

MBA in AVCM Sem.-3 Examination

IIS-17

Gen Next Farming

November-2024

Time : 2-30 Hours]

[Max. Marks : 70

Instructions:

- Question no 1 to 4 carry 14 marks each, with both the questions mentioned in question 1 to 4 of 7 marks each.
- Question no 5 carries 14 marks (each question of 2 marks). Out of the 12 questions, attempt any seven.

Question 1

- i. Why are the cocoons boiled in sericulture? Discuss the chemical components involved. Discuss the importance of sericulture.
- ii. If seaweed farming can be called sustainable agriculture? Justify your answer.

OR

- i. What do you understand about safe food? How different nutrients play role in making the food safe?
- ii. Which natural process forms the scientific basis for hydroponics? Explain its types, and their advantages.

Question 2

- i. Write a note on dry flower business. Explain the processes involved and related concerns.
- ii. How biofuels are a sustainable option over conventional fuels? What are the four different generations of biofuel?

OR

- i. Why are millets considered climate smart and resource smart?
- ii. Explain the bioethanol production process through a neat flow chart. What is bioethanol acceptance from a consumer perspective?

Question 3

- i. Explain plant tissue culture. What importance does it hold in next generation farming?
- ii. Despite the onset of green revolution, why malnutrition could not be managed? What is being done to manage malnutrition?

OR

- i. Which property forms the scientific basis of tissue culture? Discuss the steps involved in plant tissue culture.
- ii. What is micro irrigation? Explain the positive and negative aspects of micro irrigation in Indian context.

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Question 4: Read the case below of Lake Erie, and answer the linked questions:

Lake Erie is the world's eleventh-largest lake in terms of surface area and is situated on the international boundary between Canada and the United States. It "supplies drinking water to 11 million [people, contains] 50% of the fish found in all of the Great Lakes combined," and is home to numerous aquatic species. It is the southernmost, warmest, and shallowest of the Great Lakes, making it the perfect breeding ground for eutrophication. Because of this, eutrophication is nothing new to Lake Erie, as concerns began in the 1960s and 1970s when increased phosphorus inputs from various human activities resulted in a notable degradation in water quality. In response, in 1972, phosphorus abatement programs were initiated as part of the Great Lakes Water Quality Agreement, which had quick success in Erie and reigned till 1987. But the declaration of the 'restoration' of Lake Erie quickly reversed, and algae populations have continued to increase and affect the lake since the mid-1990s and have caused excessive oxygen depletion. The current eutrophication of Lake Erie threatens all the services provided by this lake. Consequently, gaining a handle on this issue will not only help sustain the services currently offered by the lake but will also enhance the potential for future services.

- i. Define the process of Eutrophication and its consequences.
- ii. What kind of ecosystem services are provided by Lake Erie? Which of them can be considered as most important?

OR

- i. Why do you think the Phosphate abatement program of 1972 was started? What could be the possible reason/s of reversal of this program?
- ii. What is the relation between algal bloom, nutrient enrichment and dissolved oxygen in Lake Erie? Why does the paragraph mention that Lake Erie is the perfect breeding ground for eutrophication?

Question 5

Attempt any seven out of twelve.

5. Attempt any seven out of twelve questions mentioned below:

A. Which among the following is not a component of a balanced diet for humans?

- | | |
|--------------|-------------|
| i. Water | ii. Protein |
| iii. Vitamin | iv. Salt |

B. Shelf-life of any agricultural produce is determined by

- | | |
|--------------------------|-------------------------|
| i. Post harvest handling | ii. Pre harvest factors |
| iii. Only i | iv. Both i & ii |

C. Banana is a _____ fruit.

- | | |
|----------------|-----------------------|
| i. Tropical | ii. Sub-tropical |
| iii. Temperate | iv. None of the above |

D. Which among the following has the shortest life span in the honey-bee family?

- | | |
|------------|------------|
| v. Worker | vi. Queen |
| vii. Drone | viii. King |

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- E. What is fortification in agriculture?
- F. The country that holds highest share in floriculture is _____
- G. An example of 2nd generation biofuel is _____
- H. What is curing in onion post-harvest management?
- I. Which part of silkworm body forms silk?
- J. What is Pulsing treatment in floriculture?
- K. Why are Pune and Bengaluru considered most suitable regions for floriculture in India?
- L. Which physico-chemical process forms the basis of hydroponics?

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