

නව/පැරණි නිර්දේශය - புதிய/பழைய பாடத்திட்டம் - New/Old Syllabus

NEW/OLD

ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව

இலங்கைப் பரீட்சைத் திணைக்களம், Sri Lanka Department of Examinations, Sri Lanka

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2019 අගෝස්තු
 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2019 ஓகஸ்த்
 General Certificate of Education (Adv. Level) Examination, August 2019

15.08.2019 / 1300 - 1500

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 them 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 statement that best describes soft technology.
 - (1) Extensive capital is required to create soft technology.
 - (2) Computers are necessary to implement soft technology.
 - (3) Human creativity is involved in design and use of soft technology.
 - (4) Soft technology heavily depends on mechanization.
 - (5) Telecommunication industry is mostly benefited from soft technology.
2. Select the process where internet is an essential requirement.
 - (1) Making a presentation on business.
 - (2) Database management.
 - (3) Writing a business letter to the employees.
 - (4) Sending an information to employees.
 - (5) E-commerce.
3. The micronutrient responsible for the anemic condition is
 - (1) iodine. (2) iron. (3) zinc. (4) magnesium. (5) potassium.
4. The direct impact of over-nutrition is
 - (1) obesity. (2) diabetes. (3) hypertension. (4) heart disease. (5) leukemia.
5. Foods containing agrochemical residues may be unfit for human consumption. Out of the following elements which one is an example for such contaminants?
 - (1) Cd (2) Mg (3) Na (4) Fe (5) K
6. The cutting surface of the fresh-cut brinjals become brown in colour within a short period of time. The enzyme responsible for this colour changes is
 - (1) catalase. (2) polyphenol oxidase. (3) peroxidase.
 - (4) linamarase. (5) chlorophyllase.
7. Studies have confirmed that the oil of Mee seeds (*Madhuca longifolia*) can be used in cooking. Select the statement that best explains the popularization of Mee seed oil among people.
 - (1) An introduction of a healthy oil source to the market.
 - (2) A new step to assure the food security.
 - (3) Removal of other plant-based oils from the market.
 - (4) An introduction of a substitute for animal fat.
 - (5) An introduction of a substitute for palm oil.

8. The most critical factor that determines tuber yield in potato is
 (1) rainfall. (2) temperature. (3) relative humidity.
 (4) change in the day length. (5) temperature difference between day and night.
9. Select the correct statement.
 (1) Sri Lanka is divided into 24 agro-ecological regions.
 (2) Sri Lanka is divided into three main agro-climate zones based on rainfall.
 (3) Areas in Sri Lanka with an average annual rainfall above 1750 mm is known as wet zone.
 (4) Relative humidity and wind speed are considered in the classification of agro-ecological regions in Sri Lanka.
 (5) Soil type, land use and topography are the main factors that are considered in classifying agro-ecological regions in Sri Lanka.
10. Consider the following statements.
 'Seed viability' indicates the ability of seeds
 A - to develop into plants.
 B - that can be stored for a longer period.
 C - to survive under unfavourable environmental conditions.
 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.
11. From the following, select the statement that best describes a 'corm'.
 (1) An underground stem, contains nodes and internodes, covered with scale leaves.
 (2) An underground storage organ, contains a swollen stem base, covered with scale leaves.
 (3) An aboveground stem, contains nodes and internodes, covered with scale leaves.
 (4) An aboveground storage organ, contains a swollen stem base, covered with scale leaves.
 (5) A vegetative propagation structure, with swollen leaf base, covered with scale leaves.
12. Select the main difference between budding and grafting.
- | | Budding | Grafting |
|-----|--|---|
| (1) | A technique used in field crops. | A technique used in horticultural crops. |
| (2) | Scion and the root stock are selected from the same plant. | Scion and stock are selected from different but related plants. |
| (3) | Practiced during the growing seasons of stock. | Practiced during the dormant seasons of stock. |
| (4) | Produces a weaker plant that cannot tolerate drought. | Produces a healthy plant that tolerate drought. |
| (5) | A budded plant shows early flowering with low yields. | A grafted plant shows late flowering with higher yields. |
13. The most suitable vegetative propagation structure of Aratta (*Alpinia calcarata*) is the
 (1) seed. (2) tuber. (3) cutting. (4) leaf. (5) rhizome.
14. The medicinal plant that is best suited to train into a 'growth arch' is
 (1) Hathawariya (*Asparagus racemosus*). (2) Pawatta (*Adhatoda vasica*).
 (3) Bin Kohomba (*Munronia pinnata*). (4) Komarika (*Aloe vera*).
 (5) Heen Bovitiya (*Osbeckia octrandia*).
15. The medicinal plant which is widely used for herbal drinks is
 (1) Aratta (*Alpinia calcarata*). (2) Pepper (*Piper nigrum*).
 (3) Iramusu (*Hemidesmus indicus*). (4) Kohomba (*Azadirachta indica*).
 (5) Niyangala (*Gloriosa superba*).
16. In Sri Lanka, sea grasses are mainly found in the
 (1) Eastern coast. (2) Southern coast. (3) Jaffna peninsula.
 (4) North-eastern coast. (5) North-western coast.

