



Question Paper

Module 2:	Wheat and the Screenroom	
Date: 6 May 2015	Time: 09:30 – 11:30	Duration: 2 hours

You should have the following for this examination: **one answer book; pencil, pen and ruler.**

All questions carry equal marks. The maximum marks for each section within a question are shown. Answer **ALL EIGHT** questions, starting each new question (1-8) on a **new** page of the answer book.

1.
 - a) Sketch and label a diagram of a wheat spikelet. (5 marks)
 - b) Starting with the outermost layer and working inwards, list the components of the wheat grain, and state the percentage of total grain weight accounted for by each component. (5 marks)
 - c) Describe briefly the nucellar layer of the wheat grain. (2 marks)
2.
 - a) List SIX factors a farmer must consider when deciding on the types of wheat to grow. (6 marks)
 - b) List the FOUR main German wheat categories and describe their use in the UK milling industry. (5 marks)
 - c) State the tonnage of wheat that Germany typically exports annually. (1 mark)
3.
 - a) Sketch and label the main parts of a pneumatic suction plant. (5 marks)
 - b) Describe briefly the operation of a pneumatic suction plant. (5 marks)
 - c) List TWO advantages of a pneumatic suction plant. (2 marks)
4.
 - a) State the reasons why wheat is 'preliminary cleaned' on intake. (4 marks)
 - b) List FOUR machines usually placed in such a preliminary cleaning plant. (4 marks)
 - c) State FOUR reasons why it is essential to clean wheat before milling. (4 marks)

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5. a) List SIX impurities that may be found in wheat prior to milling. (3 marks)
- b) State the FIVE ways in which impurities may differ from wheat. (5 marks)
- c) State where magnets are usually placed in the screenroom flow. (2 marks)
- d) List the FOUR main types of magnet used. (2 marks)
6. Outline TWELVE operational inspections that should be carried out on the machinery and processes in order to maintain expected standards in the mill screenroom. (12 marks)
7. a) State the main purpose of conditioning wheat. (2 marks)
- b) List FIVE advantages that correct conditioning of wheat will give to the miller. (5 marks)
- c) List and describe briefly the THREE types of water usually found in grain. (4 marks)
- d) State by how much bakery water absorption will be increased by a 1% reduction in flour moisture. (1 mark)
8. a) List SEVEN practices that will help minimise bacteria levels. (7 marks)
- b) Describe briefly the term "FIFO" as applied to wheat conditioning bins. (1 mark)
- c) Explain FOUR reasons why pre-damping of wheat is now less common in flour mills. (4 marks)