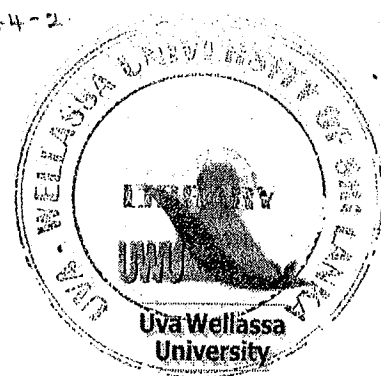


Uva Wellassa University
B.Sc. in Export Agriculture



End Semester Examination June/July 2009
Year III Semester II

Grain Product Technology and Value Addition EAG 344-2

Instructions

Answer **Four (04)** questions

No. of questions : Four (06)

No. of pages : Two (02)

Total marks allocated : 100%

Time : Two hour (2hr)

Index No:

Part I

Question 1

- I. What are the major steps of paddy post harvest technology?
- II. What are the major quality factors to be considered for good post harvest practices of paddy?
- III. What are adverse effects of high moisture content on quality of cereals during the storage?
- IV. What are the methods used to detect/ measure followings in cereals?
 - a) Moisture content
 - b) Level of impurities
 - c) Chaff content
 - d) Varietal admixture

Question 2

- I. Explain, Moisture content in cereals, subjected to change with the vapor pressure of surrounding environment.
- II. 1000 Kg of paddy at 18% moisture content was dried to get safe moisture content of 13%. Calculate the weight loss.
- III. 5000Kg of paddy at 10% moisture content was transported to wet zone and stored for over 3 months. Moisture content of paddy after 3 months of storage period was 13.5%. Calculate the weight gain.
- IV. 5000Kg of paddy at 12% moisture was parboiled and dried to get moisture 14%. Calculate the weight gain.

Question 3

Explain the following statements

- I. Poly unsaturated fatty acids are better for human health.
- II. Conjugated fatty acids are more unstable than the non conjugated fatty acids.
- III. Quality of fat is merely depending on quality of fatty acid.
- IV. About 90-92% of fatty acids in coconut oil are fully saturated. However, coconut oil is not a good source for fried products.

Question 4

- I. A rice miller, who wants to manufacture premium quality parboiled rice for export market has prepared some rice samples by his own technology and dispatch to the buyer in abroad. However, all rice samples were rejected by the buyer on the following grounds.
 - a) Color of rice not compatible with export quality
 - b) White bellies were appearing in the rice
 - c) Smell of rice samples was unacceptable.

Explain the miller, the short comings that have been happening in his own process and advice him how to make premium quality rice for the export market.

Question 5

Write short notes for followings

- a) Polyunsaturated fatty acids
- b) Conjugated fatty acid
- c) Role of emulsifiers in food industry
- d) Hydrogenation process of oil
- e) Winterization process of oil

Question 6

A baker who has decided to introduce a value added bread product by incorporation of red rice flour carried out an investigation and revealed that some bread producers in that area incorporate around 30% of rice flour into their product and get a good profit margin. Therefore he has decided to differentiate his product significantly, by incorporation at least **60% of rice flour while maintaining sensory profile** of his product similar to wheat bread.

Explain how to make rice bread with 60% rice flour to get similar sensory profile of wheat bread.