17. The most suitable method for long term storage of fruits and vegetables is

- (1) silo.
- (2) cold storage.
- (3) warehouse with good ventilation.
- (4) racks in dark environment.
- (5) deep freezer.

18. Drying preserves agricultural products as it

- (1) kills all pathogens.
- (2) alters the ingredients to make the material hard.
- (3) reduces the availability of water for degradation.
- (4) removes natural volatile compounds to a certain extent.
- (5) increases the air spaces after drying.

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19. Select the correct statement.

- (1) Production of tissue culture plants is a simple and modern biotechnological application used in commercial scale.
- (2) Recombinant DNA technology is used to produce identical new plants.
- (3) Both nucleic acids and genes are found only in cells of reproductive tissues.
- (4) Production of new plant varieties by crossbreeding and selection are traditional practices.
- (5) Production of new plant varieties by selection is a traditional practice but crossbreeding is a modern technology.

20. An example for a service-oriented, bio-resource technological entrepreneurship is

- (1) production and selling of medicinal plants.
- (2) conducting training courses on the control of Fall Army Worm.
- (3) wedding catering service.
- (4) conducting training courses on forest conservation.
- (5) production of forest tree plants.

21. Several factors that should be considered in selecting a business opportunity are

- (1) demand for the supply and availability of natural resources.
- (2) technology that will be used and capital investment.
- (3) labour availability and attitude of the people.
- (4) availability of electricity, water and other inputs.
- (5) infrastructure facilities and market.

22. Consider the following statements.

A - A manager of a successful enterprise should have leadership qualities.

B - Coordination, dedication and responsibility are leadership qualities of a manager.

C - The success of an enterprise mainly depends on capital investment.

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

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

23. Cash flow statement of a business should include

- (1) rate of production and financial losses.
- (2) profits or losses.
- (3) total revenue and net profit.
- (4) income and cash balance.
- (5) total expenditure and net profit.

24. An indirect effect of fossil fuel-powered machinery used in agriculture is

- (1) emission of particulate matter to air.
- (2) noise pollution.
- (3) disturbances to soil fauna.
- (4) global warming.
- (5) addition of harmful chemicals to soil and water.

