
 - (4) that introduced as an alternative to supply food for increasing population.
 - (5) that intentionally combines agriculture and forestry.
49. Bovine tuberculosis is caused by
- | | |
|----------------------------------|---------------------------------------|
| (1) <i>Brucella abortus</i> | (2) <i>Leptospira interrogans</i> |
| (3) <i>Brucella suis</i> | (4) <i>Mycobacterium tuberculosis</i> |
| (5) <i>Mycobacterium bovis</i> . | |
50. Following are few statements about modern agriculture:
- A - A farmer uses a greenhouse to protect crops from climate changes.
- B - A farmer adopts drip irrigation and solar energy to his greenhouse.
- In relation to above, the correct statement would be
- (1) statement A represents climate-smart agriculture.
 - (2) statement B represents controlled environment agriculture.
 - (3) both A and B statements independently represent climate-smart agriculture.
 - (4) statement A can contribute to climate-smart agriculture when it is combined with statement B.
 - (5) statement B can contribute to controlled environment agriculture when it is combined with statement A.

* * *

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

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இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2026
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2026
General Certificate of Education (Adv. Level) Examination, 2026

කෘෂි විද්‍යාව II
விவசாய விஞ்ஞானம் II
Agricultural Science II

08 E II

පැය තුනයි
மூன்று மணித்தியாலம்
Three hours

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

Use additional reading time to go through the question paper, select the questions you will answer and decide which of them you will prioritise.

Index No. :

Instructions:

- * This question paper consists of 10 questions in 11 pages.
- * This question paper comprises Part A and Part B. The time allotted for both parts is three hours.

PART A — Structured Essay (Pages 2 - 10)

- * Answer **all** questions on this paper itself.
- * Write your answers in the space provided for each question. Note that the space provided is sufficient for your answers and extensive answers are **not** expected.

PART B — Essay (Page 11)

- * Answer **four** questions only. Use the papers supplied for this purpose. At the end of the time allotted for this paper, tie the two parts together so that Part A is on the top of Part B before handing over to the supervisor.
- * You are permitted to remove only Part B of the question paper from the Examination Hall.

For Examiners' Use only

(08) Agricultural Science - II		
Part	Question No.	Marks
A	1	
	2	
	3	
	4	
B	5	
	6	
	7	
	8	
	9	
	10	
Total		

Total	
In Numbers	
In Letters	
Code Numbers	
Marking Examiner 1	
Marking Examiner 2	
Marks checked by	
Supervised by	

Part A - Structured Essay
Answer all questions on this paper itself.
(Each question carries 100 marks.)

Do not
write
in this
column

1. (A) The crop production process can be divided into inputs, main products, and by-products. For each of the following crops, state the main primary input, the main product, and a common by-product.

	Crop	Main primary input	Main product	Common by-product
i.	Rice			
ii.	Sugarcane			

- (B) A food processing factory requires to maintain the relative humidity of its stores below 50%. Using a wet and dry bulb thermometer, a technician recorded the Dry-bulb temperature of 25°C and the Wet-bulb temperature of 20.5°C.

Temperature on a Dry-Bulb Thermometer (°C)	Psychrometric Chart								
	Temperature Difference								
	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.5
	Relative Humidity (%)								
10	82	76	71	65	60	54	49	44	19
15	85	80	75	70	66	61	57	52	31
20	87	82	78	74	70	66	62	58	40
25	88	84	81	77	73	70	66	63	47
30	89	86	82	79	76	73	70	67	52
35	90	87	84	81	78	75	72	69	56

- (i) Using the Psychrometric Chart given above, determine the relative humidity level of the store.

.....

- (ii) State whether the relative humidity in the store is in the correct range.

.....

- (iii) Why the wet-bulb temperature is typically lower than the dry-bulb temperature?

.....

- (iv) Explain the relationship between Wet-bulb Depression and Relative Humidity.

