

End Semester Examinations - 2015-16 Even Semester - May 2016

14FP2016 Physical Properties of Food Materials

Set B

Time : 3 hrs
Total Marks: 100

1. i) Write a note on shear thinning fluids. (4)
 ii) Explain with a neat sketch the working of gas pycnometer. (8)
 iii) Derive Hagen-poiseuille equation. (8)

OR

2. i) Explain the different types of porosities available in food materials. (10)
- ii) How do you estimate surface area of a fruit? (5)
- iii) Write a note on angle of repose. (5)
3. a. Write a note on stress and strain. (5 marks)
 b. Give the application of penetration test. (5 marks)
 c. Describe the different types of instrumental tests carried out in measurement of texture of food. (10 marks)

OR

4. a. Give the application of snapping-Bending. (5 marks)
 b. Explain in detail about Farinograph and mixograph with neat sketches. (15 marks)
5. 1. How do you measure specific heat capacity of food material? (5)
 2. Explain in detail about measurement of thermal conductivity of food materials. (15)

OR

6. Explain the following properties of food materials

1. Specific heat capacity
2. Enthalpy
3. Thermal conductivity
4. Thermal diffusivity

7. Explain in brief about the following (5 x 4)

1. Henry's law
2. Rault's law
3. Elevation of boiling point
4. Depression of freezing point
5. Osmotic pressure

OR

8. i) Write a note on water activity. (5)
ii) Describe in detail about moisture sorption isotherms of foods. (15)
9. Describe about Dielectric properties of
- i) Sugars
 - ii) Starch
 - iii) Gum
 - iv) Proteins

Wishing you All the Best