25. A student who used a mixture of saw dust and rice straw for making compost observed poor decomposition after one month. The best action could have been taken by this student to have an optimum decomposition of the initial mixture is
- (1) turn the mixture regularly.
 - (2) add wood ash to the mixture.
 - (3) add cow dung to the mixture.
 - (4) add rock phosphate to the mixture.
 - (5) maintain a damp condition in the mixture.
26. Pulses play an important role as a primary source of protein in human diet. The correct group of crops that can be considered as pulses is
- (1) rice, dhal and chickpea.
 - (2) chickpea, soya bean and finger millet.
 - (3) green gram, learning and maize.
 - (4) soya bean, green gram and dhal.
 - (5) finger millet, chick pea and green gram.
27. Consider the following statements.
- A - Margarine contains certain amount of saturated fatty acids.
B - Trans fatty acids can be formed during manufacturing of margarine.
C - Spreadability of margarine totally depends on its trans fatty acid content.
- Of the above, the correct statement/s is/are,
- (1) A only.
 - (2) B only.
 - (3) C only.
 - (4) A and B only.
 - (5) B and C only.
28. Pre-gelatinization is required to prepare
- (1) string hopsers.
 - (2) rotti.
 - (3) oil cake.
 - (4) bread.
 - (5) cake.
29. The staple food of different continents is based on their agro-climatic and social factors. The staple food of African and Asian continents are
- (1) maize and rice, respectively.
 - (2) yams and wheat, respectively.
 - (3) maize and wheat, respectively.
 - (4) yams and rice, respectively.
 - (5) rice and yams, respectively.
- Questions 30 and 31 are based on the following ingredients.
- A - Ammonium bicarbonate
B - Soft wheat
C - Hard wheat
D - Sugar
E - Yeast
30. Of the above, the leavening agent that can be used in biscuit manufacturing is
- (1) A.
 - (2) B.
 - (3) C.
 - (4) D.
 - (5) E.
31. Of the above, the major raw material used in bread manufacturing is
- (1) A.
 - (2) B.
 - (3) C.
 - (4) D.
 - (5) E.
32. Formation of colour of a biscuit is due to the reaction between
- (1) wheat flour and sugar.
 - (2) sugar and leavening agent.
 - (3) wheat flour and leavening agent.
 - (4) hard wheat and soft wheat.
 - (5) soft wheat and sugar.
33. The texture of soya yoghurt highly depends on
- (1) protein content of soya milk.
 - (2) fat content of soya milk.
 - (3) mineral content of soya milk.
 - (4) carbohydrate content of soya milk.
 - (5) fiber content of soya milk.
34. The most suitable type of rice for diabetes patients is
- (1) raw white rice.
 - (2) raw red rice.
 - (3) parboiled red rice.
 - (4) raw samba rice.
 - (5) parboiled white rice.

- Questions 35 and 36 are based on the following food products.

- A - Canned fish balls
- B - Spray-dried milk powder
- C - Fresh-cut fruits
- D - Vacuum-dried bitter gourd

35. Of the above, the examples for minimally-processed foods 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.

36. Of the above, the examples for diversified food products 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.

37. Consider the following statements.

- A - Osmotically-dehydrated fruits have a hard texture when compared to the sun-dried fruits.
- B - Shelf life of osmotically-dehydrated fruits may depend on the initial concentration of the sugar or salt solution.
- C - Combination of oven-drying and osmotic dehydration may improve the shelf life of osmotically-dehydrated fruits.

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

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

38. The major objective of the use of sodium metabisulfite in minimal processing of fruits is to

- (1) improve the taste of fruits.
- (2) improve the texture of fruits.
- (3) control formation of brown colour in fruits.
- (4) maintain the total soluble solids (TSS) content of fruits.
- (5) improve the shelf life of fruits.

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39. Some statements on milk products are given below.

- A - Both ice cream and yoghurt are produced from fermented milk.
- B - Ice cream usually contains more fat than in yoghurt.
- C - Gelatin is an essential ingredient in set yoghurt but not in ice cream.
- D - Once produced, both ice cream and yoghurt should be stored under similar conditions.

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, C and D only.

40. Unit activities of cold preservation of fish in correct order are

- (1) selection of fresh fish, washing with cold water and store in a freezer.
- (2) selection of fresh fish, evisceration, cleaning with water and store in a freezer.
- (3) selection of fresh fish, cutting into pieces, washing with cold water, packing and store in a freezer.
- (4) selection of fresh fish, evisceration followed by cleaning with water, packing and store in a freezer.
- (5) washing of fresh fish, cutting, evisceration, washing and store in a freezer.