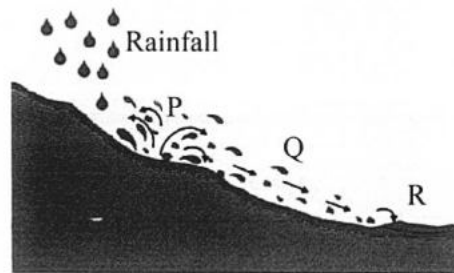
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(C) Topsoil erosion reduces agricultural productivity and ecosystem health.

- Following diagram demonstrates the process of topsoil erosion. Use this diagram to answer question (i).



(i) Name the **three** main steps P, Q, and R in soil erosion process.

(1) P -

(2) Q -

(3) R -

(ii) State the **four** types of soil erosion caused by rainfall.

(1)

(2)

(3)

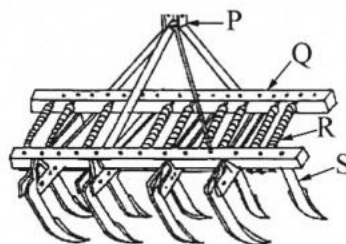
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(iii) State **two** direct negative effects of topsoil erosion.

(1)

(2)

(D) Tillage equipment prepares the soil for planting by handling crop residues, suppressing weeds, and enhancing soil structure. Following is a diagram of a tillage equipment commonly used in agriculture. Use this diagram to answer questions (i) and (ii).



(i) Name the tillage equipment shown in the above diagram.

.....

(ii) Name the parts P, Q, R, and S shown in the above diagram.

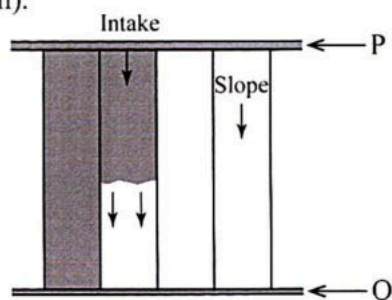
(1) P -

(2) Q -

(3) R -

(4) S -

- (E) A surface irrigation method is shown in the following diagram. Use this diagram to answer questions (i) to (iii).



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- (i) Name this irrigation method.

.....

- (ii) Name the canals labeled as P and Q in the above diagram.

(1) P -

(2) Q -

- (iii) State **three** advantages of using this irrigation method in crop production.

(1)

(2)

(3)

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2. (A) Optimizing plant physiological processes such as transpiration and photosynthesis is essential for achieving maximum crop yield.

- (i) State **two** environmental factors that affect transpiration in plants.

(1)

(2)

- (ii) List **four** agronomic practices that can be used to optimize photosynthesis in crops.

(1)

(2)

(3)

(4)

- (B) The use of appropriate plant propagation technologies is essential for improving crop productivity and sustainability.

- (i) State the main difference between sexual and asexual propagation in plants.

.....

.....

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(ii) State **two** advantages of each of the following methods of propagation.

(1) Sexual propagation

(a)

(b)

(2) Asexual propagation

(a)

(b)

(iii) State **three** internal factors that affect the rooting success of stem cuttings.

(1)

(2)

(3)

(C) Plant breeding is the science of improving the genetic potential of plants to develop new, superior varieties with desirable traits.

(i) State **two** most common selection methods used in plant breeding.

(1)

(2)

(ii) What is hybridization in plant breeding?

.....

.....

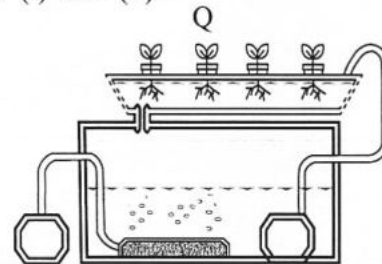
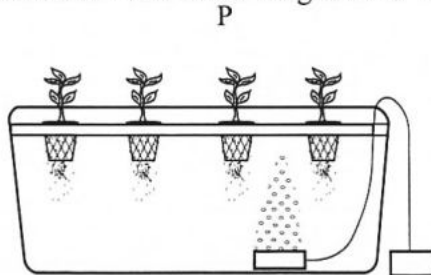
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(D) Controlled Environment Agriculture (CEA) is a modern farming method that uses technology to regulate environmental conditions in order to achieve optimal plant growth. State **two** key environmental factors that are controlled in CEA:

(i)

(ii)

(E) The following diagrams illustrate common two hydroponic setups used in soilless cultivation. Use these diagrams to answer questions (i) and (ii).



