

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

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

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2018 අගෝස්තු
 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2018 ඔகෝස්තු
 General Certificate of Education (Adv. Level) Examination, August 2018

09.08.2018 / 1300 – 1500

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. In Sri Lanka, reddish-brown earth is mainly found in
 - (1) mid country dry zone.
 - (2) low country dry zone.
 - (3) mid country wet zone.
 - (4) low country wet zone.
 - (5) mid country intermediate zone.
2. In plant nutrition, Cobalt and Silicon is considered as
 - (1) micro nutrients.
 - (2) macro nutrients.
 - (3) movable nutrients.
 - (4) essential nutrients.
 - (5) beneficial nutrients.
3. The major form/s of nitrogen absorbed into a plant would be
 - (1) NO_3^-
 - (2) NH_4^+
 - (3) NO_2^-
 - (4) NO_3^- and NH_4^+
 - (5) NO_2^- and NO_3^-
4. Of the following methods of irrigation, the one that conserves the most water is
 - (1) drip irrigation.
 - (2) basin irrigation.
 - (3) flood irrigation.
 - (4) furrow irrigation.
 - (5) sprinkler irrigation.
5. Glyphosate is a
 - (1) contact, selective weedicide.
 - (2) systemic, selective weedicide.
 - (3) contact, non-selective weedicide.
 - (4) translocative, selective weedicide.
 - (5) systemic, non-selective weedicide.
6. The most effective method to control fruit fly is
 - (1) use of light traps.
 - (2) use of pheromone traps.
 - (3) spraying of neem extract.
 - (4) spraying of contact insecticides.
 - (5) catching of the fruit flies by insect nets.
7. Viral diseases of crop plants can be effectively controlled by
 - (1) using pheromone traps.
 - (2) removing infested plants from the field.
 - (3) spraying sulphur after seeing the symptoms.
 - (4) spraying contact insecticides after seeing the symptoms.
 - (5) spraying systemic insecticides after seeing the symptoms.

8. Pesticides are prepared in different formulations and one such formulation is the Emulsifiable concentrates (EC). In the market, EC is found in the form of
 - (1) Dusts.
 - (2) Blocks.
 - (3) Liquids.
 - (4) Granules.
 - (5) Wettable powders.
9. Parthenium (*Parthenium hysterophorus*) can be best explained as
 - (1) an alien aquatic plant.
 - (2) an alien invasive plant.
 - (3) an endemic invasive plant.
 - (4) an endemic medicinal plant.
 - (5) an underutilized medicinal plant.
10. Damping off disease in nurseries is mainly caused by a
 - (1) virus.
 - (2) fungus.
 - (3) bacteria.
 - (4) protozoa.
 - (5) nematode.
11. Transpiration helps plant to
 - (1) keep the plant cool.
 - (2) exchange the gases.
 - (3) increase photosynthesis.
 - (4) absorb the plant nutrients.
 - (5) maintain the turgor pressure.
12. The plant growth regulator commonly used in ripening of fruit is
 - (1) IAA.
 - (2) IBA.
 - (3) GA₃.
 - (4) NAA.
 - (5) Ethylene.
13. An example for a C₄ plant is
 - (1) rice.
 - (2) maize.
 - (3) tomato.
 - (4) soybean.
 - (5) common bean.
14. The pregnancy period of a dairy cow is approximately
 - (1) 210 days.
 - (2) 280 days.
 - (3) 305 days.
 - (4) 340 days.
 - (5) 360 days.
15. The main site of mechanical digestion of feed in a chicken digestive tract is
 - (1) beak.
 - (2) crop.
 - (3) proventriculus.
 - (4) gizzard.
 - (5) large intestine.
16. Breeds of chicken can be categorized into four Classes based on their place of origin. An example for a breed of American Class is
 - (1) Minoca.
 - (2) Cornish.
 - (3) Australop.
 - (4) White leghorn.
 - (5) White Plymouth Rock.
17. The area of a floor brooder prepared for a flock of 1000 broiler chicks should be
 - (1) 10 m²
 - (2) 20 m²
 - (3) 30 m²
 - (4) 40 m²
 - (5) 50 m²
18. An example for a zoonotic disease is
 - (1) Mastitis.
 - (2) Tick fever.
 - (3) Brucellosis.
 - (4) Coccidiosis.
 - (5) Salmonellosis.
19. Quality of light affects the growth of the plant. Colours of the light promoting the photosynthesis are
 - (1) blue and red.
 - (2) red and green.
 - (3) yellow and red.
 - (4) blue and purple.
 - (5) green and yellow.
20. Nutrient content of Urea, Triple Super Phosphate (TSP) and Muriate of Potash (MOP) are
 - (1) 46% N, 45% P and 60% K respectively.
 - (2) 46% N, 45% P₂O₅ and 60% K respectively.
 - (3) 46% NH₄, 45% P and 60% K₂O respectively.
 - (4) 46% N, 45% P₂O₅ and 60% K₂O respectively.
 - (5) 46% NO₃, 45% P₂O₅ and 60% K₂O respectively.
21. Tetrasolium test is used to determine the
 - (1) seed purity.
 - (2) seed viability.
 - (3) seed dormancy.
 - (4) seed germination.
 - (5) seed heterogeneity.

