

# **Tutorial Letter 101/3/2018**

**Nutritional Care**

**NUT2601**

**Semesters 1 and 2**

**Department of Life and Consumer Sciences**

This tutorial letter contains important information  
about your module.

BARCODE

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## 1 INTRODUCTION

Dear Student

Welcome as a student of the Nutritional Care module! I hope that you will enjoy this module and put an effort into learning more about the nutritional care process including dietary assessment, dietary analysis and diet planning. I wish you success in your academic endeavours.

### 1.1 Tutorial matter

A tutorial letter is our way of communicating with you about teaching, learning and assessment. Therefore you will receive a number of tutorial letters during the year.

This Tutorial Letter 101 contains important information about the scheme of work, resources and assignments for this module. We urge you to read it carefully and to keep it available when working through the study material, preparing for the assignments or examination and addressing questions to your lecturers. You should receive the following tutorial matter for this module specifically:

- Tutorial Letter 101 (this document)
- Tutorial Letter 301
- Tutorial Letter 302 (Glossary)
- Study Guide 1
- Study Guide 2: addenda to study guide 1
- the prescribed book: *Condensed food composition tables for South Africa* (see section 4 in this tutorial letter)

Work through both of your study guides from beginning to end as well as the sections referred to in your prescribed books to make sure you are prepared for the examination. *Tutorial Letter 301* will guide you on how to search for information and how to write academically.

**Please note that some of the tutorial matter mentioned above may not be available when you register. Tutorial matter that is not available when you register will be posted to you as soon as possible, but is also available on myUnisa.**

## 2 PURPOSE AND OUTCOMES

### 2.1 Purpose

The purpose of the module is to enable you, the student, to gain knowledge of basic nutrition to explain the physiological processes involved in the digestive system and indicate how this influences nutritional status. You should also be able to use dietary standards for diet planning, assessment and analysis to evaluate the nutritional status of individuals and groups




### 2.2 Outcomes

- explain the physiological processes involved in the digestion and absorption of nutrients and indicate how this will influence nutritional status
- evaluate the nutritional status of an individual or a group by means of applicable methods
- use dietary standards to determine nutrient requirements and to compile a diet plan
- obtain a diet history by making use of various data collection methods
- analyse and assess a diet history and make the necessary recommendations

### 3 LECTURER(S) AND CONTACT DETAILS

#### 3.1 Lecturer(s)



Your lecturer for NUT2601 is:  
Mrs Marna Smuts and Mrs Elize Symington

 My telephone number	+27 11 471 3438
 My postal address	NUT2601 Lecturer Department of Life and Consumer Sciences Unisa Science Campus, Calabash building Private Bag X6 Florida 1710
 myUnisa webpage	Go to: <a href="https://my.unisa.ac.za/portal/">https://my.unisa.ac.za/portal/</a> Log in and click on: NUT2601-18-S1 (for semester 1) or NUT2601-18-S2 (for semester 2)

Follow the procedures in the *My Studies @ Unisa* brochure to become a user of myUnisa. On the left-hand side grey bar of the myUnisa site, you will find the option “**Course Contact**”. You will be able to e-mail me via the Course Contact option. Please have your study material and student number handy when you contact me with queries concerning the course.

The easiest way to contact lecturers is by e-mail. If you have sent an e-mail and do not receive a response within a few days, it is possible that the lecturer has not received your e-mail message, either because of computer server problems or because the lecturer is away on leave or attending a conference. In that case resend the e-mail; if you still do not get a reply, try another means of communication (see more details below). You are always more than welcome to contact us telephonically or to pay me a visit on the Florida campus.

