

RSPH Level 4 Award in Nutrition
RSPH Level 4 Certificate in Nutrition for Institutional Food Services
RSPH Level 4 Certificate in Nutrition for Physical Activity and Sport

Unit NUT 4.1: Principles of Nutrition (Reference No. J/504/4245)

Marking Guidelines

Task 1

- a) Outline the appropriate UK healthy eating guidelines for an adult.
- b) With reference to these guidelines, explain how they might differ from those of an adult for **TWO** of the following life-stages:

Baby, toddler, child, adolescent, pregnant female, breast-feeding female, elderly adult.

Your answer should include

- 1.1 reference to the requirements for energy, hydration and key nutrients.
- 1.2 information for both males and females, with an explanation for any variation between them for the same life stage (if appropriate).
- 1.3 macro and micronutrients and their functions. (For micronutrients you should select **THREE** minerals and **THREE** vitamins for discussion).
- 1.4 the importance of energy balance and how this can be achieved.

You should assume that each of your subjects has an 'average' BMI for that life stage. Appropriate units must be used throughout.

In selecting which minerals and vitamins to include in your account you should consider selecting micronutrients for which dietary requirements will vary for the different life stages that you have chosen.

- a. *Learners need to provide an outline of UK healthy eating guidelines. A table or graphics* can be used but the learner will still need to include a summary of the key messages in the guidance. Only UK information is accepted.*
- b. *Learners need to choose two life stages and explain how they are different, in comparison to an adult.*
It is recommended that learners select two fully discrete life stages – such as adolescent and pregnant female, rather than baby and toddler – so that they can demonstrate a broad range of knowledge of life-stages. This is not essential but is likely to support learners in meeting Point 1.2 (below).

Learners should explain the role of various nutrients for each of the two life stages.

Learners should also include how healthy eating guidelines for adults, are different to those of their two selected life stages.

1.1 Learners should give clear and equal attention to each of the requirements for energy, hydration and the key nutrients for the two chosen life stages. A table can be used to display the content but explanation will still be required to clarify why these requirements are relevant to each life-stage.*

1.2 Learners should include information about how the guidelines vary between males and females. If there is a difference between male and female requirements at the same life-stage, it must be explained.

1.3 Learners can include a table to display relevant content for micro and macronutrients. But this content must also be explained so that relevant knowledge is safely demonstrated.*

The dietary sources of protein, fats and carbohydrates must be identified; as well as for the selected three minerals AND three vitamins.

The physiological functions of protein, fats and carbohydrates must be explained; as well as for the selected three minerals AND three vitamins.

1.4 Learners should ensure that they compare energy expenditure AND consumption, with a clear explanation of what energy balance means and how it can be achieved. Learners must define relevant acronyms, such as BMI.

Task 2.

This task requires you to read through the scenario and associated food diary shown below and answer the related questions.

Sharna

Sharna is a lady who has three young children; one of eight years, one of four years and a baby of six months. She is married but her husband works away from home on construction sites during the week and only returns home every other weekend.

The family are Muslims.

They live in Bedford in a housing association high rise building and only moved to Bedford a few days before the birth of their youngest child. Sharna does not have use of a car as her husband needs it for work.

The children eat more or less the same as the mother; the baby is being weaned onto solid foods from packets and jars. Sharna buys all her food from the local shops during the week, but when her husband returns from work every other weekend she uses the car to go to the supermarket.

Only the eldest child attends school. The family spends most of the day watching TV. They rarely go out. Sharna wears full traditional dress but does not veil her face.

Sharna's eldest child recently announced that she no longer wanted to eat meat. She had seen a TV documentary about animal welfare and had talked about this with her classmates at school.

Her husband had an attack of gastroenteritis a month ago, and following this has exhibited the symptoms of lactose intolerance. He has arranged an appointment with his doctor for further tests.