22. A chemical used for surface sterilization of ex-plants in micro-propagation is
(1) Clorox. (2) Phenol. (3) Formalin.
(4) NaCl solution. (5) Silver Chloride.
23. Certain plants are cultivated without a potting media. This cultivation method is best identified as,
(1) geponics. (2) aeroponics. (3) hydroponics.
(4) solid media culture. (5) nutrient film technique.
24. In grafting,
(1) both scion and stock should be from the same species.
(2) stock should be selected from a high yielding variety.
(3) stock should be selected from matured/bearing plants only.
(4) scion should be selected from matured/bearing plants only.
(5) scion should be selected from a mother plant having a deep root system.
25. Seed dormancy is a natural phenomenon to
(1) maintain genetic purity. (2) promote seed germination.
(3) store seeds for a long period. (4) avoid pest and disease incidences.
(5) avoid unfavourable climatic condition.
26. The critical factors to be considered when selecting a nursery potting mixture are
(1) good drainage and good aeration.
(2) water holding capacity and good drainage.
(3) good drainage and high organic matter content.
(4) good aeration and high amount of plant nutrients.
(5) water holding capacity and high amount of plant nutrients.
27. Nutritional needs of a person vary with,
(1) age and sex, but not on physical activity.
(2) age and sex, but not on the body height.
(3) age and body weight, but not on the body height.
(4) physical activity and age, but not on body mass index.
(5) physical activity and body mass index, but not on the sex.
28. An example for food spoilage due to enzymatic reactions is,
(1) souring of milk. (2) curdling of milk.
(3) softening of fruits. (4) developing bad smell in stale fish.
(5) developing alcoholic smell in fruits.
29. An example for "Enhanced Green House Effect" is releasing of
(1) methane from marsh-lands.
(2) methane by cattle through eructation.
(3) water vapour from surface water bodies.
(4) carbon dioxide through burning of fossil fuel.
(5) chlorofluorocarbons (CFCs) due to volcano eruption.
30. A farmer is advised to apply 92 kg of Nitrogen to one hectare of his crop field. The amount of Urea needed for his crop field is
(1) 50 kg (2) 100 kg (3) 150 kg (4) 200 kg (5) 250 kg
31. The main objectives of primary tillage would be,
(1) loosening of soil and control of weeds.
(2) levelling of soil and prevention of soil erosion.
(3) breaking of hardpan of soil and levelling of soil.
(4) prevention of soil erosion and control of weeds.
(5) turning of soil and mixing of soil with organic matter.

