

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

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

14.08.2018 / 1300 - 15 00

ආහාර තාක්ෂණවේදය I
 உணவுத் தொழினுட்பவியல் I
 Food Technology I

17 E I

පැය දෙකයි
 இரண்டு மணித்தியாலம்
 Two hours

Instructions:

- * Answer **all** 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. Select the industry that has been mostly benefited from historical development of soft technologies.
 - (1) Telecommunication industry
 - (2) Inland transportation industry
 - (3) Food and beverage industry
 - (4) Healthcare industry
 - (5) Renewable energy industry
2. Spreadsheet application is best suited for
 - (1) preparing a presentation to buyers.
 - (2) preparing a document for dissemination of knowledge.
 - (3) calculation of profit of each item that a company produces.
 - (4) maintaining customer details.
 - (5) maintaining company profile data.
3. Over-nutrition may lead to
 - (1) hypertension and cancer.
 - (2) diabetes and anemia.
 - (3) obesity and depression.
 - (4) obesity and hypertension.
 - (5) obesity and cancer.
4. The most important vitamin required during the pregnancy for a healthy fetal development is
 - (1) cyanocobalamin.
 - (2) riboflavin.
 - (3) folic acid.
 - (4) pyridoxine.
 - (5) biotin.
5. Rancidity can be minimized by controlling the activity of
 - (1) Peroxidase enzyme.
 - (2) Lipase enzyme.
 - (3) Polyphenol oxidase enzyme.
 - (4) Pectinase enzyme.
 - (5) Catalase enzyme.
6. Following statements are based on the microbial contamination and the nutrient content of a food.

A - Microbial contamination changes the nutrient availability in a food.

B - Microbial contamination always increases the nutrient content of a food.

C - Food with high amount of nutrients is susceptible for microbial contamination.

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

 - (1) A only.
 - (2) B only.
 - (3) C only.
 - (4) A and C only.
 - (5) B and C only.
7. National level food security can be **negatively** affected due to
 - (1) re-exportation of processed food.
 - (2) reduction of post-harvest losses of food crops.
 - (3) development of rice-based diversified foods.
 - (4) introduction of high yielding food crops.
 - (5) growing population.

[see page two]

8. Vernalization is an important process for the germination of seeds and flowering of some plant species. Vernalization can be explained as the exposure of seeds or seedlings for
- (1) continuous dry spell and then suddenly change into wet condition.
 - (2) continuous cooler spell around 10 °C.
 - (3) continuous spell of longer photo period.
 - (4) continuous spell of shorter photo period.
 - (5) alternate dry and wet spells.
9. Consider the following statements on soil water.
- A - Gravitational water retains in macropores while the capillary water retains in micropores.
 B - Both gravitational and capillary water are lightly bound to the soil and can be available for plants.
- Of the above statements,
- (1) only A is correct.
 - (2) only B is correct.
 - (3) both A and B are correct.
 - (4) both A and B are correct and A further explains B.
 - (5) both A and B are correct and B further explains A.
10. Consider the following conditions.
- A - Increase in biodiversity
 B - Increase in number of propagules
 C - Reduction in transmission of diseases
 D - Reduction in hybrid vigour
- Of the above, the advantages of sexual reproduction compared to asexual reproduction are
- (1) A and B only.
 - (2) B and C only.
 - (3) C and D only.
 - (4) A, B and C only.
 - (5) B, C and D only.
11. The chemical that has been banned from its use for soil sterilization in Sri Lanka is
- (1) Glyphosate.
 - (2) Methyl Bromide.
 - (3) Monocrotophos.
 - (4) Captan.
 - (5) Paraquat.
12. Gibberellic acid is
- (1) an exogenous plant growth regulator.
 - (2) a hormone that inhibits seed germination.
 - (3) a hormone found in plants and fungi.
 - (4) an effective herbicide.
 - (5) an enzyme that induces secondary seed dormancy.
13. The decoction of *Adhatoda vasica* is used as a remedy for
- (1) vomiting.
 - (2) cough and cold.
 - (3) diarrhea.
 - (4) hyperglycemia.
 - (5) hypertension.
14. Examples of medicinal plants propagated by seeds, cuttings, suckers and rhizomes are
- (1) neem, adhatoda, komarika and turmeric, respectively.
 - (2) komarika, neem, adhatoda and ginger, respectively.
 - (3) adhatoda, komarika, neem and turmeric, respectively.
 - (4) asparagus, komarika, adhatoda and ginger, respectively.
 - (5) komarika, asparagus, adhatoda and turmeric, respectively.
15. Stocking of fingerlings in the internal water bodies is a method to improve the sustainable inland fish production in Sri Lanka. The stocking of fingerlings is done by the
- (1) Cey-nor foundation.
 - (2) National Aquaculture Development Authority.
 - (3) National Aquatic Resources Research and Development Agency.
 - (4) Fisheries Cooperatives.
 - (5) Fisheries Department.

