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Department of Food Technology
School of Interdisciplinary Sciences and Technology
Jamia Hamdard, New Delhi-110062
END SEM EXAMINATION
June, 2022. M Tech 2nd SEM

2022
2nd Sem

Paper Title: Food Rheology and Microstructure; Paper Code: MFTD – 207

Time allotted: 3Hrs.

Max Marks: 75

Note: Write to the point. Before answering make sure you have mentioned the Question No.

Section-A (15 Marks, Attempt All)

- Q1. Define Plasticity and Elasticity. (2)
Q2. Why does the tongue stick to ice-popsicle when licked. (2)
Q3. Glass transition (1)
Q4. Rheopectic and Thixotropic fluids (2)
Q5. Maxwell model (2)
Q6. Time dependent and Time independent fluids (2)
Q7. Strain sweep (1)
Q8. Frequency sweep (1)
Q9. During the Industrial visit to Hamdard Lab, You might have noticed the Cone shape of the Sugar Tank. Why is it like that. (2)

Section- B (Attempt any 6) (5 Marks Each)

- Q10. Write a note on Classification of fluids on the basis of Food Rheology.
Q11. Discuss the importance of Food Rheology in Food Product development
Q12. Write down the Eq for the Following: Power Law, Bingham, Hershel-Bulkley, Newtonian and Gumminess. Denote the parameters.
Q13. Explain the flow behaviour of Mayonnaise, Ketchup, Tooth paste.
Q14. Write a note on SEM and TEM.
Q15. How does the Food Microstructure have an impact on Food Rheology
Q16. Discuss the impact of processing on Food Rheology. Give examples.
Q17. Discuss the impact of any polysaccharide on Food Rheology.

Section C (Attempt any 2) (15 Marks Each)

- Q18. Discuss LVE and Creep behaviour Recovery.
Q19. Write a note on Farinograph and Extensograph. Enlist their importance in Food Industry.
Q20. Write a note on Pasting properties. Explain the significance of each parameter.
Q21. Discuss TPA. Explain the significance of each parameter.

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