

G.C.E (A/L) Support Seminar - 2016

Agricultural Science 1

Two hours

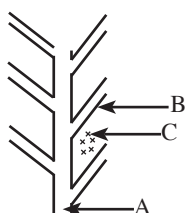
Instructions:

- * Answer all questions.
- * Select the correct or the most appropriate answer among (1), (2), (3), (4) and (5) answers for questions 1 to 50

01. The objective of Paddy land act 1 of 1958 is to,
(1) prevent filling of paddy lands.
(2) protect the rights of tenant farmers.
(3) determine the maximum amount of land area that a single farmer can possess.
(4) control the irrigation activities to the paddy lands.
(5) establish an insurance scheme for paddy lands.
02. The secondary elements that absorbed by plants are,
(1) C, H and O. (2) N, P and K. (3) Ca, Mg and S.
(4) Fe, Cu and Zn. (5) N, Ca and Mg.
03. The pigment that responsible for the red colour in tomato fruit is,
(1) Carotene. (2) Xanthophyll. (3) Carmoisine.
(4) Anthocyanin. (5) Lycopene.
04. The activity that emit the lowest amount of green house gasses is,
(1) intensive livestock farming.
(2) paddy cultivation in marshy lands.
(3) operating machines using diesel.
(4) generating hydro-power.
(5) energy production through biomass combustion.
05. Few activities in agriculture sector is shown below.
A - Cultivation of hybrid varieties
B - Use of pesticides
C - Use of chemical fertilizer
D - Mixed cropping
E - Extensive cultivation of traditional rice varieties
- Of the above, the activities used in green revolution are,
(1) A, B and C only. (2) B, C and D only. (3) C, D and E only.
(4) A, B, C and D only. (5) A, B, D and E only.
06. The condition that influence to form an acidic soil is,
(1) evaporation of water from soil due to high temperature.
(2) poor drainage in low lying soils.
(3) shallow ground water reach the soil surface due to high evaporation.
(4) leaching of basic ions due to heavy rain fall.
(5) continuous use of irrigation water that contains Na salts.

07. The physical soil properties that would be changed due to turning of soil are,
 (1) texture and structure.
 (2) porosity and texture.
 (3) porosity and true density.
 (4) porosity and bulk density
 (5) true density and bulk density
08. The mature leaf edges of a chilli plant turned to yellow colour and then turned brown gradually and finally shown a burnt appearance. If this condition was identified as a nutrient deficiency, the suitable fertilizer to get rid of this condition is,
 (1) ammonium sulfate. (2) urea
 (3) muriate of potash (4) concentrated super phosphate.
 (5) kieserite

09. The figure below shows a drainage system designed to remove excess water from the field.

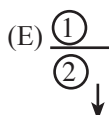
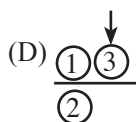
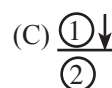
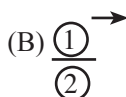
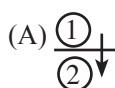


The drainage system , A, B and C indicate respectively are,

- (1) herringbone method, main drain, side drain and crop, respectively.
 (2) parallel method, main drain, side drain and crop, respectively.
 (3) grid iron method, contour drain, parallel drain and crop, respectively.
 (4) herringbone method, main water supply drain, lateral drains and stone chips, respectively.
 (5) parallel method, main water supply drain, lateral drains and stone chips, respectively.
10. The most suitable way in applying nutrients for nurseries is to,
 (1) bury fertilizer granules randomly in the field.
 (2) apply fertilizer between nursery rows.
 (3) apply as a liquid fertilizer.
 (4) mix with pesticides and apply.
 (5) apply fertilizer that dissolved in water , two days before uproot seedlings from nursery.

- Answer the question No. 11 using the given symbols.

① = Top soil ② = Sub soil ③ = plants → = movement of water



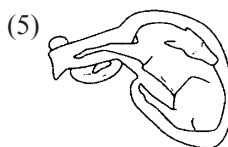
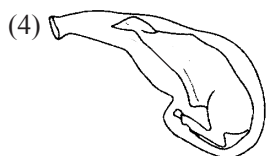
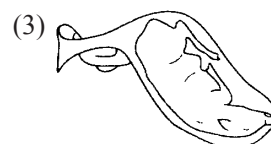
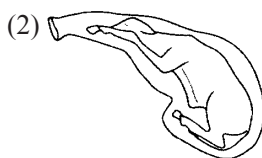
11. Of the above relationships, runoff and deep percolation is indicated in,
 (1) B and E, respectively. (2) C and A, respectively.
 (3) C and B, respectively (4) C and E, respectively.
 (5) D and B, respectively.

