TT12 Functional and chemical properties of food: *Fats and oils*

1. i)   Saturated fats are liquid at room temperature. **(1 mark)**

   TRUE/FALSE

   ii) All animal-derived fats are solid at room temperature. **(1 mark)**

   TRUE/FALSE

   iii) Plasticity of fats means that all fats become oils at the same temperature. **(1 mark)**

   TRUE/FALSE

   iv) The fatty acids in fats are hydrophobic. **(1 mark)**

   TRUE/FALSE

2. Fill in the gaps in the text below, using the keywords below. Note that each keyword
   may be used once, more than once or not at all. **(5 marks)**

oil	vinegar	water	egg	thiamine
separating	curdling	emulsifier	stabilise	ascorbic acid
thawing	lecithin	salt	thicken	water-in-oil
oil-in-water	mayonnaise	milk	ketchup	

   i)   Emulsification is a process of mixing _____ and _____ together.

   ii) To _____ the mixture and prevent it from _____ , an _____ can be used.

   iii) One of them is _____ , which naturally occurs in egg yolk.

   iv) For this reason, egg yolk is added to _____ , which is an example of _____ emulsion.

   v)   An example of _____ emulsion is _____ .

3. What does it mean that fat is immiscible? **(1 mark)**

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4. Suggest **two** reasons for which fat is creamed with sugar (aerated) when making a sponge cake. **(2 marks)**

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5. Explain how the chemical structure of fats affects their physical state. **(4 marks)**

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6. i)   Describe the process of shortening. **(4 marks)**

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    ii) Name one kind of pastry which uses shortening. **(1 mark)**

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7. The cook prepared two kinds of pastry: one was made with plain flour and lard,
    and the other was made with plain flour and butter. State which one of the pastries
    will be crumblier and explain why. **(2 marks)**

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Total marks _____ /23