



Roll No.....

Department of Food Technology
School of Interdisciplinary Sciences and Technology
Jamia Hamdard, New Delhi-110062
END SEM EXAMINATION
June, 2022. B Tech 6th SEM

B.Tech,
6th Sem,
2022

Paper Title: Engineering Properties of Food Materials; Paper Code: BFTC – 602

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 Adhesiveness & Cohesiveness. (2)
- Q2. Aerodynamic properties (2)
- Q3. Glass transition (1)
- Q4. Thermal conductivity and Emissivity (2)
- Q5. Dielectric properties and Capacitance (2)
- Q6. Colour. (2)
- Q7. Physical states of matter. (2)
- Q8. Plastic and Elastic behavior. (2)

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

- Q9. The specific heat of water is higher than other food components. Discuss its advantages as a food technologist. Explain with 2 examples.
- Q10. Discuss the importance of engineering properties in Food Product Handling
- Q11. Derive the Equation for MC wet basis and Dry basis.
- Q12. A food material is having 25% moisture content and it is dried to 17%. Calculate the amount of water removed?
- Q13. Write a note on Thermal Conductivity, Specific Heat and Sensible Heat.
- Q14. A food product contains 15% protein, 7% fat, 18% carbohydrates, 1% minerals (salt), and remaining water. Estimate the specific heat of the product.
- Q15. Estimate the penetration depth of a chicken meat during processing in home type microwave oven. Chicken meat has a dielectric constant of 53.2 and dielectric loss factor of 18.1. Assume that dielectric properties are constant during heating.
- Q16. Discuss Moisture Sorption Isotherm.

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

- Q17. Write a note on Engineering Properties of Food materials.
- Q18. Discuss the Creep Behaviour in detail.
- Q19. Explain the following: Gelatinization, Retrogradation and Pasting Properties.

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