12. Following are few statements about bud grafting.
A – The stock plant always must be in active growth stage at the time of grafting.
B – Cambium tissues must match to each other.
C – Use of stock and scion with same diameter is essential.
D – Use of scion with a dormant bud is more suitable for bud grafting.

Of the above, true statements are,

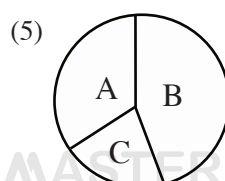
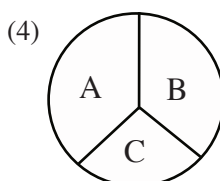
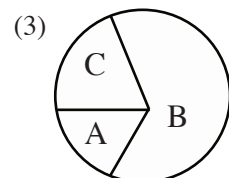
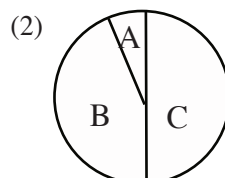
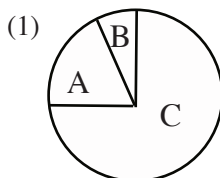
- (1) A and B only. (2) A and D only (3) B and C only.
(4) B and D only. (5) C and D only.
13. Select the correct statement about callus.
(1) Callus is a mass of divided cells.
(2) Tissues should be obtained only from ovule or pollen cells for a callus culture.
(3) It is essential to keep the tissues in a lighted place to obtain callus.
(4) By keeping the obtained callus tissues in the dark, callus formation occurs again.
(5) Plant clones could be obtained from callus.
14. The essential components that should be present in a basic plan of a home garden are,
(1) compound and the area surrounding the kitchen.
(2) cropping area and goat shed.
(3) compound and water tap.
(4) fish pond and kitchen.
(5) court yard and cropping area.
15. The tall character (T) is dominant to the dwarf character (t) in a pea variety. The ratio of tall: dwarf plants in the F₂ generation from the self pollinated plants obtained from F₁ of a cross between purebred tall and dwarf pea plants would be,
(1) 1:1 (2) 2:1 (3) 3:1
(4) 9:3:3:1 (5) 9:7

16. What is the correct position of a foetus of a calf in the reproductive tract of a cow, which is approaching the parturition?



17. A soil borne disease is,
(1) Bacterial wilt. (2) Blister blight in tea.
(3) Papaya ring spot disease. (4) Banana mosaic virus disease.
(5) Coffee rust.
18. It was observed that the pH of a soilless culture decline to 5.5 as a result of non renewal of nutrient solution daily. In such condition, the least absorbed elements would be,
(1) N and Mn. (2) Fe and Mn. (3) Mo and K.
(4) Ca and Mg. (5) N and Fe

19. The units of LD_{50} value is,
(1) mg/g body weight. (2) mg/kg body weight. (3) g/g body weight.
(4) kg/g body weight. (5) mg/mg body weight.
20. The preservation method used in the sterilized milk packed in triple laminated cartons in the market is,
(1) high temperature short time method. (2) low temperature long time method.
(3) maximum heat method. (4) freeze drying method.
(5) deep freeze method.
21. The blanching, that is used as a pre-treatment in food preservation,
(1) increases the glucose content.
(2) breaks down fiber.
(3) prevents metabolic activities due to enzyme deactivation.
(4) reduces market value due to increase the food volume.
(5) reduces shelf life.
22. The water conservation technique used in dry farming is,
(1) loosening of the surface layer of the soil.
(2) the preparation of land in order to increase the surface area of soil particles.
(3) keeping the weeds without removing.
(4) preparing the land with ridges and furrows.
(5) planting seeds instead of seedlings.
23. In alley cropping,
(1) ridges are made with coconut husks and the crops are grown in between.
(2) plant perennial legumes in rows first and then plant the crops between them.
(3) plant a cereal like maize in rows and plant crops in between.
(4) make contour ridges by soil and plant the crop on them.
(5) make contour ridges by soil and plant crops between ridges.
24. A factor that would influence the price of rice to increase, without shifting the demand curve is,
(1) the rise of fertilizer subsidy for paddy cultivation.
(2) rise of salary of the government servants.
(3) rise of the processing cost of rice.
(4) rise of wheat flour price.
(5) increment of the certified price offered by the government for rice.
25. If A, B and C represent protein, starch and fiber, respectively, what is the most suitable pie chart to represent the composition of the diet of cattle?



