

ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව
 இலங்கைப் பரீட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம் இலங்கைப் பரීட்சைத் திணைக்களம்
 Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka Department of Examinations, Sri Lanka
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 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2024
 General Certificate of Education (Adv. Level) Examination, 2024

ජෛව සම්පත් තාක්ෂණවේදය I
 உயிர் வளத் தொழினூட்பவியல் I
 Bio Resource Technology I

19 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. Two principle characteristics of soft technologies are,
 - (1) creativity and flexibility.
 - (2) rigidity and robustness.
 - (3) simplicity and durability.
 - (4) cheapness and rigidity.
 - (5) precision and robustness.
2. Primary purpose of a spread sheet application is to
 - (1) create presentations.
 - (2) create graphs.
 - (3) analyze data.
 - (4) edit images.
 - (5) prepare documents.
3. The basement of a food pyramid comprises
 - (1) fat.
 - (2) vitamins.
 - (3) proteins.
 - (4) carbohydrates.
 - (5) water.
4. The food item that can provide considerable amounts of protein and carbohydrates is
 - (1) cassava.
 - (2) dry fish.
 - (3) wheat.
 - (4) carrot.
 - (5) sea algae.
5. The enzymatic browning of food can be controlled by
 - (1) adding sodium metabisulphite.
 - (2) reducing its sugar content.
 - (3) increasing the surrounding oxygen concentration.
 - (4) adding calcium chloride.
 - (5) adding ethylene.
6. The key measure to minimize vegetable spoilage due to mechanical damages at the retail market level is to
 - (1) follow good pre-harvesting techniques.
 - (2) introduce good harvesting methodologies.
 - (3) apply high quality chemical preservatives.
 - (4) enhance knowledge of retailers on food quality.
 - (5) use high quality polysac bags.

7. The household food security is best described as,
- (1) storing enough food at home for a few months.
 - (2) growing all the food for household needs in home gardens.
 - (3) managing emergency food supplies in times of crisis.
 - (4) having sufficient food at all times regardless of their nutritional value.
 - (5) ensuring access to nutritious and safe food adequately at all times.
8. Select the correct statement about the soil.
- (1) Soil is a material of about three meter thick layer on the earth surface.
 - (2) Soil formation occurs with deposition of various materials through wind and water.
 - (3) Plants grow well in soil because it includes everything they need.
 - (4) A good quality soil for agricultural purposes is the same as that used for building houses.
 - (5) Healthy soil provides a stable living environment for plant growth.
9. Select the correct statement regarding ecosystems.
- (1) The base tier of the ecological pyramid represents the producers.
 - (2) Natural ecosystems consist of autotrophic edible mushrooms.
 - (3) Oceans are rich in nitrogen, which is an important source of nutrient for plants.
 - (4) Low humidity and low temperature of ecosystems facilitate decomposition of organic matter.
 - (5) Ecosystems are not the primary source of raw materials for industrial and domestic purposes.
10. An advantage of using tissue culture for plant propagation is,
- (1) it requires simple low-cost equipment.
 - (2) it produces genetically diverse plants.
 - (3) it allows year-round propagation.
 - (4) its reliance on soil conditions.
 - (5) it does not require skilled labour.
11. The type of layering that involves bending a branch to the ground and covering a part of it with soil while leaving the tip exposed is,
- (1) air layering.
 - (2) mound layering.
 - (3) serpentine layering.
 - (4) simple layering.
 - (5) compound layering.
12. The hormone which is often used to promote root development in layering techniques is,
- (1) gibberellins.
 - (2) auxins.
 - (3) cytokinins.
 - (4) ethylene.
 - (5) abscisic acid.
13. The medicinal plant of which all plant-parts are used in decoctions is,
- (1) ginger.
 - (2) savandara.
 - (3) moringa.
 - (4) aralu.
 - (5) pawatta.
14. A shade loving medicinal plant is,
- (1) aralu.
 - (2) bulu.
 - (3) nelli.
 - (4) binkohomba.
 - (5) moringa.

