

KS4

Food Preparation and Nutrition

Exam Details:

Exam Board: AQA

Exam consists of one paper:

Paper 1: 50% (100marks)

(1hr 45mins)



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|--|--|--|--|--|
| Protein | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |
| Fats | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |
| Carbohydrates | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |
| Factors which may influence food choice | I must know and understand | | | |
| | Physical activity level | | | |
| | Celebration | | | |
| | Cost of food | | | |
| | Preferences | | | |
| | Enjoyment | | | |
| | Food availability | | | |
| | Healthy eating | | | |
| | Income | | | |
| | Lifestyle | | | |
| | Seasonality | | | |
| | Time of day | | | |
| | Time to prepare and cook | | | |
| | Be able to cost recipes and make modifications | | | |
| Food safety in preparing, cooking and serving food | I must know and understand | | | |
| | Personal hygiene | | | |
| | Clean work surfaces | | | |
| | Separate raw and cooked foods | | | |
| | Correct cooking times | | | |
| | Temperature control | | | |
| | Care with high risk foods | | | |
| | Use of food temperature probes | | | |

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| Foods from British tradition and 2 different cuisines | I must know and understand | | | |
| | Distinctive features and characteristics of cooking | | | |
| | Equipment and cooking methods used | | | |
| | Eating patterns | | | |
| | Presentation styles | | | |
| | Traditional and modern variations of recipes | | | |

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| Sensory evaluation | I must know and understand | | | |
| | Preference tests: paired preference, hedonic | | | |
| | Discrimination tests: triangle | | | |
| | Grading tests: ranking, rating and profiling | | | |
| | How to set up a taste panel | | | |
| | Controlled conditions for sensory testing | | | |
| | Evaluating how senses guide | | | |
| | Evaluating a wide range of ingredients and food from Britain and other countries | | | |
| | How to test sensory qualities of a wide range of foods | | | |

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| Food production: Primary and secondary stages of processing and production and how processing affects the sensory and nutritional properties of ingredients | I must know and understand | | | |
| | Primary processing related to the rearing, fishing, growing, harvesting and cleaning of the raw food material | | | |
| | Secondary processing relating to how the raw primary ingredients are processed to produce a food product | | | |
| | Loss of vitamins through heating and drying | | | |
| | The effect of heating and drying on the sensory characteristics of milk | | | |
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| Technological developments to support better health and food | I must know and understand | | | |
| | Cholesterol lowering of spreads | | | |
| | Health benefits of fortification | | | |
| | Thiamin, niacin, calcium and iron added to white bread | | | |
| | Folic acid and iron added to breakfast cereals | | | |
| | Vitamins A and D added to fats and low fat spreads | | | |
| | Positive and negative aspects of additives | | | |
| | Positive and negative aspects of Genetically Modified foods | | | |

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| Function and chemical properties of Fats and Oils: Shortening Aeration Plasticity Emulsification | I must know and understand | | | |
| | Scientific principles underlying these processes when preparing and cooking food | | | |
| | The working characteristics, functional and chemical properties of proteins | | | |

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| Function and chemical properties of fruit and vegetables: Enzymic browning Oxidation | I must know and understand | | | |
| | Scientific principles underlying these processes when preparing and cooking food | | | |
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| Function and chemical properties of raising agents: Chemical Mechanical Steam | I must know and understand | | | |
| | Scientific principles underlying these processes when preparing and cooking food | | | |
| | The working characteristics, functional and chemical properties of proteins | | | |

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|---|------------------------------------|--|--|--|
| Vitamins – Fat soluble • A • D • E • K | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |

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|---|--|--|--|--|
| Function and chemical properties of Carbohydrates: Gelatinisation Dextrinisation Caramelisation | I must know and understand | | | |
| | Scientific principles underlying these processes when preparing and cooking food | | | |
| | The working characteristics, functional and chemical properties of proteins | | | |

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| Vitamins – Water soluble <ul style="list-style-type: none"> • B • C | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |
| | How preparation and cooking affects nutritional properties of food. | | | |
| Vitamins – antioxidant functions <ul style="list-style-type: none"> • A • C • E | I must know and understand | | | |
| | The role of antioxidants in protecting cells from damage. | | | |

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| Food choices related to religion, culture, ethical and moral beliefs and medical conditions | I must know and understand | | | |
| | Food choice linked to religious teachings | | | |
| | Food choice linked to ethical and moral beliefs | | | |
| | Food choice linked to food intolerances | | | |

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| How food labelling and marketing influences food choice. | I must know and understand | | | |
| | Mandatory information included on packaging | | | |
| | Non mandatory information | | | |
| | How to interpret labelling | | | |
| | How marketing can influence choice | | | |

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|--|---|--|--|--|
| Food choices related to religion, culture, ethical and moral beliefs and medical conditions | I must know and understand | | | |
| | Food choice linked to religious teachings | | | |
| | Food choice linked to ethical and moral beliefs | | | |
| | Food choice linked to food intolerances | | | |