41. In sausage production, sodium nitrate and potassium sorbate are used as

- (1) preservatives.
- (2) colouring agents.
- (3) emulsifiers.
- (4) flavour agents.
- (5) mold inhibitors.

42. Following statements are based on the coconut oil manufacturing process.

- A - High quality raw coconut is exposed to high temperature in the manufacturing process of virgin coconut oil.
- B - Natural antioxidant compounds may get removed during the refining process of coconut oil.
- C - Certain carcinogenic compounds can be formed during the refining process of coconut oil.

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

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

43. A group of students planned to add cinnamon flavour to yoghurt. The best source of cinnamon that they can select to produce the high quality product is

- (1) raw cinnamon powder.
- (2) cinnamon oleoresin.
- (3) cinnamon essential oil.
- (4) combination of cinnamon powder and its oleoresin.
- (5) combination of cinnamon essential oil and its oleoresin.

44. Following statements are based on modified atmospheric packaging.

- A - High CO_2/O_2 ratio is maintained.
- B - Vacuum environment is created within the package.
- C - N_2 can be used as an inert gas.

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

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

45. The most suitable packaging for sterilized milk is

- (1) clear glass container.
- (2) transparent plastic container.
- (3) tetra pack container.
- (4) high density transparent polythene package.
- (5) low density transparent polythene package.

46. Good manufacturing practices (GMP) may help to improve the quality of food products. Select the condition that is **not** a component of GMP.

- (1) Maintaining high sanitary conditions in and around the food processing area.
- (2) Use of proper harvest and post-harvest techniques.
- (3) Properly planned food processing area.
- (4) Use of proper waste management system.
- (5) Maintaining good personal hygiene.

47. Free fat content of a food material can be determined by

- (1) Soxhlet extraction method.
- (2) Lane and Eynon method.
- (3) Werner Schemidt method.
- (4) Dean and Stark method.
- (5) Formole titration method.

48. The authorized person who is responsible for implementation of the Food and Drug Act No. 26 of 1980 at regional level is

- (1) Medical Officer of Health.
- (2) Public Health Inspector.
- (3) Food Inspector.
- (4) Director General of Health Services.
- (5) District Medical Officer.

49. Consider the following statements.

- A - Iodine deficiency creates serious health issues in human.
- B - Anemic condition may not directly affect the functions of the thyroid gland.

Of the above,

- (1) A is true and B is false.
- (2) B is true and A is false.
- (3) Both A and B are true.
- (4) A is true and it is further explained by B.
- (5) B is true and it is further explained by A.

50. Consider the following statements.

- A - Industrial Technology Institute (ITI) has the legal authority to set the standards for food products.
- B - Knowledge regarding the food formulation could be obtained through National Engineering Research and Development (NERD) Centre.
- C - Industrial Development Board (IDB) is one of the government bodies that transfer the medium scale food processing technologies to entrepreneurs.

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

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

* * *

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නව/පැරණි නිර්දේශය - புதிய/பழைய பாடத்திட்டம் - New/Old Syllabus

NEW/OLD

இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lankaඅධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2019 අගෝස්තු
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2019 ஓகஸ்ட்
General Certificate of Education (Adv. Level) Examination, August 2019අහාර තාක්ෂණවේදය II
உணவுத் தொழினுட்பவியல் II
Food Technology II

17 E II

17.08.2019 / 1300 - 1610

පැය තුනයි
மூன்று மணித்தியாலம்
Three hoursඅමතර කියවීමේ කාලය - මිනිත්තු 10 යි
மேலதிக வாசிப்பு நேரம் - 10 நிமிடங்கள்
Additional Reading Time - 10 minutesUse **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 | | |

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| 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) (i) Name **two** intellectual qualities required to create soft technology.

(1)

(2)

(ii) Name a software each used in following applications in a business.

Software

(1) Database management

(2) Spread sheet

(3) Search engine

(B) State **two** indices that can be used to evaluate the nutritional status of a person.