15. A special management practice used in medicinal gardens is
- (1) irrigation.
 - (2) pruning.
 - (3) weeding.
 - (4) pest control.
 - (5) fertilizing.
16. The coastal district where the salt marshes are mostly found is
- (1) Mannar.
 - (2) Gampaha.
 - (3) Trincomalee.
 - (4) Ampara.
 - (5) Vavuniya.
17. Preservation of food by drying is due to
- (1) exposure to high temperature during drying.
 - (2) killing microbes during the process of drying.
 - (3) low moisture availability for microbial growth.
 - (4) increase of hardness of food.
 - (5) denature of proteins during drying.
18. "Dolly", the female sheep produced in 1996, is a result of
- (1) gene transfer technology.
 - (2) recombinant DNA technology.
 - (3) cloning technology.
 - (4) hybridization.
 - (5) multiple breeding techniques.
19. Consider the following descriptions regarding four persons.
- A - An owner of a company who acts as its Chief Executive Officer (CEO) and earns good profits.
- B - A person having strong work ethics and good adaptability, and has started a successful new business.
- C - A son of a reputed building contractor who innovated low cost and durable building materials and started his own business by supplying them to the market.
- D - The new manager appointed to a telecommunications company who introduced new changes to the company and increased its profits.
- Of the above, good entrepreneurs are
- (1) A and B only.
 - (2) B and C only.
 - (3) C and D only.
 - (4) A, B and C only.
 - (5) All A, B, C and D.
20. Some of the factors to be considered when selecting a catering service as a business opportunity would be
- (1) competitors, demand for food and availability of land.
 - (2) source of capital funds, machinery needed and efficiency of public transport system.
 - (3) skilled and unskilled labour availability, market situation and abundance of funds.
 - (4) expected profit margin, political stability in the country and household income in the area.
 - (5) technology to be used, livelihoods and education level of the people in the area.

21. Proper management is necessary for a business to be successful. The first step of the business management process would be
- (1) choosing the type of business.
 - (2) identifying the available resources.
 - (3) ensuring the abundance of suitable human resources.
 - (4) setting objectives and goals of the business.
 - (5) planning of strategies.
22. Select the correct statement in relation to planning human resources for a business opportunity.
- (1) Current workforce and future needs should be assessed first.
 - (2) Positions and salaries should be decided at the beginning.
 - (3) Everyone working in the business should have leadership qualities.
 - (4) Only trained people should be assigned to all positions.
 - (5) A welfare programme for the families of the employees should be established.
23. The use of soft technology in food production is
- (1) an advanced scientific concept.
 - (2) an outdated concept.
 - (3) only important for large-scale applications.
 - (4) only important for small-scale applications.
 - (5) an integral part of modern society.
24. The correct order of waste management hierarchy is,
- (1) reduce, reuse, recycle, recovery and disposal.
 - (2) reduce, recycle, reuse, recovery and disposal.
 - (3) reuse, recycle, reduce, recovery and disposal.
 - (4) recovery, reduce, reuse, recycle and disposal.
 - (5) recovery, reduce, recycle, reuse and disposal.
25. The most commonly used method for composting is,
- (1) windrow method.
 - (2) anaerobic method.
 - (3) Chinese method.
 - (4) Indian Method.
 - (5) Sri Lankan method.
26. Sustainability of a bio resource is determined by the
- (1) availability and its rate of consumption.
 - (2) availability and the market value.
 - (3) rate of generation and the availability.
 - (4) rate of generation and the rate of consumption.
 - (5) rate of generation and the market value.
27. The direct source function of an ecosystem is
- (1) pollination.
 - (2) nutrient cycling.
 - (3) water retention.
 - (4) food production.
 - (5) regulation of air.