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26. Eight liters (8 l) of weedicide dissolved in 200 l of water is required to apply for weed control in 2 ha crop field. The amount of weedicide need to dissolve in 10 l of water is,
- (1) 0.4 l (2) 0.8 l (3) 1.6 l
(4) 8.0 l (5) 16.0 l

27. The statements below indicate the functions of organic matter.

A – Provides energy for nitrogen fixing bacteria.
B – Increases aeration and water holding capacity in soil.
C – Releases ions such as Cd and Pb to the soil solution.
D – creates buffer conditions in the soil.

Of the above, true statements are,

- (1) A and B only. (2) A, B and C only. (3) A, B and D only.
(4) A, C and D only. (5) B, C and D only.
28. A farmer will be able to obtain a long term bank loan to,
- (1) purchase a calf. (2) buy fertilizer.
(3) purchase a rotovator. (4) purchase a crop land.
(5) buy agro chemicals.

29. Given below are few statements about soil nutrients.

A – Most of the macro nutrients become available at pH 6.5 – 7.0
B – At low pH conditions, solubility of Fe and Al increases and make phosphates insoluble.
C – At pH lower than 4, the activity of N fixing bacteria increases.
D – At higher pH, the solubility of Ca and Na increase and bind with phosphate ions to form insoluble compounds.

Of the above, true statements are,

- (1) A, B and C only. (2) A, B and D only. (3) A, C and D only
(4) B, C and D only. (5) All A, B, C and D.
30. The water use efficiency of maize crop is 0.8 -1.6 kg/m³. It means,
- (1) the amount of evapo-transpiration of maize crop.
(2) the weight of the water supplied to the crop.
(3) the volume of water supplied to the crop.
(4) the amount of yield produced for a unit weight of water.
(5) the volume of water retained in the root zone.

31. The column 11 shows the explanations for the terms given in column 1

Column 1	Column 11
A – Self pollination	P – bearing fruits without fertilization
B – Cross-pollination	Q – no pollen germination
C – Self sterility	R – though the pollen germinate, pollen tube does not grow
D – Self incompatibility	S – formation of unisex flowers
E – Parthenocarpy	T – bearing bisexual flowers

The right combination of terms and explanations are given in,

- (1) AT, BS, CR, DQ and EP. (2) AT, BS, CQ, DS and ET.
(3) AS, BR, CQ, DS and ET. (4) AR, BQ, CP, DT and ES.
(5) AP, BT, CS, DQ and ER.

32. Polythene houses found in different shapes such as; saw tooth, tubular and cylindrical shapes. The statements about the impacts created by these different shapes are given below.
- A – Minimize the harmful impacts created by the elevated humidity.
 - B – Maintains static air flows to control inside temperature.
 - C – minimize the impacts of external forces such as rain, snow and wind.
 - D – control the impacts of high light intensity.

Of the above, true statements are,

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

33. Light is required in photosynthesis to,
- (1) break down CO₂
 - (2) produce ATP and oxidizing substances.
 - (3) release energy.
 - (4) bind CO₂ and H₂O.
 - (5) release O₂.

34. A student operated the lever of the knapsack sprayer, but failed to pressurize the liquid in the tank. Following facts were listed as the reasons for the failure.
- A – Nozzle or trigger valve is clog with foreign particles.
 - B – The ball is choked inside the suction valve.
 - C – Butterfly knob that is attached to the piston is loosened.
 - D – Smaller nozzle openings

Of the above, the correct statements are,

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

35. Following are the data resulted from an analysis of soil sample obtained from a crop field.

Soil characteristic	Value/ Property
Texture	Sandy
pH value	5.1
Cation Exchange Capacity	228 meq/100 g
N content	66 mg/ kg
Total phosphorus amount	15 mg/kg

According to the above data, what is the material that should add to this field?