32. The main reason for **not** recommending the sprinkler irrigation for fertigation is due to
- (1) corroding the water pumps.
 - (2) salt burning of leaves of the crop.
 - (3) blocking of sprinkler heads by fertilizer.
 - (4) leaking of fertilizer from irrigation lines.
 - (5) high volatile losses of fertilizer during application.
33. If the amount of water utilized by a particular crop is 10 mm per day, and the amount of water irrigated to the crop is 2 cm per day, the irrigation efficiency would be
- (1) 5% (2) 20% (3) 50% (4) 75% (5) 100%
34. One maize line having average height of 40 cm is crossed with another maize line having the average height of 60 cm. The average height of the F1 maize plants was 75 cm. The phenomenon can be best explained as
- (1) inbreeding. (2) outbreeding. (3) mutation.
 - (4) crossbreeding. (5) hybrid vigour.
35. Natural grasslands found in Mahaweli flood plains in the North Central Province are known as
- (1) villus. (2) savannas. (3) shrublands.
 - (4) dry patanas. (5) wet patanas.
36. Of the following, the most potential district for dairy cattle production under free range system is
- (1) Jaffna. (2) Matara. (3) Ampara. (4) Kurunegala. (5) Nuwara Eliya.
37. The most correct statement on the effect of climatic factors on livestock farming would be that
- (1) high relative humidity can reduce the quality of silage.
 - (2) high environmental temperature can reduce the quality of layer feeds.
 - (3) high humidity can aggravate the bad affects of high temperature on farm animals.
 - (4) short day length can badly affect the feed intake of broiler birds in a closed house.
 - (5) short day length and windy environment can reduce the breeding efficiency of farm animals.
38. Followings are some statements on incubation of chicken eggs.
- A - Large eggs are usually not taken for incubation.
 - B - Large eggs always contain double yolks.
 - C - Candling of eggs on the 7th day helps to identify unfertile eggs.
 - D - Eggs should be transferred from the setter to the hatcher on the 16th day of incubation.
- Of the above, the correct statements would be
- (1) A and B only. (2) A and C only.
 - (3) B and C only. (4) B and D only.
 - (5) C and D only.
39. In general, soil nutrient availability
- (1) does not change with Cation Exchange Capacity (CEC) of the soil.
 - (2) decreases with the increase of CEC of the soil.
 - (3) does not change with pH value of the soil.
 - (4) increases with the increase of pH value of the soil.
 - (5) increases with the increase of CEC of the soil.
40. Some of the soil properties are listed below.
- A - Soil pH
 - B - Soil moisture
 - C - Soil aeration
 - D - Soil temperature
- Of the above, the properties directly affecting the plant nutrient absorption are
- (1) A and B only. (2) B and C only. (3) C and D only.
 - (4) A, B and C only. (5) A, B and D only.

41. A potato farmer in upcountry faced the following situation:

A - Bad weather.

B - Increased income of the potato consumers.

As a result of the above situations,

- (1) both demand and supply curves of potato shift to the left.
- (2) both demand and supply curves of potato shift to the right.
- (3) the demand curve of potato shifts to the left and the supply curve of potato shifts to the right.
- (4) the demand curve of potato shifts to the right and the supply curve of potato shifts to the left.
- (5) there will not be any change in the position of both demand and supply curves of potato.

42. The following are some of the interventions made by the government of Sri Lanka to develop the agricultural sector.

A - Introduction of high yielding varieties.

B - Development of irrigation infrastructure in the dry zone.

C - Provision of fertilizer subsidy.

Of the above, the interventions, directly attributed to the green revolution would be

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

43. The total cost (TC) of a farm is given as, $TC = 100 + 5Q + 0.1Q^2$, where Q is the number of units of output. The Fixed cost, and the Variable cost when $Q = 10$ are

- (1) 10 and 16 respectively.
- (2) 10 and 60 respectively.
- (3) 100 and 50 respectively.
- (4) 100 and 60 respectively.
- (5) 100 and 160 respectively.

44. The following are two market structures.

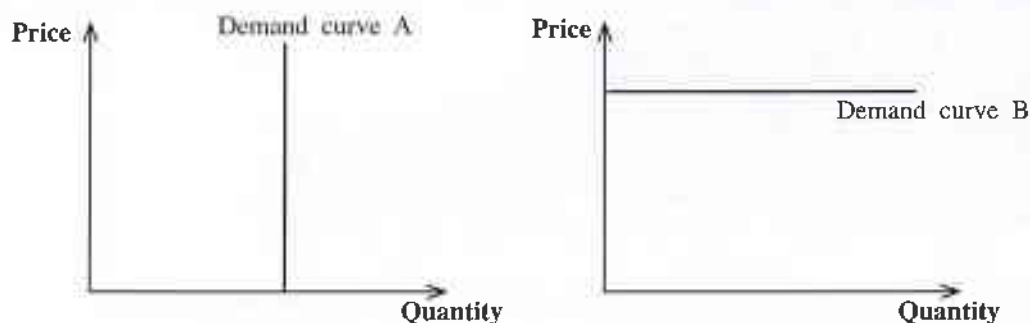
A - Market for paddy: In Sri Lanka paddy market, there are large number of producers and buyers, and the products can be considered as homogeneous.

