



UNIVERSITY OF GHANA

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FACULTY OF ENGINEERING SCIENCES
BSc. SECOND SEMESTER EXAMINATIONS: 2013/2014

FPEN 314: RHEOLOGICAL AND SENSORY PROPERTIES OF FOODS (2 credits)

Answer a total of 4 questions. (Answer all questions in section A and any two from section B in the same answer booklet).

Time allowed: 2 hours

Section A (Answer all questions in this section)

1. Discuss the relationship between rheological and sensory properties of food. **20 marks**
2. Using suitable diagrams where appropriate, write short explanatory notes on each of the following:
 - i. Purkinje effect
 - ii. Deformation -stress
 - iii. Weissenberg effect
 - iv. Halo effect
 - v. Recoil phenomenon

20 marks

Section B (Answer any 2 questions)

3. a. The Triangle test method is a useful sensory evaluation tool. Describe its mode of application and explain how this test is conducted in the laboratory.
b. Outline 3 factors that affect the viscosity of food materials.
15 marks
4. a. In rheological measurement of food, various moduli are calculated.
 - i. Explain the importance of these values.
 - ii. Define three different moduli that apply to elastic foods.b. Explain the principle of the texture profile method used in sensory evaluation. Describe the general steps in this method.
15 marks
5. Outline the main sensory properties of food and describe how each of these is important in characterising food. **15 marks**

Examiner: Dr Maame Yaakwaah Blay