Food diary

Day	Breakfast	Mid morning	Lunch	Mid afternoon	Dinner	After dinner
Monday	sugared cereal plus full fat milk, weak tea*	bag of crisps, cup of cola	Sandwich** with cheese and slices of banana, weak tea	weak tea and chocolate biscuits	fish fingers and oven chips, diet yoghurt, weak tea	bag of crisps, weak tea
After the children have gone to bed Sharna eats a chocolate bar and drinks cola						
Tuesday	sugared cereal plus full fat milk, weak tea	chocolate buttons, cup of cola	sandwich with humous and sliced apple, weak tea	weak tea and raisins	tomato pasta, diet fromage frais, weak tea	ice cream, weak tea
After the children have gone to bed Sharna eats a bag of peanuts and drinks weak tea						
Wednesday	sugared cereal plus full fat milk, weak tea	bag of crisps, apple and chocolate biscuit	Egg and mayonnaise sandwich, weak tea	weak tea and plain biscuits	Spaghetti and meat balls in tomato sauce, weak tea	ice cream and tinned fruit, weak tea
After the children have gone to bed Sharna drinks weak tea						
Thursday	sugared cereal plus full fat milk, weak tea	bag of dried apricots, cup of cola	beans on toast, weak tea	weak tea and plain biscuits	mild lamb curry with rice (low calorie), weak tea	'Pringles' and chocolate biscuit. Weak tea
After the children have gone to bed Sharna drinks weak tea						

Friday	sugared cereal plus full fat milk, weak tea	Banana, cup of cola	egg on toast, chocolate mousse, weak tea	orange segments plus biscuits and cup of milk	fish and chips from shop, piece of cheese cake weak tea	bar of chocolate and weak tea
After the children have gone to bed Sharna and husband drink weak tea						
Saturday	scrambled eggs on toast, weak tea	cup of cola	fast food meal of fish burger, French fries and cola	weak tea	mild fish curry with rice and naan bread, weak tea	
After the children have gone to bed Sharna and her husband eat corn chips and dip and drink weak tea						
Sunday	scrambled eggs on toast, weak tea	cup of weak tea	sandwich of soft cheese and tomatoes, weak tea	weak tea	pizza with vegetables, weak tea	
After the children have gone to bed her husband leaves to travel to his work and Sharna goes to bed early						

* Tea includes milk and one spoonful of sugar

** Sandwiches are made with white bread and margarine.

2.1 With reference to the food diary, identify and explain any risks to health associated with this diet for Sharna and her family.

2.1 *Learners must make reference to the food diary to illustrate the issues with the featured diet.*

Learners should ensure that they are both identifying and explaining risks to health of the diet.

Learners should identify that the diet:

- *has few fresh vegetables, fruit and complex carbohydrates*
- *is high in calories*
- *is not a healthy balance*

Learners should provide a clear explanation of the link between diet and disease.

It is preferable that cancer, dental caries, obesity, under nutrition, CKD, Type 2 diabetes and hypertension are included but Assessors can use their judgement in considering if this topic is adequately covered in answers.

2.2 For each health risk identified, explain how the diet can be modified in order to reduce this risk.

2.2 *Learners must make reference to the food diary to explain how various elements of the diet should be changed, with specific examples. The overall objective is for the learner to provide alternatives that would constitute a healthy balanced diet. Learners must suggest substitutions that are reasonable, practicable and achievable.*

2.3 Describe how the personal circumstances of Sharna and her family could have an effect / influence on their diet.

2.3 *Learners should make reference to how Sharna appears to be isolated and has limited opportunities – for various reasons – to easily purchase fresh food. Learners are expected to include:*

- *how child care responsibilities are limiting Sharna's ability to travel for shopping*
- *how the lack of networking with others can be detrimental to wellbeing.*
- *that vitamin D deficiency is possible due to being effectively house bound.*
- *the implications of a low level of activity and metabolism*
- *issues with poor dietary habits and lifestyle choices*

2.4. Sharna is concerned that her eldest child wants to become vegetarian but does not want to prevent her from doing so. How can she adapt the meals that she provides for the rest of her family to enable her daughter to switch to a meat-free diet?

2.4. *Learners need to provide definitive examples of vegetarian menu alternatives that are also nutritionally balanced. Although this question is about the vegetarian diet, this is an ideal opportunity for a learner to demonstrate the unique issue of the vegan diet and lack of B12.*

2.5 Sharna is also worried about her husband's health. What changes will she need to make to her family's diet if the early diagnosis of lactose intolerance is

confirmed?

2.5 *Learners should suggest alternatives to the weekend menu that are dairy free but still nutritionally balanced.*

2.6 What additional advice (e.g. lifestyle) could be given to Sharna and her family that would have a positive effect on their diet and health? Any advice given should not contravene their beliefs.