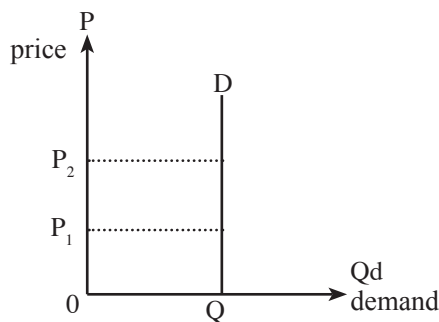
- (1) Lime.
- (2) Gypsum.
- (3) Urea.
- (4) Muriate of potash.
- (5) Clay.

36. Researches confirm that the economic threshold level for brown plant hopper at the pre-tillering stage is 5-10 insects per tiller. Several statements made based on the above information are as follows.
- A – The economic injury level is less than 5.
 - B – Pesticides must apply when it exceeds 10 insects per tiller.
 - C – The economic threshold level varies with the growth stage.
 - C – No any control method is needed if the number of insects per tiller is less than 5.

Of the above, the true statements are,

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

37. Following figure shows the price-demand elasticity of a certain product.



This product would be,

- (1) rice
- (2) fish.
- (3) meat
- (4) salt
- (5) beans.

38. Considering the banana market is stable, if the supply decline while demand is increasing, what would happen in the market?

- (1) The quantity and the price of banana is increased
- (2) The price increases but no change in quantity.
- (3) Price and quantity declines.
- (4) Quantity increases, but the change of price is not clear.
- (5) No any change in price or quantity.

39. Few statements about broiler rations are given below.

- A – Protein percentage of the starter ration is lower than that of finisher ration.
- B – Gross metabolic energy of finisher ration is lower than that of starter ration.
- C – Finisher ration contain more than double the amount of fat percentage present in starter ration

Of the above, true statement/statements is/are,

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

40. In a vaccination program for poultry, the vaccinations given on 1 day, 3 weeks and 6 weeks after birth of a chick are,

- (1) ranikhet, fowl fox and gumboro, respectively.
- (2) bird flu, gumboro and fowl fox, respectively.
- (3) Marek's, ranikhet and fowl fox, respectively.
- (4) bird flu, coccidiosis, and ranikhet, respectively.
- (5) Marek's, fowl fox and ranikhet, respectively .

41. The following characters were observed in A, B, C and D hens in a flock.

- A – well grown feathers
- B – highly bleached shank and beak
- C – light red and rough comb
- D – oval shaped, moist vent.

Based on the above characters, the hens that should be culled from the flock are,

- (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.

42. Following are several activities take place in an land preparation.
- | | |
|-----------------------------|-----------------------|
| A. Turn the soil | B. Remove the stubble |
| C. Break larger soil clumps | D. Level the soil |
| E. Inter cultivation | |

Of the above, activities perform in secondary land preparation are,

- | | | |
|-----------------------|----------------------|----------------------|
| (1) A, B, and C only. | (2) A, C and D only. | (3) A, E and F only. |
| (4) B, C and D only. | (5) B, C and E only. | |

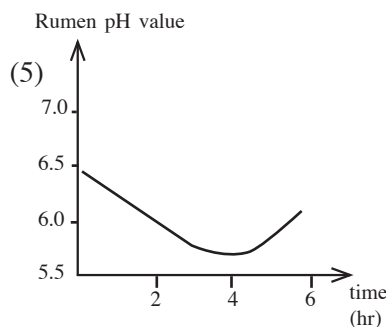
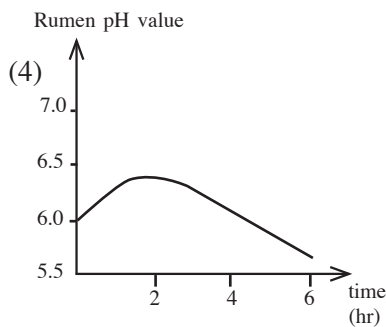
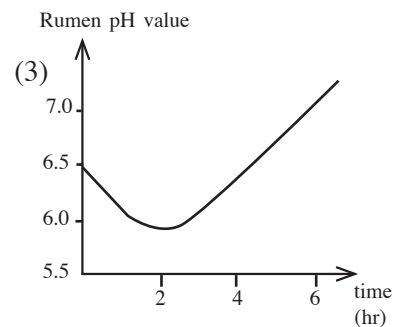
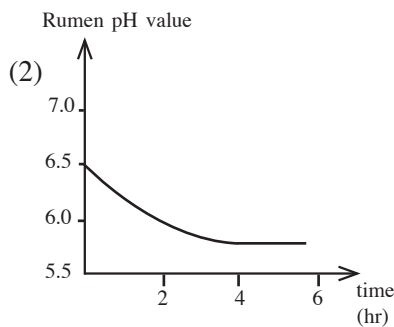
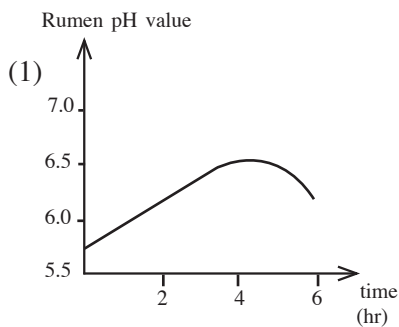
43. Several characters relevant to the farm animals are given below.