(1)

(2)

(C) State the nutritional disorders responsible for the following disease conditions of a person.

| | Disease condition | Nutritional disorder |
|-----|-------------------|----------------------|
| (1) | Hypertension | ..... |
| (2) | Goitre | ..... |

(D) Food borne diseases could occur due to microbial contamination of foods. State the major groups of micro-organisms responsible for the following disease conditions.

| | Disease conditions | Major group of micro-organisms |
|-----|--------------------|--------------------------------|
| (1) | Hepatitis | ..... |
| (2) | Diarrhea | ..... |

(E) State **two** physical factors responsible for microbial contamination of food.

(1)

(2)

(F) State **two** productive steps that could be taken at the regional level to assure the national level food security.

(1)

(2)

(G) State **two** differences between a shade net house and a green house.

(1)

(2)

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column(H) State **four** methods that can be used to sterilize the raised bed nurseries.

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

(I) State one of the main preservation methods each that could extend the shelf-life of each of the following materials.

| | Material | Main preservation method to extend shelf-life |
|-----|----------------------|---|
| (1) | Black pepper (spice) | ..... |
| (2) | Paddy (grain) | ..... |
| (3) | Fish | ..... |
| (4) | Milk | ..... |

2. (A) State one technological intervention each that may lead to create following phenomena in an agricultural eco-system.

- (1) Eutrophication :
- (2) Genetic mutation :

(B) Write **two** importance of conservation of plant genetic resources.

- (1)
- (2)

(C) State **two** characteristics of a successful entrepreneur.

- (1)
- (2)

(D) A Broiler farmer invested Rs. 100 millions to construct a modern broiler house equipped with automated feeding and watering systems. He annually spends another Rs.200 millions to purchase day-old chicks, feed and medicines. The cost for labor is Rs.1 million per year and the annual revenue from sale of broilers is Rs. 211 millions.

(i) State whether the above business is labor intensive or capital intensive.

.....

(ii) What is the variable cost of the above production?

.....

(iii) What is the gross profit of the above broiler production?

.....

(E) State the **three** main components of a profit loss account of an agricultural business.

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

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(F) Name **three** laboratory methods used to determine the soil texture.

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

(G) (i) Name **three** plants, which are used when preparing a decoction mixture for cold and cough.

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

(ii) Mention **three** methods used to dry medicinal plants.

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

(H) (i) Some of the fishing gears have been declared as destructive fishing gears. Name **two** such destructive fishing gears.

- (1)
- (2)

(ii) Jam and cordial are two popular products manufactured from pineapple. Name **one** waste product that generates in the processing of pineapple and **two** possible methods to utilize this waste product.

Waste Product

Possible methods to utilize the waste product

- (1)
- (2)

3. (A) The behaviour of proteins under different environmental conditions add certain properties to the different food products. Name the responsible protein, which affects the final quality of the following food products.

| | Food product | Protein |
|-----|--------------|---------|
| (1) | Bread | ..... |
| (2) | Yoghurt | ..... |

(B) The chemical components of a food play an important role in human nutrition. State the main function of following chemical components in a food.

| | Component | Major function |
|-----|---------------|----------------|
| (1) | Tocopherol | |
| (2) | Flavanoid | |
| (3) | Lycopene | |
| (4) | Ascorbic acid | |

[see page five]

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- (C) Foods can be categorized based on the rate of release of their nutrients during digestion. State an example for each of the following category of foods.

| | Categories of food | Example |
|-----|--|---------|
| (1) | Food that release nutrients during digestion quickly | ..... |
| (2) | Food that release nutrients during digestion slowly | ..... |

- (D) Different types of physico-chemical processes are involved in the food manufacturing process. State the impact of each of the following physico-chemical processes on manufacturing of bread.

| | Physico-chemical process | Impact |
|-----|--------------------------|--------|
| (1) | Fermentation | ..... |
| (2) | Gelatinization | ..... |
| (3) | Maillard browning | ..... |

- (E) State **two** physico-chemical differences of raw coconut oil compared to virgin coconut oil.

