**Summative assessment (p.93)**

**Question 1**

Tabulate examples of high-risk foods and low-risk foods.

**Answer**

**Examples of high-risk foods are:**

- Meat, fish and poultry and any product containing meat, fish or poultry (pies and sausages).
- Milk cream and any other dairy products (yoghurt and cheese).
- Products which are egg based (custard and mayonnaise).
- Stocks, soups and sauces.

**Foods which are not as high risk are:**

- Foods which are high in acidity (pickles and tomatoes).
- Foods with a high salt content (cured meats and olives).
- Foods with a high sugar concentration (preserves and syrups).
- Fatty foods.
- Dry/starchy foods (flour and rice).

**Question 2**

The food chain has been scrambled. Rewrite the chain in the correct order.

- Incorrect storage procedures and temperatures will allow organisms to grow and multiply.
- Food-poisoning organisms enter the food service facility.
- Bacteria are transferred to food at the point of preparation or during storage.
- Food is consumed.
- Food poisoning is the result of incorrect food handling.
- The bacteria are supported by the medium.

**Answer**

The food-poisoning chain

- Food-poisoning organisms enter the food service facility.
- Bacteria are transferred to food at the point of preparation or during storage.
- The bacteria are supported by the medium.
- Incorrect storage procedures and temperatures will allow organisms to grow and multiply.
- Food is consumed.
- Food poisoning is the result of incorrect food handling.

**Question 3**

Name the different types of organisms which exist and where they can be found.

**Answer**

- Bacteria – Bacteria live almost anywhere imaginable, from inside your intestines to the bottom of the ocean floor. Bacteria are moved by air and water currents, and on any surface, such as clothing, hands, or any object.
- Fungi – Fungi can be found in almost any environment, indoors or outdoors, and growth is stimulated by warm and humid conditions.
- Protozoa – These organisms live in water-based surroundings, such as ponds, lakes and the sea.
- Microscopic algae – Algae are found where sunlight and water are available.
- Viruses – Viruses invade the cells of both plants and animals.

**Question 4**
Once we spot mould anywhere in the kitchen, we get frustrated. Where can we benefit from mould growing?

**Answer**
- Mould can be used in the production of antibiotics. Probably the best-known use of mould is in the medical industry, where it helps produce such antibiotics as penicillin.
- Mould is important to the food industry. Mould can be used in the production of cheese. Penicillium mould is injected into blue cheese during its production to give it its unique flavour
- Moulds help break down dead material found in soil, foods, plants and other items, while some yeasts can help with baking and beer production.

**Question 5**
Salmonella can cause a person to become very ill. What steps can be taken to prevent contracting this bacterium?

**Answer**
**Prevention:**
- Make sure to wash your hands thoroughly after each visit to the bathroom.
- Make sure all equipment used is clean.
- Rinse fruit and vegetables before use.
- Store raw and cooked foods separately.
- Store perishable foods as cold as possible.
- Defrost food in the correct manner. Thaw food by placing it into a refrigerator overnight.
- Bacteria are destroyed though the cooking process.

**Question 6**
Name the food types that are easily contaminated by micro-organisms.

**Answer**
Meat and poultry
Gelatine
Fish and fish products
Milk and milk products
Eggs and egg products
Fruit and vegetables
Rice

**Question 7**
Micro-organisms can be used in many different ways to our advantage. Explain why this statement is true by giving concrete examples as to where this will be applied.

**Answer**
- ferment useful chemicals (ethanol, acetone, etc.)
- produce certain foodstuffs (wine, cheese, yoghurt, bread, etc.)
- destroy wastes (sewage, oil spills)
- prevent disease
- produce antibiotics used to treat disease (e.g. penicillin)