16. Sea grass beds are one of the sensitive aquatic ecosystems in the world. The marine species, which is more closely associated with sea grass beds, is
(1) shark. (2) whale. (3) skate. (4) turtle. (5) cuttle fish.
17. Drying is a method of food preservation. The preservation of dried foods is due to,
(1) reduction of weight.
(2) less availability of water for spoilage.
(3) heating during drying.
(4) killing the germs in high temperature during drying.
(5) low temperature in stores.
18. The suitable environment for storing fresh vegetables for a short period is at
(1) high temperature and high humidity.
(2) high oxygen and low temperature.
(3) low carbon dioxide (CO₂) and low humidity.
(4) low temperature and high humidity.
(5) freezing temperature and low humidity.
19. An example for application of traditional (old) biotechnology is
(1) production of genetically modified tomato.
(2) production of Bg360 (Keeri Samba) rice variety.
(3) identification of individuals using DNA analysis.
(4) production of lime pickle.
(5) preservation of meat by drying and smoking.
20. A commercial dairy milk producer increased his production by introducing new animals and modern technology and gained higher profits. The above activity has
(1) increased his personal benefits only.
(2) contributed to increase the national milk supply while earning more profits.
(3) helped the people in the region by supplying more milk for consumption.
(4) increased pressure on the environment by expanding the dairy farm.
(5) shown the potential for dairy production in the country.
21. Consider the following statements regarding an entrepreneur.
A - Always flexible
B - Has self-confidence
C - Makes decisions on others' opinions
D - Devotes to his work
Of the above, the correct statements regarding a successful entrepreneur 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) C and D only.
22. A restaurant owner started selling lunch packets in addition to serving food at the restaurant. All the activities involved in the business are done by people and with least machinery.
The above is a
(1) capital intensive, service-oriented business.
(2) labour intensive, service-oriented business.
(3) labour intensive, marketing-oriented business.
(4) capital intensive, marketing-oriented business.
(5) labour intensive, production and service-oriented business.
23. Capital expenditure of an agri-business includes
(1) salaries, fertilizer cost and cost for packing materials.
(2) value of machinery purchased and their maintenance cost.
(3) value of sprayers, grinders and packing machine.
(4) cost of repairing buildings and road network.
(5) depreciation of buildings, fuel cost and electricity bill.

