

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7315

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Unique Paper Code : 2203030017

Name of the Paper : Food Rheology

Name of the Course : **B.Sc. (H) Food Technology, NEP-UGCF**

Semester : VIII, DSE

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **four** questions.
3. Question **1** is compulsory.
4. **All** questions carry equal marks.

Q1. Name these:

(15)

1. Any one textural defect in butter.
2. An indigenous dairy product which includes casein and most of the whey proteins.
3. The study of the relationships between the stress exerted on a cheese and the resultant deformation (strain)
4. An instrument measures the force required to insert a probe to a given distance into the cheese.
5. This fluid is characterized by a viscosity which is independent of the shear rate at which it is measured.
6. These fluids lose viscosity under constant shear, when shearing stops, they regain their original viscosity but require time to do so.
7. These materials simultaneously exhibit elastic properties of an ideal solid and the flow properties of an ideal liquid.
8. The study of the deformation and flow of the raw materials, the intermediate products, and the final products of the food industry.
9. An instrument used to measure elastic modulus and tensile strength of bread dough.
10. An instrument used to measure compressibility, crispness and crunchability of biscuits and crackers.

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11. An empirical instrument used to measure the consistency of liquids and semisolids by testing their resistance to flow.
 12. A time measuring instrument designed to measure the hardness of biscuits, cookies and crackers.
 13. This is the most desired and critical organoleptic quality of meat
 14. This test is used to determine the toughness of meat.
 15. An instrument used to measure tenderness in meat.
- Q2 a. What are the essential elements of texture measuring devices? Discuss the approaches to Instrumental Measurement of Texture. (10)
- b. What is the model of cheese rheology? Discuss (5)
- Q3. Write Short Notes on: (any3) (15)
- a. Viscosity Modulus Quotient of Dough
 - b. Texture Profile Analysis of Meat
 - c. Basic rheological models
 - d. Plasticity of Fats
- Q4 a. Describe the texture of cheddar cheese and what factors affect its structure. (8)
- b. What are the compositional and textural attributes influencing meat quality? (7)
- Q5 a. Explain the three – phase concept of bread making. (10)
- b. Explain with help of illustration forces involved in texture measurement. (5)