- A – The generation interval of cattle is longer than that of goat.
- B – The back area of the Indian cattle is round in shape than the European cattle.
- C – The fat percentage of milk in neat cattle breeds is higher than that of buffalo breeds.

Of the above, true statement/s is/are,

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

44. What graph correctly represent the changes in pH during the first six hours after food injestion?



45. The specific gravity of a milk sample is 1.028. If the fat content is 3.5%, the solid non-fat percentage is,

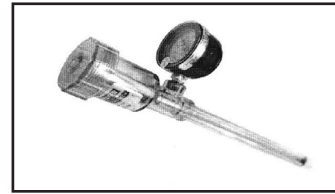
- | | | |
|-------------|------------|-------------|
| (1) 1.4365% | (2) 1.132% | (3) 7.2957% |
| (4) 17.598% | (5) 7.71% | |

46. In a certain land preparation method, land preparation begins with the start of the rain in the area. Then, after harvesting the crop and several times until the next crop is transplanted, weed control take place several times.

This land preparation type is,

- | | |
|---------------------------------|-------------------------------|
| (1) primary land preparation | (2) zero tillage |
| (3) secondary land preparation | (4) rain fed land preparation |
| (5) year round land preparation | |

47. The equipment shown in figure is used to measure the,
- (1) irrigation interval.
 - (2) level of drainage.
 - (3) nutrient content in the soil.
 - (4) amount of water retain in the soil
 - (5) amount of soil compaction



48. An experiment to determine the moisture percentage of seeds, a 40 g of seeds were kept in an oven and measure the weight after 3, 4, 6 and 8 hours. The observed values were 30, 28, 28 and 28, respectively. The moisture percentage of this seed sample is,
- (1) 30%
 - (2) 35.7%
 - (3) 42.8%
 - (4) 50%
 - (5) 55%
49. An oven dried weight of soil sample which is obtained from a 10m³ augur was 14g. What is the bulk density of the soil?
- (1) 0.7 g cm⁻³
 - (2) 1.4 g cm⁻³
 - (3) 4 g cm⁻³
 - (4) 10 g cm⁻³
 - (5) 14 g cm⁻³
50. In experimental rice cultivation, one plant contained 25 tillers and 20 panicles in those tillers. The effective tiller percentage of this rice plant is,
- (1) 5%
 - (2) 45%
 - (3) 50%
 - (4) 80%
 - (5) 90%

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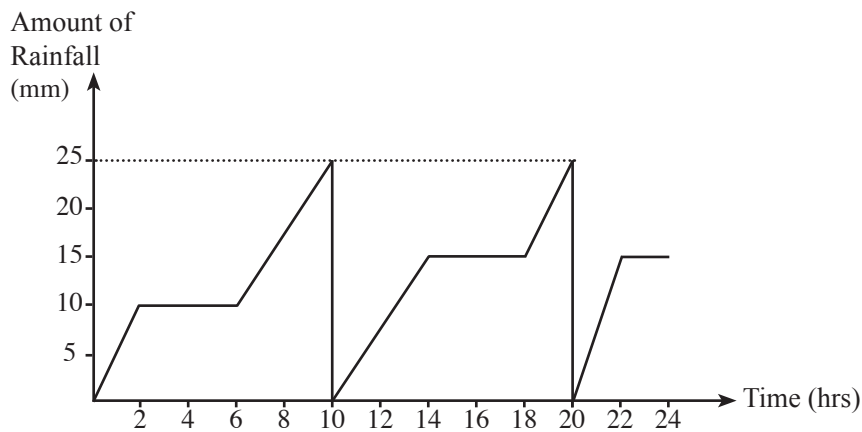
Agricultural Science II

Three hours

Part A - Structured Essay

Answer all question in this paper itself.
(10 marks are given for each question)

01. A. The given below is a rainfall graph



(i) According to the above graph, what is the intensity of rainfall received during first two hours?

