



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Education

**Design and Technology:
Food Technology 1540**

FOOD1

Post Standardisation

Mark Scheme

2010 examination - January series

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- 1 Haemoglobin count in blood, transportation of oxygen around body, prevention of anaemia. (2 marks)
- 2 Dietary Reference Values – a set of standards, set in the UK by the Committee on Medical Aspects of Food Policy (COMA), of the amounts of energy and each of 33 nutrients needed to maintain good health: people differ in the amount they need. DRVs are provided as four values – EAR, RNI, LRNI, Safe Intake
Guidelines Daily Amounts – a guide to the amount of calories, fat, saturates, salt and sugar that make up a healthy diet: the amount will depend on age, gender and how physically active a person is. (2 marks)
- 3 Metabolism, Body Size, Age, Activity, Pregnancy (2 marks)
- 4 Milk and dairy produce, carrots, apricots, tomato, watercress etcetera. (2 marks)
- 5 Hydration, function of body process (2 marks)
- 6 Consumption exceeds output (2 marks)
- 7 Weak bones, teeth, nails. Contraction of muscles, nerve function, activity of enzymes, clotting of blood. Stunted growth in children, rickets in children, women with repeated pregnancies, osteoporosis, old people, osteomalacia in adults. (4 marks)

8 Flavour enhancer - increase the flavour of a food product
e.g. monosodium glutamate, salt

Antioxidants - prevention of the rancidity of fats
especially in baked goods and fried goods, e.g. crisps

(4 marks)

9 (a)

Responses will include well justified points relating to
current health issues and may include:

- Obesity
- Diabetes
- Heart Disease
- Dental Cares
- Salt Consumption
- Fat Consumption

Mark range 8-10: Responses will reflect a full discussion
with at least 5 plus justified points raised

Mark Range 4-7: Responses will include a discussion of
3-4 justified points or 8 plus mentioned superficially.

Mark Range 1-3: Responses will be superficial with little
or no justified points raised

Mark Range 0: No points worthy of credit

(10 marks)

9 (b)

Responses will include reference to social trends when producing food products with reference to:

- Social Trends
- Changes in Lifestyle
- Family composition
- Leisure time
- Recession / financial implications
- Consideration of how a food producer could lose money if they misunderstand current cultural factors

Mark range 8-10: Responses will reflect a full explanation with at least 5 plus justified points raised

Mark Range 4-7: Responses will include an explanation of 3-4 justified points or 8 plus mentioned superficially.

Mark Range 1-3: Responses will be superficial with little or no justified points raised

Mark Range 0: No points worthy of credit

(10 marks)

10 (a)

Responses will include well justified points relating to the nutritional requirements of vegetarians and may include:

- Protein - complementary action of low biological proteins, biological values
- Fats - use of vegetable sources only
- Carbohydrates - effect of excess inc. NSP
- Water soluble Vitamins - sources of B group other than meat
- Fat soluble vitamins - sources of retinol and D
- Calcium - working with vitamin D, sources
- Iron - non animal sources, working with Vitamin C
- Trace elements

Mark range 8-10: Responses will reflect a full discussion with at least 5 plus justified points raised

Mark Range 4-7: Responses will include a discussion of 3-4 justified points or 8 plus mentioned superficially.

Mark Range 1-3: Responses will be superficial with little or no justified points raised

Mark Range 0: No points worthy of credit

(10 marks)

10 (b) Explain the importance of different communication methods used in food product development.

Different methods of communication used in food product development will be described in full with reference to:

- Design Ideas
- Design Proposals
- Target Audience

e.g. Presentation (Spec), mood boards / image boards, annotated sketches, digital photography, nutritional modelling, working drawings

Each method must have clear explanation of its importance in food product development

Mark range 8-10: Responses will reflect a full discussion with at least 5 plus justified points raised

Mark Range 4-7: Responses will include a discussion of 3-4 justified points or 8 plus mentioned superficially.

Mark Range 1-3: Responses will be superficial with little or no justified points raised

Mark Range 0: No points worthy of credit

(10 marks)

11 (a)

Responses will refer to different types of Pulses and their nutritional qualities:

- Addition of NSP / Dietary fibre / changing texture
- fruits, nuts, oats bran, skins
- Specific examples of improving texture
- Colour, smell, sight
- Addition of spices/herbs to replace flavour (fat).

(20 marks)

11 (b)

Responses will make reference to different types of contamination with reference to ways of preventing it in foods:

- Physical
- Chemical
- Biological

Mark range 8-10: Responses will reflect a full discussion with at least 5 plus justified points raised. Relevant reference will be made to specific food products.

Mark Range 4-7: Responses will include a discussion of 3-4 justified points or 8 plus mentioned superficially. Reference will be made to food products to support some of the points made.

Mark Range 1-3: Responses will be superficial with little or no justified points raised. References to food products are limited, absent or incorrect.

Mark Range 0: No points worthy of credit

(10 marks)

11 (c)

Responses will make reference to current legislation including:

- Food Safety Act 1990
- Food Hygiene Regulations 1995

Reference will clearly made to the importance of food hygiene legislation to the consumer.

Mark range 8-10: Responses will reflect a full discussion with at least 5 plus justified points raised

Mark Range 4-7: Responses will include a discussion of 3-4 justified points or 8 plus mentioned superficially.

Mark Range 1-3: Responses will be superficial with little or no justified points raised

Mark Range 0: No points worthy of credit

(10 marks)