#### 3.2 Department

 Secretary's telephone number	+2711 471 2230 / 2292
 Departmental fax number	+2711 471 2796
College administrator's e-mail address	<a href="mailto:CAESenquiries@unisa.ac.za">CAESenquiries@unisa.ac.za</a>

#### 3.3 University

**Unisa website:** <http://www.unisa.ac.za> & <http://mobi.unisa.ac.za>  
**myUnisa:** <https://my.unisa.ac.za/portal> & <https://my.unisa.ac.za/portal/pda>  
**E-mail:** [info@unisa.ac.za](mailto:info@unisa.ac.za)  
**SMS:** 32695 (only for students in South Africa)  
**Fax:** 012 429 4150

### 4 RESOURCES

Check the study material that you have received against the inventory letter. You should have received all the items listed in the inventory, unless there is a statement like “out of stock” or “not available”. If any item is missing, follow the instructions on the back of the inventory letter without delay. Also see the booklet entitled *My Studies @ Unisa* (which you received with your tutorial matter).

**PLEASE NOTE:** Your lecturers cannot help you with missing study material. Please send an SMS to Despatch at 43579 or e-mail them at [despatch@unisa.ac.za](mailto:despatch@unisa.ac.za).

#### 4.1 Prescribed books

##### a. *Normal and clinical nutrition*

Rolfes, SR., Pinna, K & Whitney, E  
10<sup>th</sup> edition – international edition, 2013  
Publishers: Mason, OH: Wadsworth, Cengage Learning  
ISBN-13: 9781285458762  
ISBN-10: 1285458761

Prescribed books can be obtained from the University's official booksellers. Please refer to the list of official booksellers and their addresses in *my Studies @ Unisa*. If you have difficulty locating your book at these booksellers, please contact the Prescribed Book Section at telephone 012 429-4152 or email [vospresc@unisa.ac.za](mailto:vospresc@unisa.ac.za).

##### b. *Condensed food composition tables for South Africa*

Wolmarans, P, Danster, N, Dalton, A, Rossouw, K Schönfeldt H. 2010. 1<sup>st</sup> edition  
Medical Research Council (MRC). ISBN: 1-919809-63-5

**NOTE:** this book is approved as **part of the study package** – do not purchase the book because you will receive it with your study material.

##### c. *Dietary reference Intakes*

Nutrition Information Centre of the University of Stellenbosch. 2003.

- **Please note that you need to download this yourself from the following website, please copy and paste this link into your browser:**

<http://www.sun.ac.za/english/faculty/healthsciences/nicus/how-to-eat-correctly/nutrients/dri>

“Dietary Reference Intakes” will appear as you scroll down on the website page for each macro- and micronutrient. Please note that this is the DRI page and not a booklet, as indicated in your study guide.

#### 4.2 Recommended books

There are no recommended books for this module.

#### 4.3 Electronic reserves (e-reserves)

There are no e-Reserves for this module.

#### 4.4 Library services and resources information

For brief information, go to [www.unisa.ac.za/brochures/studies](http://www.unisa.ac.za/brochures/studies)

For detailed information, go to the Unisa website at <http://www.unisa.ac.za/> and click on **Library**.

For research support and services of personal librarians, go to <http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=7102>.

The library has compiled a number of library guides:

- finding recommended reading in the print collection and e-reserves – <http://libguides.unisa.ac.za/request/undergrad>
- requesting material – <http://libguides.unisa.ac.za/request/request>
- postgraduate information services – <http://libguides.unisa.ac.za/request/postgrad>
- finding, obtaining and using library resources and tools to assist in doing research – [http://libguides.unisa.ac.za/Research\\_Skills](http://libguides.unisa.ac.za/Research_Skills)
- how to contact the library/finding us on social media/frequently asked questions – <http://libguides.unisa.ac.za/ask>

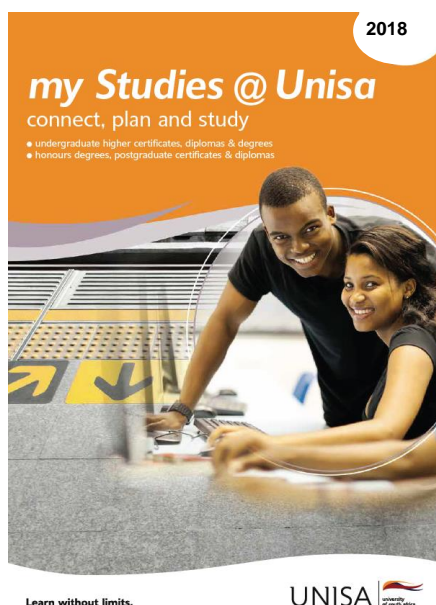
## 5 STUDENT SUPPORT SERVICES

The DCCAD supports prospective and registered students before, during and after their Unisa studies. There are resources on their website, and also printed booklets available to assist you with:

- career advice and how to develop your employability skills
- study skills
- academic literacy (reading, writing and quantitative skills)
- assignment submission and exam preparation.