.....

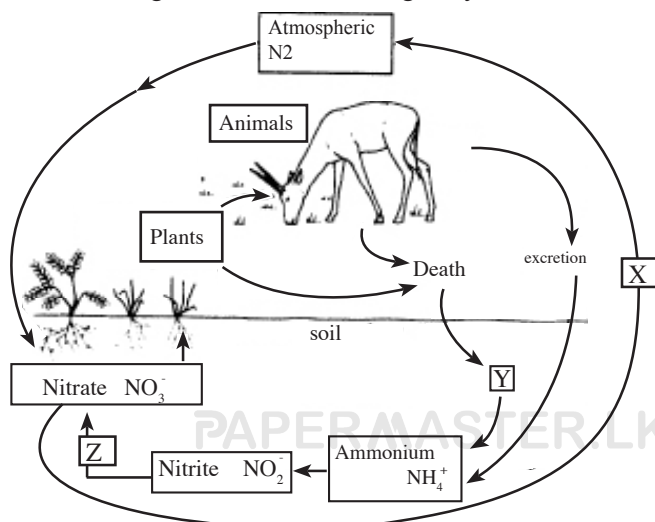
(ii) If it is to be considered as an erosive rain, what should be the minimum value?

.....

(iii) Write **three** advantages of recording rainfall data as indicated above

- 1
- 2
- 3

B. The shown above is a figure related to the Nitrogen Cycle



- (i) Name X, Y, and Z processes
 - 1 X
 - 2 Y
 - 3 Z

 - (ii) Name a microorganism each responsible for X and Z processes.
 - 1 X
 - 2 Y

 - (iii) Name a type of symbiotic nitrogen fixing bacteria.
.....

 - (iv) Name a place where X process is commonly taking place
.....

 - (v) Name the harmful effect of receiving nitrates to the aquatic ecosystem.
.....
- C. With the invasion of Europeans, there was a trend towards the commercial plantation agriculture instead of the local subsistence farming that was existed.
- (i) Name **two** harmful impacts of commercial plantation agriculture on the local agricultural economy.
 - 1
 - 2

 - (ii) Name **two** strategies adopted to rebuild the collapsed economy after gaining the independence.
 - 1
 - 2

 - (iii) Write **two** factors that obstruct the development of the present agriculture sector in Sri Lanka.
 - 1
 - 2
- D. Growing crops in protected houses minimizes the pest and disease incidences and hence improve the quantity and the quality of yield.
- (i) Mention **two** ways that pests and diseases would enter to a protected house.
 - 1
 - 2

 - (ii) Mention **two** strategies used to prevent pest and disease infestation in protected houses.
 - 1
 - 2

 - (iii) State **two** reasons for the higher yields in crops grown in protected houses.
 - 1
 - 2

02. A. Sri Lanka is facing lot of problems due to the indiscriminate use of chemicals for the agriculture activities. As a solution, promotional programs to influence the people for toxic free crop production are implementing.

(i) Name **two** impacts of inappropriate use of pesticides to the environment.

- 1
- 2

(ii) Mention **two** methods that pesticide could enter into the body.

- 1
- 2

(iii) Name **two** harmful impacts of getting exposed to pesticides.