- (1)
- (2)

- (F) (i) Blanching can be considered as one of the important steps in vegetable processing. State **three** major methods available for blanching.

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

- (ii) Mention **three** objectives of blanching.

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

- (G) State **two** advantages of open air sun-drying.

- (1)
- (2)

- (H) Essential oil and oleoresins are two major spice-based products. State the main processing technique used to produce following products.

| | Product | Processing Technique |
|-----|------------------------|----------------------|
| (1) | Ginger oleoresin | ..... |
| (2) | Cinnamon essential oil | ..... |

- (I) State the percentage of Fat and solids non-fat (SNF) contents of fresh milk taken from a Friesian cow.

- (1) Fat Percentage :
- (2) SNF Percentage :

Do not
write
in this
column

4. (A) State the physico-chemical process that is responsible for the staling of bread.

.....

(B) State **two** nutritional benefits of germinated pulses.

(1)

(2)

(C) State **four** raw materials that can be used for a balanced composite flour mixture.

(1)

(2)

(3)

(4)

(D) (i) Both dry fish and Jadi are processed fish products. List **two** major differences between dry fish and Jadi.

(1)

(2)

(ii) List **two** raw materials used to produce meat balls.

(1)

(2)

(E) Package of a food material plays an important role in protecting the quality of food products. Name the most suitable package for each of the following food products.

| | Food Product | Most suitable packaging |
|-----|---------------|-------------------------|
| (1) | Sausages | ..... |
| (2) | Vegetable oil | ..... |
| (3) | Lime pickle | ..... |
| (4) | Chilli powder | ..... |

(F) Determination of moisture content of a food material may help to determine its shelf-life. State **four** major steps that should be followed in the determination of moisture content using the oven-drying method.

(1)

(2)

(3)

(4)

- (G) There are different types of quality management systems to assure the final quality of a food material. State the quality management systems denoted by the following abbreviations.

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write
in this
column

| | Abbreviation | Quality management System |
|-----|--------------|---------------------------|
| (1) | HACCP | |
| (2) | GAP | |

- (H) Consumption of considerable amount of fresh fruits and vegetables may reduce the risk of non-communicable diseases. State **two** non-communicable diseases that can be controlled through the consumption of fresh fruits and vegetables.

(1)

(2)

* *

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NEW/OLD

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

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2019 අගෝස්තු
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General Certificate of Education (Adv. Level) Examination, August 2019

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) Giving reasons, compare the nutritional requirement of infant and old stages of humans.
(ii) Explain how to avoid groundwater pollution when using agrochemicals.
(iii) Explain the factors that should be considered when establishing a commercial plant nursery.
6. (i) Briefly explain the impact of community-based activities on food security.
(ii) Describe the main activities involved in managing a business successfully.
(iii) Briefly describe the biological factors responsible for food spoilage.
7. (i) Describe advantages and disadvantages of application of genetic engineering techniques in agriculture.
(ii) Describe the reasons of high post-harvest losses of fruits and vegetables compared to grains in Sri Lanka.
(iii) Describe different applications of the 3R concept in agricultural waste management.

Part C

8. (i) Explain, giving examples the importance of biodegradable packaging materials.
(ii) Explain the health problems associated with street food consumption behaviour.
(iii) Once animal-based food products are produced, their quality must be compared with similar commercial products. Describe a procedure to test the quality of a new yoghurt product.
9. (i) Describe the effects of refining, bleaching and deodorization processes on the original quality of the coconut oil.
(ii) Explain the health issues associated with calcium deficiency in relation to humans.
(iii) Describe the important steps of jam manufacturing process.
10. (i) Describe the impact of major unit operations of parboiled rice manufacturing process.
(ii) Explain the statement: "Spices contain many bioactive compounds which may help to maintain a healthy life".
(iii) Describe, giving examples, the basic steps of sensory evaluation and their importance.