### Contact details

Website	<a href="http://www.unisa.ac.za/counselling">http://www.unisa.ac.za/counselling</a>
E-mail for Counselling	<a href="mailto:counselling@unisa.ac.za">counselling@unisa.ac.za</a>
E-mail for Academic Literacy	<a href="mailto:acalit@unisa.ac.za">acalit@unisa.ac.za</a>



Further important information appears in your *My Studies @ Unisa* brochure.

Make sure you received the 2018 version of the *My Studies @ Unisa* brochure. If you do not have it, make sure to download it from the Unisa website ([www.unisa.ac.za](http://www.unisa.ac.za)) at the STUDY section and click on *Download Brochures*.

## 6 STUDY PLAN

Find below a detailed study plan for this module. Please take note that this only gives you **guidance** and you can still work at your own pace. By following the plan for a semester, you can

be assured that your assignments will reach us on time and that you will be prepared for the exam. Use the *My Studies @ Unisa* brochure for **general time management** and planning skills. The Study and Assessment Plan for 2018 is as follows:

### Nutritional Care: NUT2601

#### Study and Assessment Plan 2018 for semesters 1 and 2

Week	Date	Comments
1	S1: 26 Jan S2: 13 Jul	<ul style="list-style-type: none"> <li>○ Make sure you have received all the study material.</li> <li>○ Read through Tutorial Letter 101 (this one) carefully.</li> <li>○ Register on <a href="http://www.my.unisa.ac.za">www.my.unisa.ac.za</a>.</li> <li>○ Read through the general Introduction in the study guide carefully.</li> <li>○ Browse through your Tutorial Letter 301 – note important information on your assignments.</li> <li>○ Start working on Theme 1: Read study unit 1 thoroughly.</li> </ul>
2	S1: 5 Feb S2: 16 Jul	<ul style="list-style-type: none"> <li>○ Read through Assignments 01 and 02.</li> <li>○ Work on Theme 1: read study unit 2 &amp; 3 thoroughly.</li> </ul>
3	S1: 12 Feb S2: 23 Jul	<ul style="list-style-type: none"> <li>○ Work on Assignment 01.</li> <li>○ Work on Theme 1: read study unit 4 thoroughly.</li> <li>○ If ordinary post: <b>post Assignment 01</b> by 11<sup>th</sup> February or 3<sup>th</sup> August.</li> </ul>
4	S1: 16 Feb S2: 10 Aug	<ul style="list-style-type: none"> <li>○ If myUnisa: submit <b>Assignment 01</b> via <a href="http://my.unisa.ac.za">my.unisa.ac.za</a></li> </ul>
5	S1: 19 Feb S2: 13 Aug	<ul style="list-style-type: none"> <li>○ Work on Theme 2: read study units 5 &amp; 6 thoroughly</li> <li>○ Work on Assignment 02.</li> <li>○ If ordinary post: <b>post Assignment 02</b> by the 2<sup>nd</sup> March or 17<sup>th</sup> August</li> </ul>
6	S1: 9 Mar S2: 24 Aug	<ul style="list-style-type: none"> <li>○ If myUnisa: submit <b>Assignment 02</b> via <a href="http://my.unisa.ac.za">my.unisa.ac.za</a></li> </ul>
7	S1: 12 Mar S2: 3 Sep	<ul style="list-style-type: none"> <li>○ Prepare for Assignments 03 and 04.</li> <li>○ Work on Theme 3: read study unit 7 &amp; 8 thoroughly</li> <li>○ Start working on Assignment 03</li> </ul>
8	S1: 19 Mar S2: 10 Sep	<ul style="list-style-type: none"> <li>○ Work on Theme 4: read study unit 9 &amp; 10 thoroughly</li> <li>○ Start working on Assignment 04 and complete assignment 3.</li> <li>○ If ordinary post: <b>post Assignment 03</b> by the 23<sup>th</sup> March or 1<sup>th</sup> September</li> </ul>