24. The most suitable way of reducing the risk of environmental pollution due to intensive food production is by,
- (1) avoiding use of agrochemicals.
 - (2) minimizing food consumption.
 - (3) popularizing traditional agricultural practices.
 - (4) applying appropriate technologies.
 - (5) developing environmental remediation technologies.
25. Three types of biogas production units used in Sri Lanka are given below.
- A - Chinese type
B - Indian type
C - Sri Lankan type
- Of the above, the most appropriate type/s for a small scale dairy farm is/are
- (1) A only.
 - (2) B only.
 - (3) C only.
 - (4) A and B only.
 - (5) B and C only.
26. The food item, which is produced using the combination of traditional and modern technologies is
- (1) Jadi.
 - (2) Maldivian fish.
 - (3) Cheese.
 - (4) Dried jackfruit.
 - (5) Milk powder.
27. Coagulation of egg white protein during hard boiling of an egg is best described as
- (1) breaking of peptide and hydrogen bonds in protein molecule.
 - (2) breaking and rearranging of peptide and hydrogen bonds in protein molecule.
 - (3) breaking of cross linking bonds in protein molecule.
 - (4) breaking and rearranging of cross linking bonds within the same protein molecule.
 - (5) breaking and rearranging of cross linking bonds among different protein molecules.
28. Of the following, foods with high lycopene content include,
- (1) water melon, banana and soursop.
 - (2) strawberry, tomato and banana.
 - (3) water melon, strawberry and tomato.
 - (4) tomato, mango and soursop.
 - (5) passion fruit, banana and mango.
29. Following two statements are based on the food habits.
- A - Certain food habits may improve the health status of a person.
B - Consumption of the curry "*Hath Maluwa*" is a good traditional food habit in Sri Lanka.
- Of the above,
- (1) A is correct and B is incorrect.
 - (2) B is correct and A is incorrect.
 - (3) Both A and B are correct.
 - (4) A is correct and it further explains B.
 - (5) B is correct and it further explains A.
30. Red raw rice is more suitable than polished rice as an ingredient of a "breakfast cereal powder mix" because, red raw rice
- (1) decreases the viscosity and increases the glycemic index.
 - (2) increases the viscosity and decreases the glycemic index.
 - (3) increases the viscosity and fibre content.
 - (4) decreases the glycemic index and fibre content.
 - (5) increases the glycemic index and decreases the fibre content.
31. Consider the following statements regarding gluten.
- A - It is a storage protein together with starch in some cereals.
B - It helps to develop the porous structure of wheat-based baked food.
C - It causes allergic reactions in some consumers.
D - In certain rice varieties, the gluten content is higher than that in wheat.
- Of the above, the correct statements are
- (1) A and B only.
 - (2) A and C only.
 - (3) A, B and C only.
 - (4) A, C and D only.
 - (5) B, C and D only.

32. The main reason for adding cow milk to soya milk in processing soya yoghurt is to
- (1) mask the beany flavour of soya milk.
 - (2) increase the sweetness.
 - (3) improve the creaminess.
 - (4) facilitate the curdling process.
 - (5) control souring that occurs over time.
33. Select the most correct statement regarding processing of bakery products.
- (1) Baking powder is used as a leavening agent in bread and biscuit doughs.
 - (2) Maillard reaction helps to improve the colour and flavour of baked food.
 - (3) Caramelization improves the colour by reacting sugar with amino acids.
 - (4) Proofing is critical in developing the texture of biscuits.
 - (5) Yeast is an effective leavening agent in hard doughs.
34. The correct representation for rice-based diversified foods is
- (1) raw rice, red rice flour, string hoppers and hoppers.
 - (2) roasted rice flour, parboiled rice flour, hoppers and oil cake.
 - (3) rice porridge, rice milk, parboiled rice and raw rice.
 - (4) string hoppers, roasted rice flour, parboiled rice flour and oil cake.
 - (5) string hoppers, hoppers, rice milk and oil cake.
35. Fresh cut-fruits are highly susceptible to deterioration due to
- A - enzyme-derived oxidation of phenolic compounds.
B - hormone-accelerated senescence.
C - contamination with spoilage micro-organisms.
D - textural changes due to water loss.
- Of the above, the correct statements are,
- (1) A and B only.
 - (2) A and C only.
 - (3) A, B and C only.
 - (4) A, C and D only.
 - (5) B, C and D only.
36. Select the correct statement regarding processing of jam.
- (1) Gelatin is added to develop the jelly-like texture of jam.
 - (2) The pH is increased above 4.6 to control spoilage micro-organisms.
 - (3) The Brix is maintained between 30-40 in most jams.
 - (4) Sterilized after bottling.
 - (5) Pectin rich fruits are used as the main raw material.
37. In osmotic dehydration of fruits and vegetables,
- A - salt solutions are used.
B - sugar solutions are used.
C - bee honey can be used.
D - vinegar can be used.
- Of the above, the correct statements are
- (1) A and B only.
 - (2) A and C only.
 - (3) A, B and C only.
 - (4) A, C and D only.
 - (5) B, C and D only.
38. The correct sequence of processing of sauce is
- (1) cleaning, pulping, adding spices, concentrating and hot filling.
 - (2) cleaning, adding spices, pulping, concentrating and sterilizing.
 - (3) cleaning, pulping, adding spices, sterilizing and concentrating.
 - (4) cleaning, adding spices, pulping, pasteurizing and concentrating.
 - (5) cleaning, adding spices, pulping, hot filling and concentrating.
39. The temperature range to be maintained in an incubator used to produce yoghurt is
- (1) 4-6 °C.
 - (2) 12-15 °C.
 - (3) 38-40 °C.
 - (4) 43-46 °C.
 - (5) 48-50 °C.