B - Market for internet services: There are less than 10 competitive internet service providers in Sri Lanka and usually there are barriers to enter into the market.

The correct description of these two market structures is,

- (1) market A is monopoly and market B is oligopoly.
- (2) market A is oligopoly and market B is monopoly.
- (3) market A is oligopoly and market B is perfect competition.
- (4) market A is perfect competition and market B is oligopoly.
- (5) market A is perfect competition and market B is monopoly.

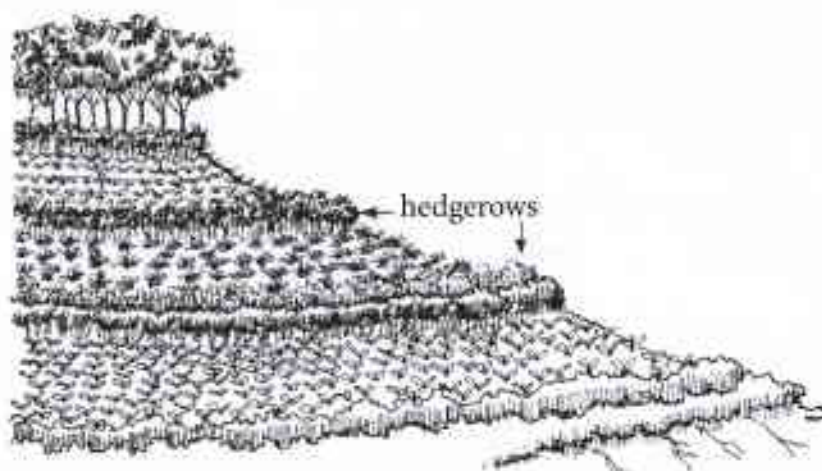
45. Use the following diagram to answer this question.



According to the above diagram, what is the correct statement with respect to price elasticity of demand of A and B?

- (1) A is inelastic while B is elastic.
- (2) A is elastic while B is inelastic.
- (3) A is unitary elastic while B is perfectly elastic.
- (4) A is perfectly inelastic while B is perfectly elastic.
- (5) A is perfectly elastic while B is perfectly inelastic.

46. The four main components of a business plan are:
- (1) Technical plan, production plan, input supply plan and market plan.
 - (2) Technical plan, social plan, human resources management plan and market plan.
 - (3) Technical plan, human resources management plan, market plan and finance management plan.
 - (4) Technical plan, production plan, natural resource management plan and market plan.
 - (5) Technical plan, production plan, human resources management plan and market plan.
47. The following are some of the changes taken place in rice grains during maturity.
- A - Reduction of water content
 - B - Hardening of the kernel
 - C - Change of the colour of the seed coat
- Of the above, the most contributive changes in reducing post-harvest losses of rice during storage would be
- (1) A only.
 - (2) B only.
 - (3) C only.
 - (4) A and B only.
 - (5) B and C only.
48. The provision of fertilizer subsidy to the farmers is a responsibility of the
- (1) Divisional Secretariat.
 - (2) Department of Agriculture.
 - (3) Department of Agrarian Development.
 - (4) Agriculture and Agrarian Insurance Board.
 - (5) Hector Kobbekaduwa Agrarian Research and Training Institute.
49. A student has noted down the following in his field note-book.
- A - Decreased in infiltration
 - B - Mixed up the soils
 - C - Stimulated soil microbial activity
- Of the above, the earthworms contribution to improve soil health would be for
- (1) A only.
 - (2) B only.
 - (3) A and B only.
 - (4) A and C only.
 - (5) B and C only.
50. Answer the question using the following diagram.



What is the most suitable plant to establish hedgerows in above cropping systems?

- (1) A leguminous slow growing plant
- (2) A leguminous fast growing plant
- (3) A non-leguminous slow growing plant
- (4) A non-leguminous fast growing plant
- (5) A any plant species having conical canopy

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இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka

අධ්‍යයන මහා සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2018 අගෝස්තු
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2018 ஓகஸ்ட்
General Certificate of Education (Adv. Level) Examination, August 2018

කෘෂි විද්‍යාව II	08 E II	11.08.2018 / 1300 - 1610
விவசாய விஞ்ஞானம் II		
Agricultural Science II		

පැය තුනයි மூன்று மணித்தியாலம் Three hours	අමතර කියවීමේ කාලය - මිනිත්තු 10 යි கேலதிக வாசிப்பு நேரம் - 10 நிமிடங்கள் Additional Reading Time - 10 minutes
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Use additional reading time to go through the question paper, select the questions and decide on the questions that you give priority in answering.

