



KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Food Technology) 2021 Admission
II Semester Final Examination – September 2022

Pafe.1204

Food Chemistry of Macronutrients (2+1)

Marks: 50
Time: 2hours

I Fill in the blanks

(10 x 1=10)

1. Egg yolk is rich inand egg albumin is rich in
2. Moisture content of milk is %.
3. The pH at which protein get net neutral charge is known as
4. oil is consumed in largest quantity in world.
5. Starch is made up of and
6. The factor used for converting glucose to sucrose is
7. Peroxide value is a measure of..... of the oil.
8. Fatty acid + glycerol will give
9. Number of double bonds in relation to the amount of lipid present is known by
10. Browning is a chemical reaction that takes place between amino group and the

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Define emulsion and give suitable examples of emulsion based food products.
2. Briefly explain about the stability of emulsion in foods with suitable examples.
3. What are reducing sugar? Give their examples.
4. Explain about effects of oxidizing agents to nutritional quality of foods during processing.
5. Elaborate on the structural levels of protein.
6. What is enzymatic browning? Give examples of beneficial enzymatic browning.
7. Enlist types of enzymatic reactions of fats

III Answer ANY FIVE of the following

(5x4=20)

1. Explain briefly about resistant starch and its types.
2. Give classification of amino acids.
3. Explain in brief about the compositional changes occur to protein during extraction and fractionation process.
4. Explain about significance of the maillard reaction in food processing.
5. Write detailed note on autoxidation.
6. Write note on racemization.
7. Explain about the various functional properties of the protein.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Explain in detail about water activity and sorption isotherm.
2. What is rancidity? Discuss its types, factors affecting and prevention measures.