40. Some of the ingredients used to produce ice cream include
- (1) starter culture, sugar and gelatin.
 - (2) sugar, butter fat and gelatin.
 - (3) butter fat, salt and emulsifiers.
 - (4) emulsifiers, milk solids and salt.
 - (5) milk solids, butter fat and flavours.
41. An example for a fermented fish product is
- (1) fish sauce.
 - (2) dry fish.
 - (3) Maldive fish.
 - (4) smoked fish.
 - (5) canned fish.
42. The most suitable raw material type and temperature of the production process of virgin coconut oil are
- (1) raw scraped coconut and high temperature, respectively.
 - (2) raw scraped coconut and medium temperature, respectively.
 - (3) dry coconut pieces and high temperature, respectively.
 - (4) dry coconut pieces and very low temperature, respectively.
 - (5) mixture of dry, raw coconut pieces and high temperature, respectively.
43. A manufacturer planned to add ginger for biscuits. The most suitable material that he could use to obtain the maximum benefit is
- (1) raw ginger.
 - (2) dehydrated ginger.
 - (3) ginger oil.
 - (4) ginger oleoresin.
 - (5) water extract of ginger.
44. Select the correct statement on modified atmospheric packaging.
- (1) Cannot protect the vitamin content of a food.
 - (2) The major objective is to maintain low temperature condition.
 - (3) Prevents food from oxidation.
 - (4) Can be applied only for liquid food items.
 - (5) May reduce the packaging cost.
45. Following statements are based on the sensory evaluation of a food material.
- A - All physico-chemical properties of a food can be evaluated through sensory evaluation.
- B - Sensory evaluation is one of the key steps in production process of a new food product.
- Of the above,
- (1) A is correct and B is incorrect.
 - (2) B is correct and A is incorrect.
 - (3) Both A and B are correct.
 - (4) A is correct and it further explains B.
 - (5) B is correct and it further explains A.
46. Following statements are based on the quality evaluation of a food product.
- A - ISO fulfils the maximum consumer protection.
- B - HACCP is one of the prerequisites to obtain ISO for a food product.
- Of the above,
- (1) Only A is correct.
 - (2) Only B is correct.
 - (3) Both A and B are correct.
 - (4) A is correct and it further explains B.
 - (5) B is correct and it further explains A.
47. Based on the SLS analytical standards, the correct method that could be used to determine the protein content of a food material is
- (1) Soxhlet method.
 - (2) Oven drying method.
 - (3) Dean and Stark method.
 - (4) Kjeldhal method.
 - (5) Rose-Gottlieb method.
48. Based on the Food Act No. 6 of 1980, sodium metabisulphite (sms) can be categorized as
- (1) an anti-caking agent.
 - (2) an anti acid.
 - (3) a thickening agent.
 - (4) a preservative.
 - (5) a colouring agent.

49. Following statements are based on the Protein Calorie Malnutrition (PCM).

A - Popularization of underutilized protein and carbohydrate sources among people is one of the ways to control PCM.

B - Certain types of yams are rich in high quality carbohydrates as well as proteins.

Of the above,

- (1) Only A is correct.
- (2) Only B is correct.
- (3) Both A and B are correct.
- (4) A is correct and it further explains B.
- (5) B is correct and it further explains A.

50. The technology behind extraction of sugar from sugar cane and production of treacle from coconut sap can be categorized as

- (1) traditional and modern technological methods respectively.
- (2) modern and traditional technological methods respectively.
- (3) traditional technological methods.
- (4) modern technological methods.
- (5) emerging technological methods.

