0212N895

Candidate's Seat No :_____

MBA in AVCM Sem.-3 Examination

IIS-20

Animal Husbandry, Dairy, Fisheries

December-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. Write a note on following:
   a. Compound cattle feed
   b. Feed supplements for milching animals

ii. How does overfishing impacts coral reefs? Explain.

OR

i. What is the importance of coral reefs? How climate change threatens coral reefs?

ii. Explain the following:
   a. Bypass protein supplements for animals
   b. Bypass fat supplements for animals

Question 2

i. Explain D value, Z value, and F value in milk sterilization.

ii. Explain CIP in case of dairy industry? Why is it important?

OR

i. Explain quality management, financial management and human resource management of Amul. Why is the branding and advertisement of Amul unique?

ii. Define the following:
   a. Commercial sterility
   b. Homogenization
   c. Coral bleeching

Question 3

i. Why milk is chilled at 4°C, when bacterial growth factor is just 1 at 0°C? What is the impact of this 4°C at shelf life of milk?

ii. Explain how indigenous Pokkali Rice cultivation in Kerala promotes sustainable development?

OR

i. Why do you think the traditional Pokkali Farming of Kerala is a good example of a sustainable Social-Ecological model?

ii. Why is chilling milk essential within stipulated time after production? What we can infer from this for the dairy industry infrastructure preparation?

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

A robust assessment of water used in agriculture, including livestock production systems and supply chains, is critical to inform diversification and the development of productivity and sustainable food production systems. An analysis of water used and consumed in nine dairy milk processing plants spread across Punjab, India's leading dairy milk-producing state, shows that over the five years (2015–2019), the direct water use (DWU) was quantified at 3.31 L of groundwater per kg of milk processed. Only about 26% of the direct water used was consumed, including evaporative losses in various milk processing operations, while the remaining 74% was returned as effluent discharges. The average total water footprint (TWF), accounting for both direct and indirect water consumption, was quantified at 9.0 L of water per kg of milk processed. The majority share (~89%) of the total water footprint was contributed by the indirect water footprint associated with the consumption of electricity (energy) in dairy milk processing activities. The plant's milk processing capacity and processing products mix also affected significant seasonal and annual variations in the direct and indirect water footprints of dairy milk processing. The analysis also found an inverse relationship between the average total water footprint and the average monthly amount of milk processed in the study plants. Therefore, efforts to reduce the indirect water footprint (associated with energy consumption), the treatment and recycling of effluent discharges, and the optimization of milk processing capacity, the dairy processing product mix, and the locations of dairy processing plants are expected to help reduce the water footprint of dairy processing in the state.

i. Define water footprint? How can the indirect component of total water footprint of dairy industry be minimized? Elaborate.

ii. What do you understand by sustainable food production systems? How dairy industry can play important role in achieving the sustainable food production systems?

OR

i. What are the sources of evaporative losses in milk processing industry? Why do you think the indirect portion of total water footprint of dairy industry is more than that of direct portion of total water footprint?

ii. As per the study mentioned, an inverse relationship was found between the average total water footprint and the average monthly amount of milk processes in the study plant.

Question 5

Attempt any seven out of twelve.

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

A. What facilities must be provided at the milk collection center in a village?

i. Weighing machine ii. Fat checking machine
iii. Chilling unit iv. All the above

B. What kind of relation exists between temperature and D value

i. They are directly proportional ii. They are inversely proportional
iii. No relation exist iv. Cannot say

C. Brackish water fishes can tolerate salinity in the range of

i. 0.5-30 ppt
ii. <0.5 ppt
iii. >30 ppt
iv. None of the above

D. Cold water fishes can survive in the water having temperature range:

v. 5° C to 15°C
vi. 5° C to 20°C
vii. 10° C to 25°C
viii. 5° C to 25°C

E. The Acronym AMUL stands for .....
F. Give two examples of inbound logistics.
G. Give two examples of outbound logistics.
H. The biggest coral reef is found near which continent?
I. Which technology helps in keeping the ice creams shelf-life up to 365 days in chillers?
J. What do you understand by milk sterilization?
K. Which body parts of fish help in breathing and swimming respectively?
L. Define fisheries.

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