Index No. :

Instructions:

- * This question paper consists of 10 questions in 10 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 - 9)

- * Answer **all four** 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 10)

- * 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

Final Marks

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

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 10 marks.)

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column

1. (A) Weeds reduce the crop yields by competing with crops for water and nutrients.

(i) State the **three** classes of weeds based on their morphological characters.

(1)

(2)

(3)

(ii) Define “integrated weed management”.

.....

.....

.....

(iii) State **two** types of weedicides, based on their mode of action in the plants.

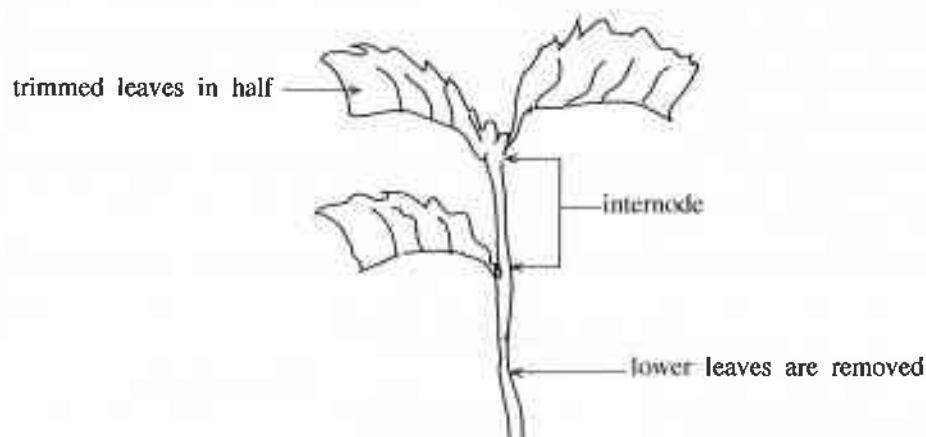
(1)

(2)

(iv) Of the above two types of weedicides, what is the most suitable type to control Couch grass (*Panicum repens*)?

.....

(B) Use the following diagram to answer questions (i) to (vii).



(i) State **two** important characters to be considered in selecting the mother plant to obtain above cutting for propagation.

(1)

(2)

(ii) State the reason why the knife used to obtain this cutting from the mother plant should be sharp and clean.

.....

.....

(iii) What should be the approximate length of the above cutting?

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(iv) What treatment should be done to promote rooting of the cutting?

.....

(v) Why is it necessary to remove the lower leaves of the stem cutting?

.....

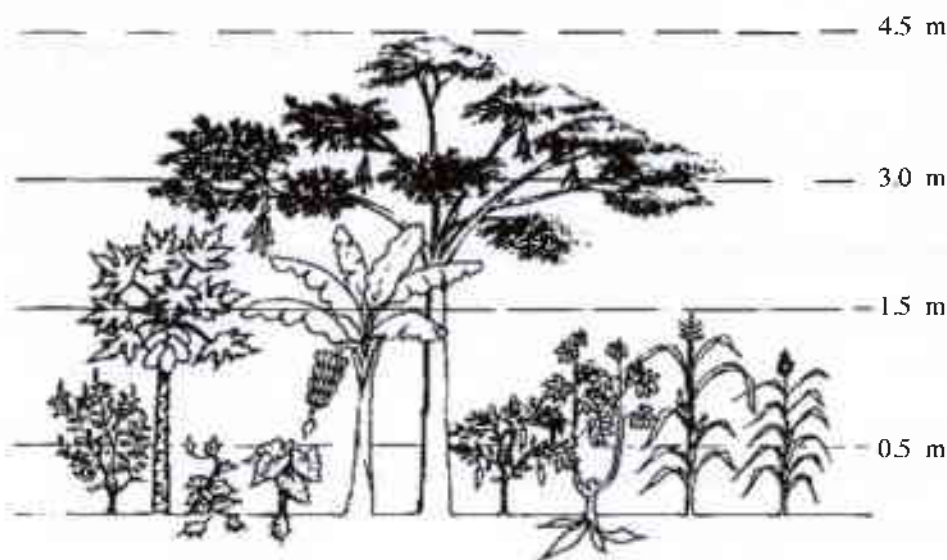
(vi) Why should a half of the each remaining leaf of the cutting be removed?