* * *



සියලුම හිමිකම් ඇවිරිණි/முழுப் பதிவுரிமையுடையது/All Rights Reserved

ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව
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ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව
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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, 2018 අගෝස්තු
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர) பரீட்சை, 2018 ஓகஸ்ட்
General Certificate of Education (Adv. Level) Examination, August 2018

ආහාර තාක්ෂණවේදය II
உணவுத் தொழினுட்பவியல் II
Food Technology II

17 E II

16.08.2018 / 1300 - 16 10

පැය තුනයි
மூன்று மணித்தியாலம்
Three hours

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

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

Index No. :

Instructions:

* This question paper consists of 10 questions in 08 pages.

* This question paper comprises of Parts A, B and C.

The time allotted for all three parts is three hours.

Part A - Structured Essay (2 - 7 pages)

* Answer all questions on this paper itself.

* Write your answers in the space provided for each question. Please note that the space provided is sufficient for your answers and extensive answers are **not** expected.

Part B and C - Essay : (page No. 8)

* Select **two** questions from each of the Parts B and C and answer **four** questions only. Use the papers supplied for this purpose.

* At the end of the time allotted for this paper, tie the **three** parts together so that Part A is on the top of Parts B and C before handing over to the supervisor.

* You are permitted to remove only Parts B and C of the question paper from the Examination Hall.

For Examiner's Use only

Part	Question No.	Marks
A	1	
	2	
	3	
	4	
B	5	
	6	
	7	
C	8	
	9	
	10	
Total		
Percentage		

Final Marks

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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1. (A) State a soft-technological application used in each of the following activities.

(1) Body fitness :

(2) Beauty care :

(B) State the appropriate application software or type of application software for each of the following tasks.

Task	Application software or type of software
(1) Maintaining employee record :
(2) Writing a business letter :

(C) Consumption of excess amount of simple carbohydrates may raise blood sugar level. Name **two** health problems that are associated with high blood sugar.

(1)

(2)

(D) State **two** approaches to sustain household level food security.

(1)

(2)

(E) Food can under go spoilage due to physical and bio-chemical factors.

(i) Name **two** bio-chemical factors responsible for spoilage of food.

(1)

(2)

(ii) State **three** physical factors responsible for spoilage of food.

(1)

(2)

(3)

(F) Soil pH is an important factor for better crop growth.

(i) State **two** reasons for a neutral soil to become an acidic soil.

(1)

(2)

(ii) State **two** problems associated with acidic soil in relation to aquaculture.

(1)

(2)

(iii) Name **two** materials that can be used to reclamate acidic soil.

(1)

(2)

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(G) Define the following terms.

(i) Seed dormancy

.....

.....

(ii) Micro-propagation

.....

.....

(iii) Parthenogenesis

.....

.....

(H) State **three** characteristics of a rhizome.

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

2. (A) Maintaining of a medicinal garden gives many benefits in addition to the provision of useful herb materials with medicinal value.

(i) Name **three** other benefits of maintaining a medicinal garden.

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

(ii) Name **three** important maintenance activities needed in medicinal plant nursery management.

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

(B) Coral reefs are one of the highly diverse eco-systems.

(i) Name **two** main locations where the coral reefs are abundantly found in Sri Lanka.

- (1)
- (2)

(ii) State **two** factors that threaten the existence of these coral reefs.

- (1)
- (2)

(C) Modern bio-technological tools are widely used in the human medicine. List **two** such technological tools.

(1)

(2)

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(D) (i) State whether the following businesses are production-oriented or service-oriented.

	Business	Nature of the business
(1)	"Hela Bojun" centres operated by the Department of Agriculture.
(2)	Ridiyagama Dairy Farm of National Livestock Development Board.
(3)	Milk Industries of Lanka Private Limited (MILCO).

(ii) A farmer established a dairy farm with 10 milking cows by investing Rs. 5 millions. He spends Rs. 1500.00 for feeding and another Rs. 500 for other supplies daily. The average daily milk production in the farm is 100 litres and the farm gate price of milk is Rs. 70 per litre. Answer the following questions.

(1) Recurrent expenditure of the farm = Rs. per day.

(2) Gross profit of the business = Rs. per day.

(E) State **two** main causes for post-harvest losses of stored grains under Sri Lankan conditions.

(1)

(2)

(F) State **two** traditional methods of storing grains in Sri Lanka.