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|---|--|--|--|--|
| Minerals | I must know and understand | | | |
| | The functions | | | |
| | Main sources | | | |
| | Effects of deficiency (not enough) | | | |
| | Effects of excess (too much) | | | |
| | Related dietary reference values | | | |
| Water | I must know and understand | | | |
| | Function of water to eliminate waste from body | | | |
| | Function of water to cool the body | | | |
| | Function of water to aid digestion | | | |
| | How water is lost from the body | | | |
| | Occasions when extra fluids are needed | | | |
| Where and how ingredients are grown, reared and caught | I must know and understand | | | |
| | Grown ingredients: fruit, vegetables, cereals | | | |
| | Reared ingredients: meat and poultry | | | |
| | Caught ingredients: fish | | | |
| | Organic and conventional farming | | | |
| | Free range production | | | |
| | Intensive farming | | | |
| | Sustainable fishing | | | |
| | Local produced foods | | | |
| | Seasonal foods | | | |
| Environmental issues associated with food | I must know and understand | | | |
| | Seasonal foods | | | |
| | Sustainability eg fishing | | | |
| | Transportation | | | |
| | Organic foods | | | |
| | Reasons for buying food locally | | | |
| | Food waste in the home/production/retailers | | | |
| | Environment issues relating to packaging | | | |
| | Carbon footprint | | | |
| Impact of food on local and global markets and communities | I must know and understand | | | |
| | Climate change | | | |
| | Global warming | | | |
| | Sustainability of food sources | | | |
| | Insufficient land for growing food | | | |
| | Availability of food | | | |
| | Fairtrade | | | |
| | Problems of drought and flooding | | | |
| | Genetically Modified foods | | | |
| | Food waste | | | |

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| Making informed choices for a varied and healthy diet | I must know and understand | | | |
| | Guidelines for healthy eating – Eatwell Guide | | | |
| | Nutritional needs at different life stages | | | |
| | How to plan a balanced meal for specific dietary needs | | | |
| Energy needs | I must know and understand | | | |
| | Factors which affect basal metabolic rate | | | |
| | The percentage of recommended energy sources | | | |
| | Protein 15% | | | |
| | Fat 35% | | | |
| | Carbohydrates 50% | | | |
| How to carry out nutritional analysis | I must know and understand | | | |
| | How to use current nutritional information and data to calculate energy and nutritional values | | | |
| | Food tables | | | |
| | Nutritional analysis software | | | |
| Diet, nutrition and health | I must know and understand | | | |
| | Obesity | | | |
| | Cardiovascular disease | | | |
| | High blood pressure | | | |
| | Bone health | | | |
| | Dental health | | | |
| | Iron deficiency anaemia | | | |
| | Type 2 diabetes | | | |

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|--|---|--|--|--|
| Foods from British tradition and 2 different cuisines | I must know and understand | | | |
| | Distinctive features and characteristics of cooking | | | |
| | Equipment and cooking methods used | | | |
| | Eating patterns | | | |
| | Presentation styles | | | |
| | Traditional and modern variations of recipes | | | |
| Microorganisms and enzymes | I must know and understand | | | |
| | Growth conditions for microorganisms | | | |
| | Control of microorganisms growth | | | |
| | High risk foods | | | |
| | Control of enzymic action | | | |
| Signs of food spoilage | I must know and understand | | | |
| | Enzytic action | | | |
| | Mould growth | | | |
| | Yeast action on fruits | | | |
| Microorganisms in the production of food | I must know and understand | | | |
| | Mould in the production of blue cheese | | | |
| | Yeasts in bread | | | |
| | Bacteria in yoghurt and cheese production | | | |
| Bacterial contamination | I must know and understand | | | |
| | From other contaminated foods | | | |
| | Work surfaces and equipment | | | |
| | The people cooking | | | |
| | Pests | | | |
| | Waste food and rubbish | | | |
| | Campylobacter | | | |
| | E-coli | | | |
| | Salmonella | | | |
| | Listeria | | | |
| | Staphylococcus aureus | | | |
| Buying and storing food | I must know and understand | | | |
| | Temperature control | | | |
| | Ambient storage | | | |
| | Temperature danger zone | | | |
| | Correct use of fridges and freezers | | | |
| | Date marks | | | |
| | "Best before" and "Use by" dates | | | |
| | Covering foods | | | |

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| Why is food cooked and how heat is transferred | I must know and understand | | | |
| | Make food safe to eat | | | |
| | Develop flavours | | | |
| | Improve texture | | | |
| | Improve shelf life | | | |
| | Give variety to diet | | | |
| | Improve colour , flavour, texture and smell | | | |
| | Conduction | | | |
| | Convection | | | |
| | Radiation | | | |

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| Selecting appropriate cooking methods | I must know and understand | | | |
| | Select appropriate cooking and preparation methods | | | |
| | Can conserve or modify nutritive value | | | |
| | Know how cooking and preparation affect appearance, colour, flavour, texture, smell and palatability | | | |
| Function and chemical properties of Protein: Protein denaturation Protein coagulation Gluten formation Foam formation | I must know and understand | | | |
| | Scientific principles underlying these processes when preparing and cooking food | | | |
| | The working characteristics, functional and chemical properties of proteins | | | |