.....

(vii) Why should a half of the each remaining leaf be remained intact?

.....

(C) Use the following diagram to answer questions (i) to (iii)



(i) Name the above cropping system.

.....

(ii) State **two** advantages of this cropping system with respect to food security.

(1)

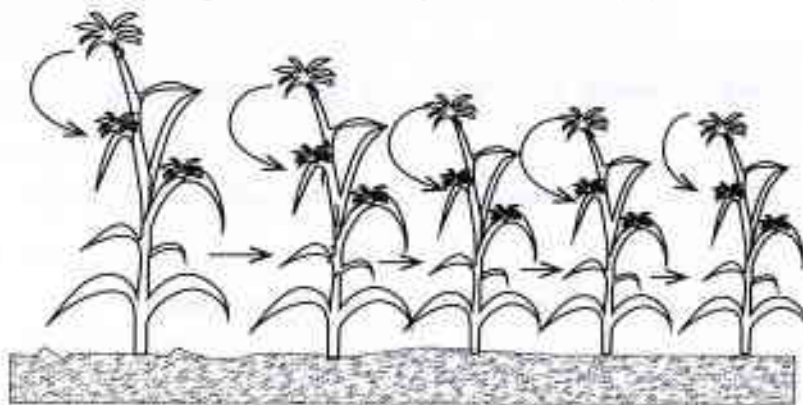
(2)

(iii) State **two** advantages of this cropping system with respect to utilization of natural resources.

(1)

(2)

(D) Use the following diagram to answer questions (i) to (iii).



Do not
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column

(i) Name the pollination technique used in the above breeding method.

(ii) Why are subsequent generations becoming shorter in the above breeding method?

(iii) What is the main objective of this breeding process?

(iv) Define "hybrid vigour".

2. (A) Bulk density is considered as an important physical characteristic of a soil.

(i) What is soil bulk density?

(ii) State **four** main advantages of having a knowledge on the soil bulk density for a farmer.

- (1)
- (2)
- (3)
- (4)

(iii) In an experiment conducted to measure the bulk density of a particular soil, a soil sample was taken using a galvanized tube, placed in a container and dried to a constant weight in an oven.

Weight of the soil sample and the container = 150 g

Weight of the container = 100 g

Volume of the soil sample = 5 cm³

Calculate the bulk density of the soil.

- (B) State **three** research institutes in Sri Lanka that work on perennial crops together with their locations.

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column

Name of the research institute	Location
(i)	
(ii)	
(iii)	

- (C) Diseases and nutrient deficiencies in crops may cause pre and post-harvest losses.

- (i) Distinguish between a disease from a nutrient deficiency.

.....

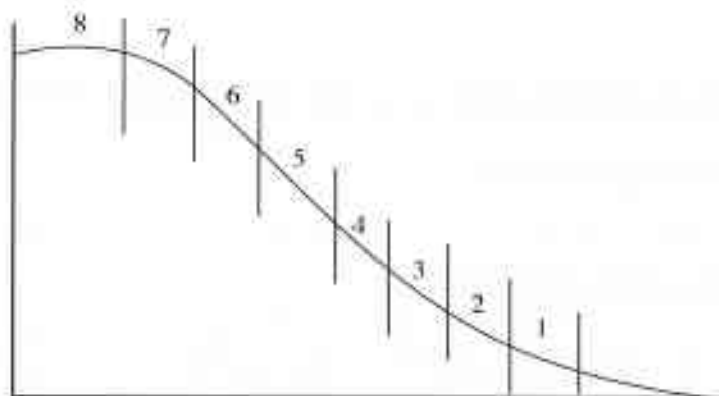
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- (ii) State an example for each of the following modes of disease transmission.

- (1) Seed borne:
- (2) Soil borne:
- (3) Air borne:

- (D) Following diagram illustrates the physical land classification. Use this diagram to answer questions (i) to (iv).



State the nature of the land and a suitable crop to be cultivated in each of the following land classes, shown in the above diagram.