(1)

(2)

(G) Name **two** technological interventions in agriculture that increase net greenhouse gas generation.

(1)

(2)

(H) Municipal solid waste has become a burning environmental issue in Sri Lanka.

(i) State **two** environmental impacts caused by municipal solid wastes.

(1)

(2)

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3. (A) Protein sources play an important role in world food production.

Name **two** plant-based food sources, which can supply high amount of proteins.

(1)

(2)

(B) State **two** food habits that could be observed based on a lifestyle of a person.

(1)

(2)

(C) State the main factor/action necessary to achieve the following quality characters of a milk product.

(1) High overrun in ice cream:

(2) Desired thickness of yoghurt:

(D) Processed foods can be safely stored for a long time. State the main factor responsible for preserving the following processed foods.

(1) Refrigerated fish:

(2) Meat sausages:

(E) Name **two** products produced from ground fish.

(1)

(2)

(F) Desiccated coconut is a high demanding product in the market. List **two** uses of desiccated coconut.

(1)

(2)

(G) List **two** added health benefits that could be obtained by the consumption of spices.

(1)

(2)

(H) List **four** types of Plastic fiber-based food packages.

(1)

(2)

(3)

(4)

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column

(I) Quality certificate systems help in assuring the quality of a food product.

State **four** quality certificate systems.

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

(J) Food get unfit for human consumption due to microbial contamination.

State **three** precautions that the food manufacturers can take to minimize microbial contamination.

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

4. (A) Calcium plays an important role in human nutrition.

State **four** food sources of calcium.

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

(B) Government institutes may help to improve the quality of a food product. List **two** government institutes in Sri Lanka that may provide information on the quality of vegetables.

- (1)
- (2)

(C) (i) State **three** main physical changes that take place in starch granules during gelatinization.

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

(ii) State **two** main physico-chemical changes that take place during curdling of milk in yoghurt processing.

- (1)
- (2)

(D) (i) State the first **five** unit-operations of processing of parboiled rice, in the correct sequence.

- (1)
- (2)
- (3)
- (4)
- (5)

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(ii) State **three** advantages of diversification of food.

(1)

(2)

(3)

(E) (i) State **three** reasons for the high demand for minimally-processed fruits and vegetables among the urban population.

(1)

(2)

(3)

(ii) Write **three** advantages of using a solar dryer to dehydrate vegetables compared to open air sun drying.

(1)

(2)

(3)

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සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved

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 General Certificate of Education (Adv. Level) Examination, August 2018

ආහාර තාක්ෂණවේදය II
 உணவுத் தொழினுட்பவியல் II
 Food Technology II

17 E II

Essay

* Select **two** questions from each of the Parts B and C and answer **four** questions only.
 (Each question carries 15 marks.)

Part B

5. (i) Write an essay on the use of technology in national wildlife sanctuary management.
 (ii) Describe the importance and use of information technology in starting a business to maximize the profit.
 (iii) Describe the changes in traditional food habits of Sri Lankans, due to their changing lifestyle.
6. (i) Describe the influence of environmental temperature on crop production.
 (ii) Explain how a successful entrepreneur could sustain his business.
 (iii) Describe the influence of human activities on the sustainability of aquatic ecosystems.
7. (i) Describe the post-harvest losses and measures for minimizing postharvest losses of a selected fruit in Sri Lanka, from farm to the consumer.
 (ii) Describe the importance of ethical conducts in usage of information technology.
 (iii) With examples, describe the application of 3R concept in the management of waste generated in the day to day life in Sri Lanka.

Part C

8. (i) Describe the importance of food with respect to the body activity of a person.
 (ii) Explain the unit operations of bread making in achieving its highest quality.
 (iii) Explain the health benefits of coconut oil with special reference to its chemical composition.
9. (i) Describe the steps that can be taken to explore the international market for Sri Lankan spices.
 (ii) Explain the importance of packaging with respect to the food safety.
 (iii) Explain the importance of quality standards of food with respect to the consumer protection.
10. (i) "Contamination of a food may create health problems", Comment on this statement.
 (ii) Explain the applicability of different dehydration techniques in food processing and preservation.
 (iii) Describe various processing methods used to produce fish products.