28. The Red Data Book contains the list of
- (1) invasive species.
 - (2) degraded forests.
 - (3) threatened ecosystems.
 - (4) threatened and endangered species.
 - (5) flora and fauna prohibited for export.
29. A plant species naturally found in the dry zone forests of Sri Lanka is
- (1) Hora (*Dipterocarpus zeylanicus*).
 - (2) Keena (*Calophyllum calaba*).
 - (3) Maha rath mal (*Rhododendron arboreum*).
 - (4) Mahogany (*Swietenia macrophylla*).
 - (5) Satin wood (*Chloroxylon swietenia*).
30. Consider the statements given below.
- A - Commercial forest plantations fulfill the timber requirements of the people.
B - Commercial forest plantations reduce the pressure on natural forests.
- Of the above statements,
- (1) A is correct.
 - (2) B is correct.
 - (3) A is correct and B is incorrect.
 - (4) Both A and B are correct and A further explains B.
 - (5) Both A and B are correct and B further explains A.
31. Consider the following statements about eco-tourism in Sri Lanka.
- A - Promotion of eco-tourism in Strict Nature Reserves is not feasible.
B - Nature reserves are the most famous eco-tourism hotspots in Sri Lanka.
C - Wildlife safari is a major eco-tourism activity.
- Of the above, the correct statement/s would be
- (1) A only.
 - (2) A and B only.
 - (3) A and C only.
 - (4) B and C only.
 - (5) All A, B and C.
32. The State Timber Corporation of Sri Lanka is responsible for
- (1) conservation of natural forests.
 - (2) replanting in protected areas.
 - (3) extraction of timber from state forests.
 - (4) import timber from foreign countries.
 - (5) constructing wooden buildings.
33. The density of a timber is mainly related to its
- (1) durability.
 - (2) strength.
 - (3) fire resistance.
 - (4) water resistance.
 - (5) colour.

34. Consider the following statements about seasoning of timber.

A - The main objective of timber seasoning is to preserve its physical features.

B - Direct sun drying of non-sawn timber decreases timber quality.

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 B further explains A
- (5) B is correct and A further explains B

35. The main raw material for MDF board manufacturing industry of Sri Lanka is

- (1) saw dust.
- (2) rubber wood.
- (3) straw.
- (4) waste paper.
- (5) bamboo.

36. Select the correct statement about volatile oils.

- (1) They are typically heavier than water.
- (2) They are insoluble in alcohol.
- (3) They possess strong therapeutic properties.
- (4) They are mainly used for cooking.
- (5) They are stable and do not change over time.

37. Consider the following statements.

A - Vulcanization is a chemical process in which natural rubber or related polymers are converted into more durable materials.

B - Natural rubber and synthetic rubber are the main polymers used for vulcanization.

C - Calcium oxide and acetic acid are some activators used with sulphur in the process of vulcanization of rubber.

Of the above, the correct statement/s would be

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

38. Select the correct statement from the following.

- (1) Bio resource technology can transform organic materials into energy, chemicals, and other valuable products.
- (2) Urea fertilizer marketed in Sri Lanka contains 56% of nitrogen and is the most widely used fertilizer in paddy cultivation.
- (3) Crop rotation is not effective to control weeds due to the differences in the management of crops.
- (4) Contact herbicides are best suited to control perennial weeds in different cropping systems.
- (5) Sprinkler irrigation helps control majority of the insect pests in vegetable crops due to the velocity of water supply.

39. The government organization in Sri Lanka that is exclusively responsible for promotion of non-timber forest resources is, the

- (1) Palmyrah Development Board
- (2) Coconut Development Board
- (3) Export Development Board
- (4) Industrial Development Board
- (5) National Livestock Development Board

40. Consider the following statements about the landscapes.

- A - The zoo is an example for an urban landscape.
- B - Natural landscapes in Sri Lanka are found only within nature reserves.
- C - An up-country tea plantation in Sri Lanka can be considered as a modified landscape.
- D - Minneriya national park is an example for an ecological landscape.

Of the above, the correct 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.

41. Consider the following statements on bio-ethanol production.

- A - Algae are used for the bio-ethanol production.
- B - Lipids in algae are converted into bio-ethanol.

Of the above statements,

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

42. Consider the following statements regarding fermentation of milk.

- A - Unit operations in making curd and yoghurt from cow milk are identical.
- B - Milk is first fermented and then coagulated by rennet in making cheese.
- C - Lactose is converted to lactic acid by the same bacterial species in making all fermented milk products.

Of the above, the correct statement/s would be

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

43. The best preservation method for long distance transport of sea fish in Sri Lanka is

- (1) freezing.
- (2) smoking.
- (3) salting.
- (4) refrigeration.
- (5) vacuum packing.