2.6 *Answers should include increases in fruit, vegetables and dietary fibre, as well as producing the baby's food from home cooked meals and healthier snacks*

2.7 Based on your answers to questions 2.4 – 2.6 construct a menu for 1 day that all of Sharna's family can enjoy.

2.7 *The objective is for the learner to provide alternatives that would constitute a healthy balanced diet for one day. Learners must suggest a menu that is reasonable, practicable and achievable.*

Task 3

Obtain **THREE** food labels or packets and **ONE** advertisement for food. The food products should be readily available in the UK.

For each label or advertisement, you should determine how well it conforms to UK legal requirements, and assess the reliability and validity of any claims made for the product by completing the following:

a) For the food labels:

List the legal requirements for food labels and explain how each label complies with these requirements.

You should cover the following elements of the food labels:

- ingredients list
- nutritional information,
- front of package labelling,
- health claims,
- nutrition claims,
- allergy information,
- use by/best before dates
- storage instructions.

(NB It is not necessary to cover all of these elements for each of the labels but you should ensure that between the three food labels all of the above list is covered).

How accurate, valid and reliable are any claims made on the labels?

Do any of the labels contain information that is prohibited, or lack mandatory information?

b) For the advertisement:

- Who is the advert aimed at?
 - If the advert is aimed at a specific group of people are there any restrictions on advertising to this group?
 - How accurate are any health and nutrition claims for the advertised product?
 - Are there any ingredients in the product which may be at too high a level for a healthy diet?
- a. *The three selected food labels need to be for products that are easily available in the UK. Assessing the label of a product that is not designed for the UK market, against UK legislation, is not valid.*

Learners need to outline the legal requirements for food labels and then explain how well each of their selected food labels complies with the law.

Learners should demonstrate that they have thoroughly assessed each label for accuracy, validity and reliability.

Health claims, nutrition claims, ingredient lists, front of package labelling, allergy information, storage instructions, nutritional information and expiry dates (with differentiation between 'use by and 'best before') need to be covered but not necessarily for each label.

Learners should also identify if any of the labels are missing mandatory information or is displaying any prohibited information.

- b. *The selected food advertisement needs to be for a product that is easily available in the UK. Judging an advertisement for a product that is not designed for the UK market, against UK legislation, is not valid.*

Learners need to outline the legal requirements for food advertising and then explain how well their selected advertisement complies with the law.

Learners should demonstrate that they have thoroughly assessed the advertisement for validity and reliability, as well as accuracy of health and nutrition claims for the advertised product. .

Learners should discuss the target market for the advertisement in their answer and if there are any restrictions when advertising to specific groups.

Learners should also make reference to any ingredients in the product that are unsuitable for a healthy diet, due to their high level of content.

**Any tables or graphics from external sources must be explicitly referenced.*

When carrying out this assignment, candidates should ensure they refer to the learning outcomes, assessment criteria and content contained in the qualification specification.

Coverage of Learning Outcome and Assessment Criteria

The table below shows how the assignment provides candidates with opportunities to provide evidence for each of the assessment criteria for this unit. This list is not exhaustive; candidates may provide evidence for meeting the assessment criteria from other parts of their completed assignment.

Assessment Criterion	Possible Evidence
1.1 Identify dietary sources of macro and micro nutrients	Task 1; 1.3 Task 2; 2.7
1.2 Explain the physiological functions of macro and micro nutrients	Task 1; 1.3
2.1 Explain the components of energy consumption and expenditure	Task 1; 1.4
2.2 Explain the energy, hydration and nutrient requirements at different lifetime stages	Task 1; 1.1 & 1.2
2.3 Outline factors that affect energy, nutrient and hydration requirements of individuals in relation to social, cultural, religious and ethnic groups	Task 2; 2.3, 2.4, 2.5
3.1 Describe the relationship between diet and disease	Task 2; 2.1, 2.2, 2.5, 2.6
3.2 Describe possible dietary influences for different groups	Task 2; 2.3, 2.4
4.1 Assess how food labels conform to legislative requirements	Task 3
4.2 Outline the legal requirements in relation to health claims and nutrition claims	Task 3