(i) Name the above hydroponic systems P and Q

(1) P -

(2) Q -

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(ii) What is the main difference between the hydroponic systems P and Q?

.....

.....

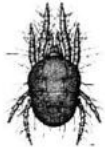
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(F) Food preservation is the processing of foods to stop or slow down the spoilage. State the method and the principle of preservation of following preserved foods.

Preserved food	Method of preservation	Principle
(i) Yoghurt		
(ii) UHT milk		
(iii) <i>Jaadi</i>		
(iv) Canned food		

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3. (A) Agroecosystems contain a wide variety of Arthropods, where both beneficial and harmful species play important roles. The line diagrams of termite, beetle, wasp, honeybee, mite, and spider are shown below. Name each Arthropod and its role in the agroecosystem.

Diagram	Name of the Arthropod	Main role in agroecosystem
(i) 		
(ii) 		
(iii) 		
(iv) 		
(v) 		
(vi) 		

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(B) Crop maturity indices can be categorized as physical, chemical and physiological. State **one** example for each of the following categories.

(i) Physical :

(ii) Chemical :

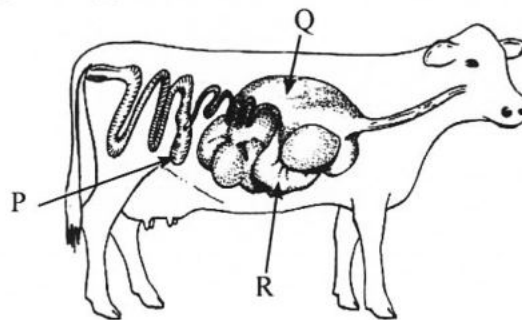
(iii) Physiological :

(C) Artificial ripening is the process of inducing fruit ripening using external agents. State **two** external ripening agents commonly used for inducing ripening of fruits.

(i)

(ii)

(D) The digestive system of a cow is illustrated in the following diagram. Use this diagram to answer questions (i) and (ii).



(i) Name the parts labeled as P, Q and R of the above diagram.

(1) P -

(2) Q -

(2) R -

(ii) Name **three** final products resulting from feed digestion within the Part Q.

(1)

(2)

(3)

(E) A chicken egg is a highly nutritious, protein-rich product encased in a protective shell. State the main function of each of the following parts of a chicken egg.

(i) Shell membrane

.....

(ii) Albumin

.....

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- (F) Artificial insemination in cattle is a technique where collected semen from a genetically superior bull is manually deposited into cow's reproductive tract. State **three** reasons for frequent unsuccessful artificial inseminations among cattle in Sri Lanka.

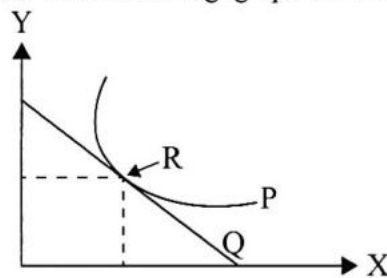
- (i)
- (ii)
- (iii)

- (G) Following are few statements regarding livestock and poultry production. State whether these statements are **true** or **false**.

Statement	True/False
(i) At present, no pure breeds are reared to produce table eggs and broiler meat.	
(ii) When milking is done by hand, stripping must be done at the beginning.	
(iii) Australian Milking Zebu (AMZ) is produced by crossing Jersey and Sindhi cattle.	

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4. (A) In addition to other inputs, a farmer used 50 labour-days and 100 kg of fertilizer to produce 1000 kg of potatoes. Use following graph to answer questions (i) to (vi).