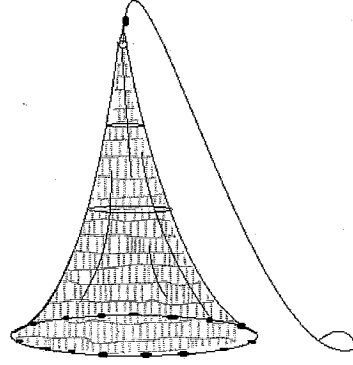
44. The fish species that needs dark conditions during breeding is

- (1) Neontetra.
- (2) Tilapia.
- (3) Chinese carp.
- (4) Angel.
- (5) Guppy.

- Use the following diagram to answer the question 45.

45. The fishing gear shown in the above diagram is

- (1) purse seine.
- (2) gill net.
- (3) cast net.
- (4) trawler net.
- (5) beach seine



46. The aquatic species most suitable for the bottom layer of a freshwater polyculture pond is

- (1) prawn.
- (2) crab.
- (3) milk fish.
- (4) Silver carp.
- (5) koi carp.

47. The instrument used to determine the density of algae in an aquaculture pond is

- (1) EC meter.
- (2) pH meter.
- (3) Secchi disk.
- (4) microscope.
- (5) refractrometer.

48. The ornamental fish species that is mostly exported from Sri Lanka is

- (1) Platy.
- (2) Guppy.
- (3) Koi carp.
- (4) Gurami.
- (5) Swordtail.

49. After completing a harvest of an aquaculture pond, the essential task that should be performed is

- (1) aeration.
- (2) de-silting.
- (3) fertilizing.
- (4) pH adjustment.
- (5) drying.

50. Select the most appropriate statement about community-based organizations (CBOs) in Sri Lanka.

- (1) Samurdhi movement is a leading CBO.
- (2) A constitution is not a mandatory requirement for the functioning of a CBO.
- (3) The CBOs empower individuals to achieve tasks that cannot be achieved alone.
- (4) The CBOs are organized basically to deal with the environment conservation activities.
- (5) Finances of CBOs are governed by a treasurer appointed by the Department of Social Services.

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ජෛව සම්පත් තාක්ෂණවේදය II
 உயிர் வளத் தொழினுட்பவியல் II
Bio Resource Technology II

19 E II

පැය තුනයි
 மூன்று மணித்தியாலம்
Three hours

අමතර කියවීම් 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 you will answer and decide which of them you will prioritise.

Index No. :

Instructions:

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

Total

In Numbers	
In Letters	

Code Numbers

Marking Examiner 1.	
Marking Examiner 2.	
Marks Checked by	
Supervised by	

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

Do not write in this column

1. (A) State whether the following statements are **true** (✓) or **false** (X).

(1) Use of simple tools for land preparation is an example for soft technological application in agriculture. (.....)

(2) Innovations are soft technologies. (.....)

(B) Name **two** commonly used search engines in information technology.

(1)

(2)

(C) Major and minor nutrients available in a food may perform specific role in human nutrition. State a major food sources that could be consumed to fulfil the following nutrients requirements.

Nutrient	Major food source
Carbohydrates
Proteins
Lipids
Vitamin A

(D) State **four** changes that could be observed due to contamination of food.

(1)

(2)

(3)

(4)

(E) State **two** ways that the government policies directly influence the countries food security.

(1)

(2)

(F) State the important enzyme and the pigment present in root nodules that are essential for nitrogen fixation.

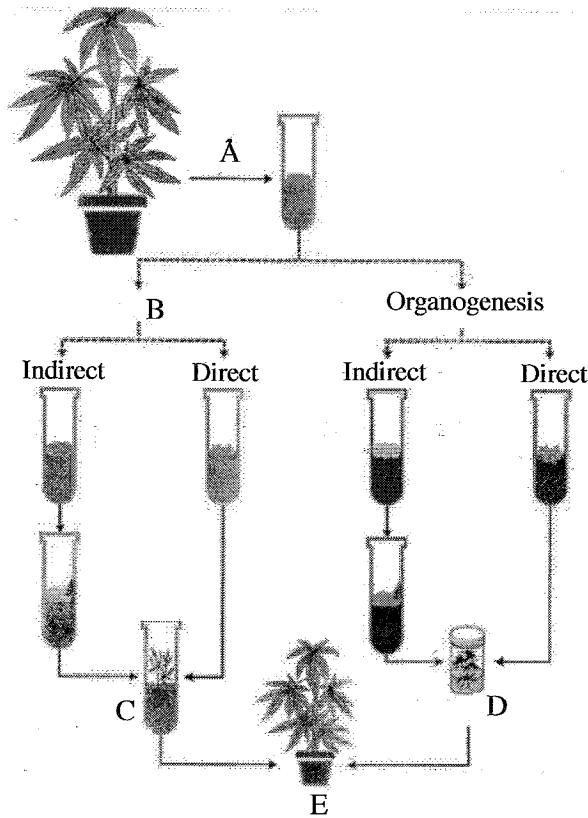
(1) Enzyme :