- 1
- 2

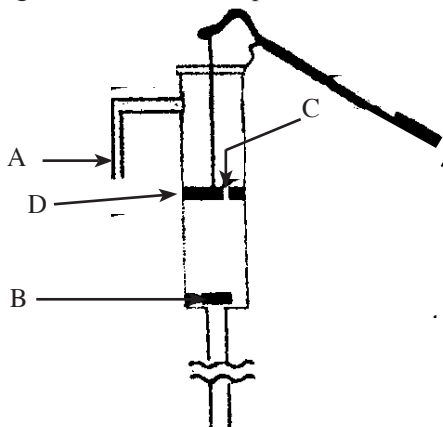
(iv) Mention **two** actions that the government has taken to promote toxic-free crop production

- 1
- 2

(v) Name **two** environmental friendly farming methods

- 1
- 2

B. The Diagram below shows a pump used for lifting water from a tube well.



(i) Name the parts shown as A, B, C and D in the above diagram

- | | |
|---------|---------|
| A | B |
| C | D |

(ii) Mention the role of D, when the pump is at work.

.....

(iii) Mention a way that the valves of such pumps can be damaged.

.....

C. The land preparation equipments operated by mechanical power are mounted on the tractor and use for land preparation.

(i) Name a primary land preparation equipment that mounted on a two-wheel tractor

.....

(ii) Name **two** secondary land preparation equipments that mounted on four-wheel tractor.

- 1
- 2

(iii) Name a place where the equipments mention in (ii) above, to be mounted on a four-wheel tractor.

.....

(D) The force required for the water movement within a living plant is given by transpiration pull and root pressure.

(i) Name **two** importance of water for the existence of plants

- 1
- 2

(ii) Illustrate a simple experiment through a diagram to show the importance of root pressure to transport water inside the plant.

(iii) The root pressure increases when a minute quantity of Indole Acetic Acid is applied to the roots of a tomato plant. What could be concluded from this observation?

.....
.....

(iv) Out of the forces mention in (D). (i) above, what is the most important force to transport water in taller plants?

.....
.....

03. (A) A successful crop cultivation can be maintained by planting the seedlings obtained from germinated seeds raised in a nursery.

(i) (i) What do you mean by a nursery?

.....
.....

(ii) State a type of nursery to obtain plants for each of the following requirements.

- 1. Root stocks
- 2. Hydroponics
- 3. Paddy cultivation

(iii) Name **three** methods to sterilize nursery beds.

- 1
- 2
- 3

(iv) List **three** standard characters of seeds suitable for planting.

- 1
- 2
- 3

(v) Name **two** reasons for the scarcity of good quality seeds in Sri Lanka

- 1
- 2

(B) A student engaged in a practical activity of calibrating a knapsack sprayer and the values obtained are shown below.

Area of liquid sprayed	100 m ²
Amount of liquid filled into the tank	6000 ml
Amount of liquid left after application to the field	2950 ml
Total capacity of the tank	16 l

(i) Calculate the amount of liquid sprayed to the field.

.....
.....
.....
.....

(ii) Calculate the amount of liquid need to be sprayed for a field of one hectare

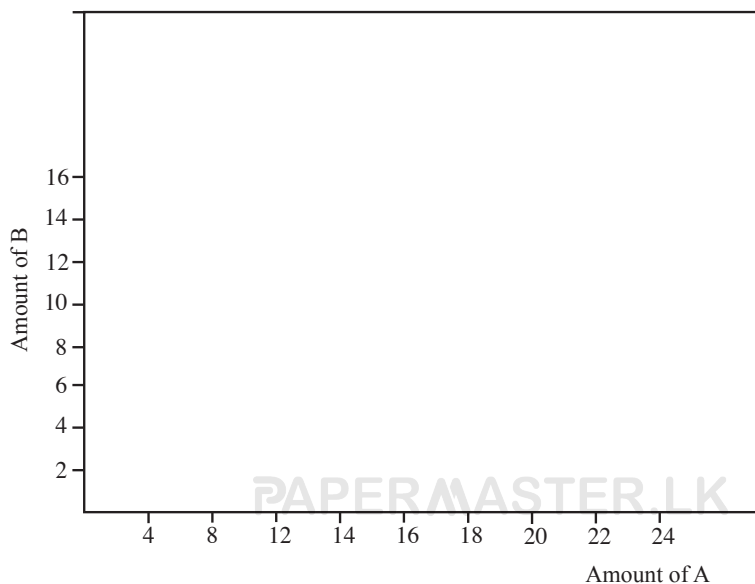
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.....
.....

(iii) Calculate the number of tanks need to be sprayed for a field of one hectare

.....
.....

(C) A consumer purchased Goods A and B only. The price of a single unit of A is Rs. 10.00 and B is Rs. 20.00. His income is Rs. 200.00.

