

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7993

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Unique Paper Code : 2203030017

Name of the Paper : Food Rheology

Name of the Course : **B.Sc. (Hons.) 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. Question 1 is compulsory. Attempt **four** questions in all.

1. Answer the following : (15)

- (i) Define rheology.
- (ii) An example of a Newtonian fluid.
- (iii) State one difference between viscosity and viscoelasticity.
- (iv) Name an empirical test for texture measurement.
- (v) Name an instrument used to measure tenderness in meat.
- (vi) Name the wheat variety and percentage of proteins desirable for pasta making.
- (vii) State one rheological property of butter.
- (viii) Name an instrument used for cheese quality evaluation.
- (ix) State one compositional factor influencing meat texture.
- (x) What is meant by plasticity in fats?

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2. (a) Describe the rheological instruments used for measuring meat texture. (8)
- (b) Explain the three-phase concept of bread making and its rheological significance. (7)
3. Differentiate between the following : (5×3=15)
- (a) Fundamental vs. Empirical texture tests.
- (b) Newtonian vs. Non-Newtonian fluids in food systems.
- (c) Basic rheological models vs forces involved in texture measurement.
4. Write short notes on (**any three**) : (5×3=15)
- (a) Texture Profile Analysis
- (b) Viscosity Modulus Quotient in dough rheology
- (c) Rheological properties of butter
- (d) Instrumental methods for cheese quality measurement
5. (a) Discuss the compositional and textural attributes influencing meat quality. (8)
- (b) Explain the rheological models of cheese and factors affecting Cheddar cheese texture. (7)