WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 6th Semester Examination, 2021

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 auto-oxidation? What are the factors affecting the auto-oxidation in milk?   2+3+2+3
    Write the names of two methods of measuring auto-oxidation of lipid. What are the
    preventive measures of auto-oxidation in milk?

2. Mention the ranges of following physical properties of milk: 1×10=10
    (i)   Freezing point
    (ii)   Boiling point
    (iii) Acidity
    (iv)   pH
    (v)   Surface tension
    (vi)   Viscosity
    (vii) Specific gravity
    (viii) Density
    (ix)   Refractive index and
    (x)   Water as component.

3. What is lactose? How does the alpha and beta forms of lactose differ? Give two   2+6+2
    examples of lactose free milk product.

4. Differentiate between: 4+3+3
    (i)   casein and serum protein
    (ii)   casein and whey protein.
    Discuss about the different types of casein. What are uses of casein?

5.   State the factors affecting melting point, boiling point and solubility of milk fat. What do you mean by the term 'fractionation of protein'?   6+4

6.   State the importance of enzymes alkaline phosphatase and lipase in milk. Discuss about the amphoteric nature of milk protein.   6+4

7.   Write short notes on: 5×2=10

   (i)   Status of Dairy industry in India

   (ii)   Significances of lactose in dairy industry.

8.   Write in brief about Saponification value, Iodine value, RM value, Polenske value, Peroxide value of milk fat.   2×5=10

   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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