(i) Draw the budget line in the chart given below.



(ii) (a) If he consumes only 6 units of B, what is the amount of A he sacrifices for that?

.....
.....
.....

(b) Draw the indifference curve for A and B on the above chart.

(c) Mention **two** characters of indifference curve

- 1
- 2

(iii) (a) Find the slope of the budget line

.....

(b) What is the slope of the indifference curve at the optimum consumption?

.....
.....

(c) What is the relationship between the gradient of the indifference curve and the gradient of budget line at the optimum consumption?

.....

(d) Explain the above relationship in economics terms.

.....
.....

(iv) Why doesn't the consumer satisfy at any other point of the budget line?

.....
.....

04. (A) Following table shows the poultry meat production in Sri Lanka for five years from 2010 to 2014.

Year	2010	2011	2012	2013	2014
Poultry meat products (000' MT)	104.16	116.76	137.39	144.54	150.32

(i) Complete the plot using the data given in the table.



(ii) What is the average annual poultry meat production during the given five year period?

.....

(iii) Mention **two** reasons for the annual increase of poultry meat production in Sri Lanka.

1

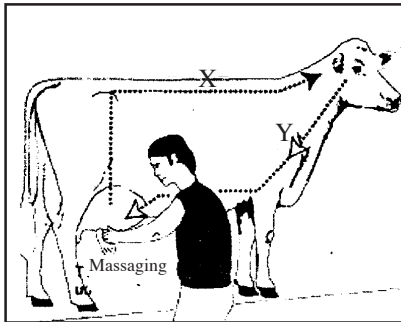
2

(iv) Name **two** districts in Sri Lanka where poultry production is done in large scale.

1

2

(B) Following figure shows the milk let down process of a cow.



(i) (i) What is milk let down?

.....

.....

(ii) Name X and Y processes shown in the figure.

1

2

(iii) Mention the locations where X and Y processes are stimulated in the cow.

Process	Location of stimulation
1 X
2 Y

(iv) Name the hormone that inhibits the milk letdown and the place of its secretion.

1 Hormone

2 Place of secretion

(C) The daily protein requirement for a 16 year old boy is 0.77 g/day/kg.

(i) What is the daily protein requirement for 16 years old boy weighing 40 kg?

.....

(ii) Mention **two** functions of protein in human body,

1.

2.

(iii) Mention the reason why the biological value of mung bean protein is low, in comparison with some other food items.

.....

(D) Nearly one third of the food production in Sri Lanka is wasted due to spoilage. It can be reduced with the use of appropriate preservation methods.

(i) What is food spoilage?

.....
.....
.....

(ii) Mention **three** characters of a spoiled food.

1
2
3

(iii) Name **two** physical factors that affect food spoilage.

1
2

(iv) Name **two** traditional food preservation methods and mention the preservation principle of each method.

	Traditional Preservation method	Principle
1
2

**

Part B - Essay

- * *Answer only four questions. The marks allocated for each question is 15.*
- * *Use clearly labeled diagrams in necessary places.*

1.
 - (i) Describe the undesirable impacts of climate change on the agricultural activities.
 - (ii) Describe the importance of food standardization.
 - (iii) Explain what actions have been taken by the government to increase the paddy production in Sri Lanka.

2.
 - (i) Mention the ways of water pollution through agriculture and describe the possible actions to be taken to minimize the water pollution created by them.
 - (ii) Describe how the zero land preparation affects the soil physical characteristics.
 - (iii) Describe the possible measures that would be taken to conserve water in the soil.

3.
 - (i) Describe the micro propagation process.
 - (ii) Describe the possible actions to be taken to improve the drainage in a soil.
 - (iii) Describe how genetic variation can be created in plants.

4.
 - (i) Describe the importance of organic farming.
 - (ii) Describe the eco-friendly methods used in insect pest control.
 - (iii) Describe the importance of keeping farm records.

5.
 - (i) Describe the food digestion process of fowl.
 - (ii) Describe the strategies that would be adapted to obtain yield with higher quality.
 - (iii) Describe the procedures to be followed to protect the seed viability.

6.
 - (i) Describe the importance of food diversification.
 - (ii) Explain the adaptations that weeds possess to secure its survival.
 - (iii) Describe the adaptation of plants to increase the photosynthesis efficiency.
