

U.G. 6th Semester Examination - 2022**FOOD & NUTRITION****[HONOURS]****Discipline Specific Elective (DSE)****Course Code : F&N-H-DSE-T-4A**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

2×5=10

- a) What is the most effective sterilization method?
- b) What is the Individual Quick Freezing?
- c) What are the methods of dehydration?
- d) What is the difference between spray drying and freeze drying?
- e) Fish is highly perishable. Why?
- f) What are Alkaline Fruits?
- g) What is the difference between cryopreservation and lyophilization?

[Turn Over]

h) What is the SI unit for radiation damage?

2. Answer any **two** questions: 5×2=10

- a) Mention 'Ropiness / Sliminess' that are frequently encountered on milk as a consequence of spoilage, along with the name of organism responsible for spoilage. 5
- b) What is the difference between pasteurization, UHT treatment and sterilization? 5
- c) What precautions would you take while thawing frozen foods and why? 5
- d) As a method, in what way is hot air-drying superior to sun-drying? 5

3. Answer any **two** questions: 10×2=20

- a) Briefly describe Bacterial Soft Rot. What is the role of Lactic acid bacteria (LAB) primarily associated with spoilage of processed meats? What are all the causes of seafood spoilage and intrinsic characteristics of fish that supports the causes? Give examples of Storage fungi when grain stored under moist conditions. 3+3+3+1=10
- b) How can water activity be reduced? What is adsorption isotherm? Explain briefly with a diagram. What are examples of perishable and

non-perishable foods? What precaution should be taken during storage of semi-perishable foods? $2\frac{1}{2}+2\frac{1}{2}+2+3=10$

- c) Which dryer is used for pureed raw ingredients that are dried at relatively low temperatures over rotating? Mention the mechanism of action. Mention three types of ionizing radiations approved to be used for food irradiation. Why is gamma radiation used for food irradiation? What is cold sterilization used for?

$$3+3+2+2=10$$

- d) Write short notes on (any **two**): $5\times 2=10$

- i) Spoilage of bread
 - ii) Factors affecting dehydration
 - iii) Types of freezers
 - iv) Advantages and disadvantages of pasteurized milk
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