- (i) Name the above graph
.....
- (ii) Label the X-axis and Y-axis of above graph.
- (1) X-axis
- (2) Y-axis
- (iii) Name P and Q of above graph.
- (1) P -
- (2) Q -
- (iv) State the type of relationship illustrated in this graph
.....
- (v) Name point labeled as R in the above graph.
.....
- (vi) State **two** advantages of point R to the potato farmer
- (1)
- (2)

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(B) An Integrated Farming System (IFS) is a sustainable agricultural approach.

(i) List **three** major components in this farming system.

(1)

(2)

(3)

(ii) State **two** main advantages of this farming system.

(1)

(2)

(C) Chemical poisoning frequently occurs during the application of pesticides. To reduce this risk, farmers must adhere to safety measures before, during and after the process of pesticide application. State a safety measure need to be taken at each of the following stages.

(i) Before application of pesticides

.....

(ii) During application of pesticides

.....

(iii) After application of pesticides

.....

(D) A farmer wants to apply nitrogen (N) at a rate of 80 kg/ha to his crop field and he intends to use urea.

(i) Calculate the amount of urea required per hectare.

.....

.....

.....

(ii) If the area of his crop field is 2.5 ha, calculate the total amount of urea required.

.....

.....

.....

(E) A farmer wants to prepare 100 kg of a fertilizer mixture in the ratio 10:20:10 (N:P₂O₅:K₂O). Fertilizers available are Urea (46% N), Triple superphosphate (TSP) (46% P₂O₅) and Muriate of potash (MOP) (60% K₂O). It is necessary to calculate the quantity of each fertilizer and filler required for the above fertilizer mixture.

(i) What are the amounts of nutrients (N, P₂O₅ and K₂O) required (kg) in this fertilizer mixture?

(1) N (kg)

.....

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(2) P_2O_5 (kg)

.....

.....

(3) K_2O (kg)

.....

.....

(ii) What is the amount of each fertilizer (Urea, TSP and MOP) required (kg) in this fertilizer mixture?

(1) Urea

.....

.....

.....

(2) TSP

.....

.....

.....

(3) MOP

.....

.....

.....

(iii) What is the amount of filler required (kg) for this fertilizer mixture?

.....

.....

.....

(F) Climate change refers to long term shifts in global temperature and weather patterns.

(i) What is *El nino* effect?

.....

.....

.....

(ii) What is *La nina* effect?

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Department of Examinations, Sri Lanka

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2026
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2026
General Certificate of Education (Adv. Level) Examination, 2026

කෘෂි විද්‍යාව II
விவசாய விஞ்ஞானம் II
Agricultural Science II

08 E II

Part B - Essay

Instructions:

- * Answer **four** questions only.
- * Give clearly labelled diagrams where necessary. (Each question carries **150** marks.)

5. (i) Describe the role of bio-fertilizers in improving soil health and sustainability.
(ii) Explain the relationship between the two main crop seasons and four seasons based on rainfall patterns in Sri Lanka.
(iii) Name the main soil components and explain their influence in crop productivity
6. (i) Describe the importance of co-operative companies for the development of the agricultural sector in Sri Lanka.
(ii) Using appropriate diagrams, describe different types of houses suitable for intensive rearing of dairy cattle.
(iii) Describe the important practices to follow when preparing a sloping land for crop production?
7. (i) Describe main management practices involved in rearing a flock of laying chicken in a deep litter house.
(ii) Compare the drip and sprinkler irrigation systems highlighting their advantages and disadvantages.
(iii) Describe the necessity of controlling the transpiration in crop plants and methods of controlling transpiration.
8. (i) Describe the factors affecting seed viability.
(ii) Describe the factors to be considered in selecting a media for soilless culture.
(iii) Describe the dispersal methods of invasive weeds and their impact on crop production.
9. (i) Using disease triangle, explain no disease, slight disease and severe disease conditions in plants.
(ii) Describe the factors affecting postharvest losses of fruits and vegetables in Sri Lanka.
(iii) Explain how value chain analysis can be used to improve farmer income in the agricultural sector.
10. (i) Describe the role of carbohydrates, and proteins in human nutrition.
(ii) Describe the characteristics to be considered in selecting crops for mixed cropping system.
(iii) Describe the **four** steps in agribusiness management.