2.2.1 Proteins

1. The protein found in wheat flour is called gluten. True/False
2. Proteins are made of large molecules, the individual units are known as ascorbic acids. True/False
3. An example of coagulation is the use of eggs to coat breadcrumbs on the outside of fish cakes. True/False
4. Proteins coagulate. Which term best describes this process?
   a) Gelling
   b) Drying
   c) Setting
   d) Kneading
5. Which two proteins are contained in gluten?
   a) Lactalbumin and gelatin.
   b) Glutenin and gliadin.
   c) Coagulation and elastin.
   d) Collagen and lecithin.
6. Denaturation of protein is caused by a number of reasons. Match the cause to the example.

   Mechanical agitation         Swiss roll
   Heat                           Marinating meat
   Whisking eggs and sugar       Whisking egg whites
   Acids                         Boiling an egg
2.2.2 Carbohydrates

1. For gelatinisation to occur heat is needed. True/False

2. The process by which a sauce thickens is called caramelisation. True/False

3. Which of the following is an example of dextrinisation?
   a) Apples going brown when cut and exposed to the air.
   b) Scrambled eggs going tough and rubbery when cooked.
   c) Egg whites making a foam when whisked.
   d) Bread turning brown to make toast.

4. Match the correct temperature to the stages in the process of gelatinisation.

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60°C</td>
<td>Starch granules are swollen so that they burst, releasing starch molecules into the liquid.</td>
</tr>
<tr>
<td>80°C</td>
<td>Sauce becomes completely thickened.</td>
</tr>
<tr>
<td>100°C</td>
<td>Starch molecules start to absorb the liquid which causes them to swell.</td>
</tr>
</tbody>
</table>

5. Match the correct term to the definition.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caramelisation</td>
<td>The swelling of starch granules when cooked with a liquid, which then burst and release starch.</td>
</tr>
<tr>
<td>Dextrinisation</td>
<td>Breaking up of sugar molecules when they are heated, which results in a change of colour, flavour and texture.</td>
</tr>
<tr>
<td>Gelatinisation</td>
<td>When foods containing starch are cooked by dry heat and go brown.</td>
</tr>
</tbody>
</table>
Quiz: Fats and oils

1. Plasticity is the ability to be shaped and spread with light pressure.   True/False

2. Oils are solid and fats are liquid at room temperature.   True/False

3. Which of the following is not a working property of fats?
   a) Flakiness in pastry.
   b) Preventing lumps in sauces.
   c) Providing a concentrated source of energy.
   d) Giving a short melt-in-the-mouth texture to pastries and biscuits.

4. Match the function of the fat/oil to an example of its use in food preparation.

<table>
<thead>
<tr>
<th>Plasticity</th>
<th>Mayonnaise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortening</td>
<td>Whisked sponge</td>
</tr>
<tr>
<td>Aeration</td>
<td>Sausage rolls</td>
</tr>
<tr>
<td>Emulsification</td>
<td>All-in-one chocolate cake with chocolate frosting</td>
</tr>
</tbody>
</table>
2.2.4 Raising agents

1. Cream of tartar is an acid. True/False
2. Yeast is an example of a chemical raising agent. True/False
3. Bicarbonate of soda is an alkali. True/False
4. Which of these is not associated with raising agents?
   a) Air
   b) Carbon monoxide
   c) Carbon dioxide
   d) Steam
5. Which type of flour contains baking powder?
   a) Strong plain flour.
   b) Cornflour.
   c) Self-raising flour.
   d) Wholemeal plain flour.
6. In order to grow, yeast needs which of the following?
   a) Food, warmth, moisture and time.
   b) Food, air, high temperatures and time.
   c) Food, air, cold temperatures and alkali.
   d) Warmth, food, carbon dioxide and acid.
7. Which of these is not an example of a mechanical raising agent?
   a) Folding air into a mixture, e.g. when making cakes.
   b) Whisking eggs, e.g. when making a Swiss roll.
   c) Sieving flour into a mixture, e.g. when making pastry.
   d) Using yeast to make bread rise.
8. Match the term related to raising agents to the example.

<table>
<thead>
<tr>
<th>Chemical raising agent</th>
<th>Mechanical raising agent</th>
<th>Biological raising agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of baking powder or bicarbonate of soda.</td>
<td>Using yeast to produce carbon dioxide.</td>
<td>Whisking, sieving, creaming or rubbing in a mixture.</td>
</tr>
</tbody>
</table>