



HIGHER SCHOOL CERTIFICATE EXAMINATION

1995
FOOD TECHNOLOGY
2/3 UNIT (COMMON)

*Time allowed—Three hours
(Plus 5 minutes' reading time)*

DIRECTIONS TO CANDIDATES

Section I (12 marks)

- Attempt ALL questions.
- Mark your answers in pencil on the Answer Sheet provided.

Section II (48 marks)

- Attempt THREE questions.
- Questions 13 and 14 are COMPULSORY.
- Attempt *EITHER* Question 15 *OR* Question 16.
- Answer the questions in the spaces provided in this paper.

Section III (40 marks)

- Attempt TWO questions, ONE from each Part.
- Answer each question in a *separate* Writing Booklet.
- You may ask for extra Writing Booklets if you need them.

SECTION I

(12 Marks)

Attempt ALL questions.

All questions are worth 1 mark each.

Select the alternative A, B, C, or D that best answers the question.

Mark your answers in pencil on the Answer Sheet provided.

1. Homogenization of milk is
- (A) a process that destroys micro-organisms.
 - (B) a chemical process that prevents fat from separating out.
 - (C) a physical process for reducing fat particle size to stabilize the emulsion.
 - (D) a physical process that reduces the fat concentration of the milk.

2. The following ingredients appear on a food label.

Ingredients: pasta (wheat flour); salt; flavour enhancers (621, 631); chicken meat; onion; sugar; lactose; chicken fat; leeks; flavours (garlic, spice extracts); yeast extract; chives; colour (100); anti-caking agent (544).

From the ingredient list it is apparent that the food product

- (A) is a viscous liquid.
 - (B) should be stored in a freezer.
 - (C) is a solid dehydrated product.
 - (D) is a free-flowing dehydrated product.
3. Glass packaging is gaining market share against other packaging technologies because it is
- (A) inert and recyclable.
 - (B) resealable and biodegradable.
 - (C) hygienic and easily transportable.
 - (D) cheaper and lighter than aluminium.
4. An example of an additive used to improve the nutritional value of a food product would be
- (A) lecithin used in margarine.
 - (B) humectants used in marshmallows.
 - (C) thiamine used in cereal products.
 - (D) antibiotics used in processed smallgoods.

5. The increased demand for 'single-serve' food products can be attributed to
- (A) increasing desire for health, fitness, and well-being.
 - (B) lifestyle changes that have led to independent eating patterns.
 - (C) an increase in the number of people on low-energy diets.
 - (D) more people eating pre-prepared meals at home.
6. Computerized manufacturing control systems may be used in large-scale food-processing plants to determine
- (A) ingredient quantity, temperature, and product size.
 - (B) product size, price structures, and temperature.
 - (C) product yield, packaging, and price structures.
 - (D) ingredient quantity, product viscosity, and marketing.
7. Plate heat exchangers are used in the processing of
- (A) pasta and cheese.
 - (B) milk and fruit juice.
 - (C) instant coffee and chocolate.
 - (D) cordial concentrate and biscuits.
8. The increase in the range of functional foods in the marketplace can be attributed to
- (A) improvements in the performance of functional ingredients in processed foods.
 - (B) improvements in automated food-production and processing systems.
 - (C) consumer demand for the reduction of additives in processed foods.
 - (D) increased consumer awareness of the importance of specific nutrients in health.
9. *Sous vide* is a method of
- (A) cooking food in a vacuum package.
 - (B) French food preparation.
 - (C) freezing food after dehydration.
 - (D) sterilizing food in a liquid form.

- 10.** Modified-atmosphere packaging of fruit and vegetables is effective for preservation because it
- (A) permits the rapid transfer of oxygen through the package.
 - (B) permits respiration to continue at a slower rate.
 - (C) reduces the rate of evaporation.
 - (D) reduces the moisture content within the package.
- 11.** Hazard Analysis and Critical Control Points (HACCP) is a systematic approach
- (A) used in food production to reduce costs.
 - (B) designed to maintain the sensory quality of food.
 - (C) for quality control that ensures the chemical safety of a food.
 - (D) used in food production as a means to ensure food safety.
- 12.** The major role of the Australian Quarantine Inspection Service (AQIS) is to
- (A) ensure the health, safety, and welfare of people in the food industry.
 - (B) make changes to food standards through a public consultation process.
 - (C) monitor all foods to be imported into and exported from Australia.
 - (D) investigate issues relating to deceptive practices within the food industry.

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STUDENT NUMBER

CENTRE NUMBER

SECTION II

(48 Marks)

Attempt **THREE** questions.

Questions 13 and 14 are **COMPULSORY**.

Attempt ***EITHER*** Question 15 ***OR*** Question 16.

Answer the questions in the spaces provided in this paper.

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QUESTION 13. Food Manufacture (16 marks)

Select a processed food product you have studied.

- (a) State the food product that you have chosen.

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- (b) Draw and label a flow diagram that identifies:

- (i) the raw materials used;
- (ii) the production stages in the manufacturing process.

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SECTION II**

STUDENT NUMBER

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Attempt *EITHER* Question 15 *OR* Question 16.

QUESTION 15. Food Marketing (16 marks)

Select TWO food products from the list below.

For each food product selected, design a marketing strategy.

- Australian native foods for export.
- Microwavable food products for elderly people.
- High-fibre, low-fat snack foods for children.

(a) Product

Strategy

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SECTION III

(40 Marks)

Attempt TWO questions, ONE from each Part.

Each question is worth 20 marks.

Answer each question in a *separate* Writing Booklet.

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PART A—CORE STRANDS

Attempt ONE question.

QUESTION 17. Food Manufacture

- (a) Outline the functions of food packaging.
- (b) Describe current developments in food-packaging materials and technologies.
- (c) Evaluate the impact of current government legislation on food packaging and labelling.

QUESTION 18. Food Manufacture

Evaluate the ways in which food manufacturers have responded to increased consumer awareness of ecological issues.

QUESTION 19. The Australian Food Industry

The following are regarded as key influences in the development of the Australian food industry.

Evaluate the importance of THREE of the following influences.

- Resource availability.
- Population change and diversity.
- Favourable manufacturing circumstances.
- Ecological issues.

QUESTION 20. The Australian Food Industry

‘The food-service industry in Australia responds to social, technological, and economic changes. At the same time, this industry is making a significant contribution to changes in the pattern of foods consumed in Australia.’

Discuss the issues raised in the statement. To what extent is the statement an accurate evaluation of the food-service industry?

PART B—OPTION STRANDS

Attempt ONE question.

QUESTION 21. Food Marketing

The types of policies and practices for pricing food products depend upon the nature of marketing.

Discuss this statement with reference to EACH of the following:

- a small corner store;
- a food-product wholesaler;
- a large supermarket chain.

QUESTION 22. Food Marketing

‘Food marketing in Australia is industry driven, not consumer driven.’

Discuss this statement in relation to food-marketing practices and ethical issues.

QUESTION 23. Food-Product Development

The development of a new food product is a complex process and many new products ‘fail’ in the marketplace.

- (a) Briefly explain the steps involved in developing a new food product.
- (b) Discuss FOUR factors in the development of new products that may affect their success.

QUESTION 24. Food-Product Development

‘The product-development process is often thought to be substantially a technical function. In reality, it spans the organization and requires inputs from general management through to all production and support functions.’

Discuss this statement using a food product you have studied.

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