(2) Pigment :

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6800

(G) State the steps or techniques indicated as A, B, C and D in the diagram given below in tissue culture.



- (1) A
- (2) B
- (3) C
- (4) D

(H) State **two** reasons for conducting step E in tissue culture methods.

- (1)
- (2)

(I) List **three** methods of drying medicinal herbs.

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

Q. 1

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2. (A) Write an example each for a grain type, leaf type and rhizome type which can be included into a herbal porridge.

- (1) Grain type :
- (2) Leaf type :
- (3) Rhizome type :

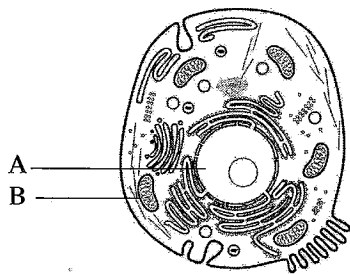
(B) Name two examples for the brakish-water ecosystems in Sri Lanka

- (1)
- (2)

(C) Write a common preservation method for minimizing the postharvest losses of the following agricultural products.

- (1) Black pepper
.....
.....
- (2) Goraka (*Garcinea*)
.....
.....
- (3) Fresh vegetables
.....
.....
- (4) Potato
.....
.....

(D) Name the Parts A and B of the diagram representing an animal cell and write the main function of each.



- (1) Name of part A :
- (2) Main function of part A :
- (3) Name of part B :
- (4) Main function of part B :

Do not write in this column

6800

(E) State **four** steps in developing a marketing plan of a business.

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

(F) Given below are some information regarding a plant nursery.

Value of the land	Rs. 5 000 000
Value of vehicles	Rs. 4 000 000
Value of the water pump and tools	Rs. 200 000
Value of potted plants	Rs. 500 000
Value of fertilizer in storage	Rs. 100 000
Bank loan to be paid in 4 years	Rs. 2 000 000
Utility bills payable	Rs. 50 000
Average annual income tax	Rs. 40 000

Calculate the following.

(1) Total value of fixed assets:

.....

.....

.....

.....

.....

.....

.....

.....

(2) Total value of current assets:

.....

.....

.....

.....

.....

.....

.....

.....

Do not write in this column

(3) Total value of current liabilities:

.....

.....

.....

.....

.....

.....

(4) Total value of non-current liabilities:

.....

.....

.....

.....

.....

.....

(G) State whether the following statements are true (✓) or false (X).

- (1) Success of an industry depends on the appropriate combination of soft and hard technologies (.....)
- (2) Sprinkler irrigation system is an example for hard technology, but the management of the irrigation system is an example for soft technology (.....)

(H) Name **one** material each to improve the pottassium and phosphorus content in the compost.

- (1) Potassium :
- (2) Phosphorous :

Q. 2
100

3.(A) Name the main beneficial substance in the following bio resources.

- (1) Compost :
- (2) Bee honey :

(B) Ex-situ conservation is one of the techniques used for biodiversity conservation. Name **four** methods used for the ex-situ conservation in the world.

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

Do not write in this column

(C) Montane forests are one of the important forest types available in Sri Lanka. Name **two** Montane Forests found in Sri Lanka

(1)

(2)

(D) List **two** advantages of multi-layer cropping system.

(1)

(2)

(E) Write **two** examples of bio resources that can be sustainably obtained from the sea.

(1)

(2)

(F) Write a popular destination for each of the following types of eco-tourism in Sri Lanka.

(1) Natural habitat adventure tourism :

(2) Cultural tourism :

(G) Timber industry is an important primary industry in Sri Lanka.