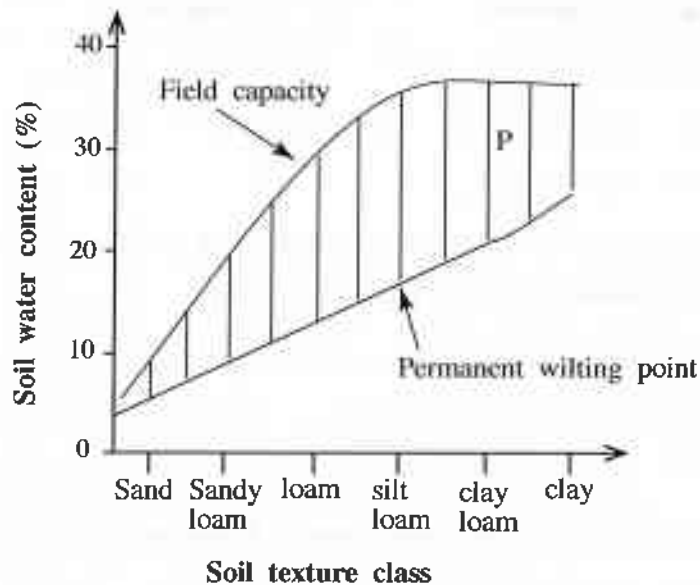
Land class	Nature of the land	Suitable crop
(i) 1		
(ii) 2		
(iii) 5		
(iv) 8		

- (E) State **three** main characteristics used in defining a plant hormone.

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

- (F) The following graph shows the soil water content in different soil texture classes. Use this graph to answer questions (i) and (ii).

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- (i) Name the water content found in P area of the above graph.

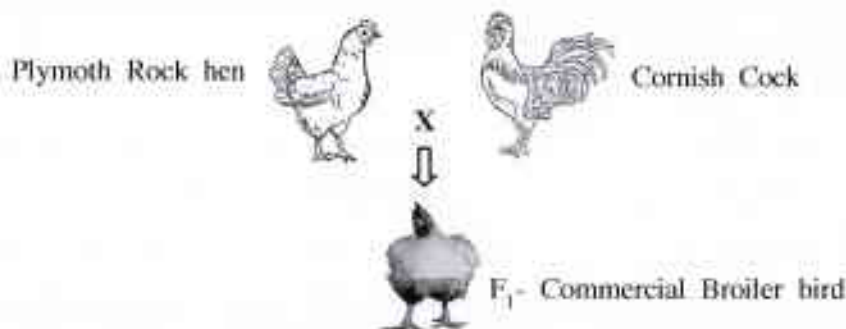
- (ii) Name a soil texture class having the highest water content named in question (i) above.

3. (A) Name a large scale state-owned dairy farm and a large scale private-owned dairy farm found in Sri Lanka.

- (i) A large scale state-owned dairy farm:

- (ii) A large scale private-owned dairy farm:

- (B) The following diagram shows a breeding method used in commercial broiler production.



- (i) Name the above breeding method.

- (ii) Write the main reason for using F_1 generation as the commercial broiler birds.

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column

(C) Name **two** feedstuffs that can be used as energy supplements in poultry feeds.

- (i)
- (ii)

(D) List **two** characteristics of good quality grass silage.

- (i)
- (ii)

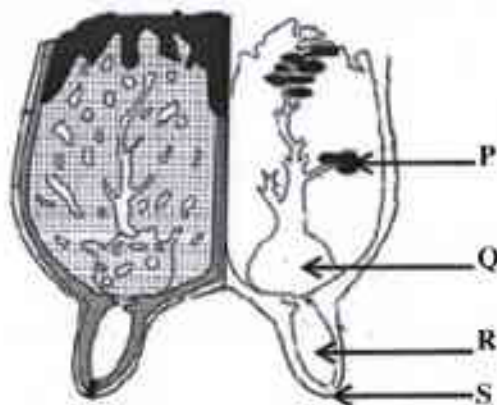
(E) Write **two** important management practices needed to obtain clean eggs from a layer flock.

- (i)
- (ii)

(F) State **two** external characteristics that can be used in selecting eggs for incubation.

- (i)
- (ii)

(G) The following diagram illustrates the internal structure of a mammary system of a cow. Use this diagram to answer questions (i) to (iv).



Name the parts labelled as **P**, **Q**, **R** and **S** in the above diagram

- (i) **P**
- (ii) **Q**
- (iii) **R**
- (iv) **S**

(H) Animal diseases are caused by different causal agents. Name the type of causal agent for each of the following animal disease conditions.

