WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 6th Semester Examination, 2022

FNTADSE05T-FOOD AND NUTRITION (DSE3/4)

DAIRY TECHNOLOGY

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.

Answer any *four* questions from the following   10×4 = 40

1. What is casein? Distinguish between acid casein and rennet casein. Write about the different uses of casein including industrial uses.   2+4+4

2. Write short note on: 5+5
    (a) Milk enzymes
    (b) Lactones and its use

3. What is meant by developed/real acidity in milk? Which pigments are present in milk? Comment on electrical conductivity and viscosity of milk. Define the term 'Whey'.   2+2+4+2

4. Milk has good buffering capacity — Why? Write short notes on refractive index and color of milk. List the benefits of lactose in milk and milk products.   2+5+3

5. "The susceptibility of unsaturated fatty acids to oxidation increases"— Justify the statement. What are the possible ways to control the degree of oxidation of milk fats? What is meant by the hydrolysis of fats? Define saponification value.   3+3+2+2

6. Why is the study of physical properties important in dairy science? Explain the structural hierarchy of milk proteins. List the thermal properties of milk.   3+5+2

7. Write the differences among milk proteins. Discuss heterogeneity of milk proteins. List the factors affecting melting point and boiling point of milk fat.   3+3+4

8. Mention four derivatives obtained on chemical modification of lactose. What is the role of lactose in milk? Write a short note on status of dairy industry in India.   3+3+4

9. Write a note on composition of milk fat and structure of milk fat globule.   5+5

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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