(i) Name **two** timber types which are exclusively originated from plantation agriculture.

(1)

(2)

(ii) State a law or regulation in Sri Lanka that is directly relevant to timber extraction from a forest.

.....

(iii) Write **three** advantages of timber preservation.

(1)

(2)

(3)

(H) State **two** non-timber forest resources that are legally restricted to obtain from natural forests.

(1)

(2)

(I) List **three** methods that can be used to extract various components from plant materials.

(1)

(2)

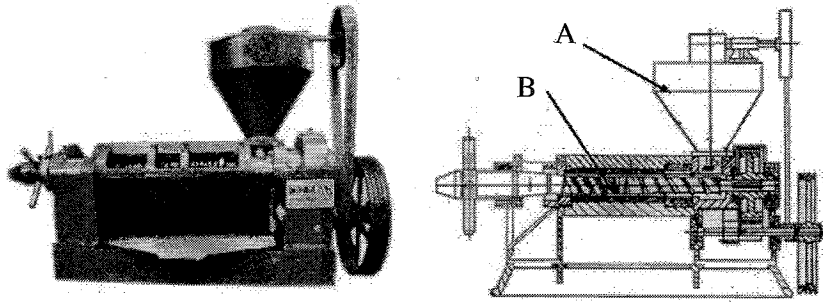
(3)

Q. 3

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4. (A) The Structure of a single screw oil press machine is given below. Name the parts A and B.



A -

B -

(B) Write **two** environmental issues related to continuous cropping in the dry zone of Sri Lanka.

(1)

(2)

(C) Write **two** essential characteristics of an ecological landscape.

(1)

(2)

(D) Name **two** strategies to minimize global warming

(1)

(2)

(E) Name the **two** main end-products of carbohydrate fermentation by yeast.

(1)

(2)

(F) Name **two** active fishing gears used in sea fishing

(1)

(2)

(G) List **three** different structures used in food fish culture

(1)

(2)

(3)

Do not write in this column

(H) List **three** types of natural water sources where aquaculture could be practiced.

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

(I) Name **three** parameters that should be monitored in an aquaculture pond in order to maintain water quality.

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

(J) State **two** undesirable effects that could be observed in an ornamental fish breeding unit, if proper selection of parent fish is neglected.

- (1)
.....
- (2)
.....

(K) Write **two** bioresource-related fields on which community-based organizations could be formed.

- (1)
.....
- (2)
.....

Q. 4
100

**

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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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 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, 2024
 கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2024
 General Certificate of Education (Adv. Level) Examination, 2024

ජෛව සම්පත් තාක්ෂණවේදය II
 உயிர் வளத் தொழினுட்பவியல் II
 Bio Resource Technology II

19 E II

Essay

- * Select two questions from each of the Parts B and C and answer four questions only.
 * Each question carries 150 marks.

Part B

5. (i) Write a brief essay on risk and danger of inappropriate use of technology in agriculture.
 (ii) Write the importance of a management information system for a business.
 (iii) Describe the impact of overnutrition on heart diseases.
 6. (i) Describe the damages that could happen due to food spoilage.
 (ii) Describe the major advantages and disadvantages of sexual propagation methods of plants.
 (iii) Describe the challenges for the sustainable existence of the aquatic ecosystems.
 7. (i) Explain the importance of agro-ecological regions in selecting crops for cultivation.
 (ii) Describe the factors affecting microbial activities in a biogas unit.
 (iii) Describe the factors to be considered in selecting a software for inventory keeping in a small rural industry.
- ### Part C
8. (i) Describe the uses of commercial forest plantations.
 (ii) Explain methods that can be used to manufacture liquid fertilizer from suitable plant sources.
 (iii) Describe the important factors to be considered in maintaining an ornamental fish breeding center.
 9. (i) Briefly describe the main steps that should be followed in planning an eco-tourism project.
 (ii) Briefly describe the important steps in chemical preservation of timber.
 (iii) Describe the retting process and state its negative impacts to the environment.
 10. (i) Providing appropriate examples, describe how to sustainably extract fisheries resources from coastal lagoons.
 (ii) Describe how the bio resources can be used to address the energy crisis in Sri Lanka..
 (iii) Briefly describe the main factors to be considered in designing a landscape plan for a school.

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