- (i) Milk fever in cattle:
- (ii) Coccidiosis in chicken:
- (iii) Foot and mouth disease in cattle:
- (iv) Gamboro disease in chicken:

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(I) State **two** major reasons for reducing the post-harvest losses of fruits and vegetables when stored under refrigerated conditions.

(i)

(ii)

(J) State **two** main advantages of packaging of foods.

(i)

(ii)

(K) Write **two** mandatory information need to be stated on the main panel of a food label according to the food labelling regulation of the Food Act No. 26 of 1980.

(i)

(ii)

4. (A) A fertilizer mixture with 5:10:10 fertilizer grade is recommended to apply for a crop. Calculate the amount of Urea, Triple Super Phosphate and Muriate of Potash required to prepare 100 kg of the above fertilizer mixture.

(i) Urea (kg)

.....

.....

(ii) Triple Super Phosphate (kg)

.....

.....

(iii) Muriate of Potash (kg)

.....

.....

(B) Vegetative propagation is commonly used in propagation of crops. State the most commonly used type of propagules to propagate following crops.

Crop

Type of propagule

(i) Cannas

.....

(ii) Dahlia

.....

(iii) Croton

.....

(iv) Mango

.....

(v) Banana

.....

(C) Different types of seed treatments are used to break the seed dormancy. State the most suitable seed treatment to break the dormancy of each of the following seeds.

Seed type

Type of seed treatment

(i) Winged bean

.....

(ii) Paddy

.....

(iii) Mango

.....

(iv) Tomato

.....

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- (D) Most of the Sri Lankans use big onion as a substitute to red onion. During a particular growing season red onion cultivation was severely damaged by a fungal disease, but had no effect on the big onion cultivation.

(i) What would happen to the supply curve of the big onions?

.....

(ii) What would happen to the demand curve of the big onions?

.....

(iii) What would happen to the equilibrium price of the big onions?

.....

- (E) The inputs and the corresponding outputs of a particular production process are given below.

Units of input	1	2	3	4	5
Units of output	20	50	90	120	140

(i) What is the average product when 4 units of the input are used?

.....

(ii) What is the marginal product when inputs are used in between 4 and 5 units?

.....

(iii) In a typical production function, when marginal product becomes zero, what would happen to the total product?

.....

- (F) Green revolution brought positive and negative impacts to the Sri Lankan agriculture.

(i) State **two** positive impacts of green revolution.

(1)

(2)

(ii) State **two** negative impacts of green revolution.

(1)

(2)

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

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 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, 2018 අගෝස්තු
 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தரப் பரீட்சை, 2018 ஆகஸ்ட்
 General Certificate of Education (Adv. Level) Examination, August 2018

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 **15** marks.

5. (i) Describe the most commonly used techniques to control environmental factors in protected plant houses in low country of Sri Lanka.
- (ii) State the common symptoms of sick farm animals. What precautions can be taken to control diseases in a livestock farm?
- (iii) Stating examples, explain the importance of using appropriate harvesting techniques and immediate post-harvest treatments to control post-harvest losses of food crops.
6. (i) State the advantages of layering as compared to other vegetative propagation methods and explain the physiological process of rooting in layering.
- (ii) Explain various milking methods practiced by dairy farmers.
- (iii) Stating examples, describe different applications of temperature regulation for food preservation.
7. (i) Describe the advantages and disadvantages of Artificial Insemination (AI) in cattle as compared to natural mating under local conditions.
- (ii) Describe the factors affecting the demand and supply of rice in Sri Lanka.
- (iii) What is "enhanced greenhouse effect"? Explain the causes of enhanced greenhouse effect.
8. (i) Describe the impacts of soil degradation.
- (ii) Describe the strategies that can be practically used to increase the fertilizer use efficiency.
- (iii) Describe the different designs of drainage systems used in agricultural lands.
9. (i) Describe the special nurseries explaining their practical uses in crop production.
- (ii) Stating examples, describe the objectives of seed treatments.
- (iii) Describe different methods of controlling transpiration in crops.
10. (i) Describe different weed control methods.
- (ii) Using an appropriate example, explain how to prepare a business plan for a small agribusiness.
- (iii) State agricultural activities that create harmful effects to the environment and describe mitigation measures.

