



The Open University of Sri Lanka
Faculty of Engineering Technology

Department of Agricultural & Plantation Engineering

Study Programme : Bachelor of Science Honours in Engineering
(Agricultural Engineering) Programme
Name of the Examination : Final Examination
**Course Code and Title : AGX4405 Post Harvest Engineering and
Technology I**
Academic Year : 2023/2024
Date : 1st March 2025
Time : 13.30 - 16.30 hrs

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SECTION 2: Answer any four (04) questions.

1. a) What is meant by Equilibrium Moisture Content?
(5 mark)
b) Explain Hysteresis effect of a moist object.
(5 marks)
c) How does grain moisture content affect the quality and shelf life of stored grains?
Briefly explain.
(15 marks)
2. a) Explain why is grain drying essential in post-harvest management?
(10 mark)
b) Explain the drying techniques used in solar drying and mechanical drying
equipment.
(15 marks)
3. How do the "Building Attributes" affect designing of structure of warehouse and
functionality?
(25 marks)
4. a) What factors influence the yield and quality of rice during the paddy processing
stages? Briefly explain.
(10 marks)

b) Explain the difference between raw rice and parboiled rice in terms of processing and nutritional value.

(10 marks)

5. a) Explain why is food safety management important in the food industry?

(10 marks)

b) Explain the 10 principles of GMP.

(15 marks)

6. Write short notes on following **three (3)** topics.

(25 marks)

- i) Importance of fumigants in grain storage
- ii) Climacteric & non-climacteric fruit
- iii) Modified Atmospheric Packaging (MAP).
- iv) Controlled Atmosphere (CA)
- v) Hysteresis effect