9	S1: 30 Mar S2: 7 Sep	<ul style="list-style-type: none"> <li>○ If myUnisa: submit <b>Assignment 03</b> via <a href="http://my.unisa.ac.za">my.unisa.ac.za</a></li> </ul>
10	S1: 2 Apr S2: 13 Sep	<ul style="list-style-type: none"> <li>○ Scan through all the study units to prepare for finalizing Assignment 04</li> <li>○ Complete Assignment 04.</li> <li>○ If ordinary post: <b>post Assignment 04</b> by the 5<sup>th</sup> April or 17<sup>th</sup> September</li> </ul>
11	S1: 13 Apr S2: 21 Sep	<ul style="list-style-type: none"> <li>○ If myUnisa: submit <b>Assignment 04</b> via <a href="http://my.unisa.ac.za">my.unisa.ac.za</a></li> </ul>
12	S1: 23 Apr S2: 8 Oct	<ul style="list-style-type: none"> <li>○ Revise Theme 1</li> <li>○ Work through the returned Assignment 01 and correct any mistakes Revise Theme 2.</li> <li>○ Work through the returned Assignment 02 and correct any mistakes.</li> </ul>
13	S1: 7 May S2: 15 Oct	<ul style="list-style-type: none"> <li>○ Revise Theme 3.</li> <li>○ Work through the returned Assignment 03 and correct any mistakes.</li> <li>○ Work through the FAQs posted on myUnisa in preparation for the exam.</li> </ul>
14	S1: 14 May S2: 22 Oct	<ul style="list-style-type: none"> <li>○ Revise Theme 3.</li> <li>○ Start working through previous exam papers (see myUnisa).</li> </ul>
15	S1: 21 May S2: 29 Oct	<ul style="list-style-type: none"> <li>○ Revise Theme 4.</li> <li>○ Work through Tutorial letter 201</li> <li>○ Work through the returned Assignment 04 and correct any mistakes.</li> <li>○ Prepare for the exams.</li> </ul>
<b>Examination Cycle Starts</b>		



## 7 PRACTICAL WORK AND WORK-INTEGRATED LEARNING

There are no practical sessions for this module.

## 8 ASSESSMENT

### 8.1 Assessment plan

Assignments are seen as part of the learning process for this module. As you do the assignment, you should analyse and revise the study material provided to you, consult other resources, discuss the work with fellow students or do research on a specific concept in order for you to be actively engaged in your learning and to increase your skill set.

There are **four** assignments for NUT2601 for each semester. You will find the assignments, which you need to complete for the semester that you are registered for, in this tutorial letter for

- **semester 1** (January to June) in **Addendum A** for students registered in semester 1 and
- **semester 2** (July to December) in **Addendum B** for students registered in semester 2

It is compulsory to submit at least one assignment in order to be awarded examination admission.

**Important:** Note that **all assignments contribute to your final mark**. Thus, even though not all of the assignments are compulsory, they are all equally important to assure the successful completion of this module. If you do not submit all of the assignments, your year mark will be very low and you might fail the module, even if you pass the exam.

Therefore please familiarise yourself with the assessment plan below and note the percentage distribution of each assignment, contributing to the final mark.

### Summary of YOUR responsibilities for NUT2601:

- Study each study unit
- Send comments on study package and assessment to lecturer
- Complete assignments and submit in time
- Prepare for examination
- Write exams

#### Formative assessment:

Assignment 1 (15% of year mark)  
 Assignment 2 (15% of year mark)  
 Assignment 3 (15% of year mark)  
 Assignment 4 (55% of year mark)

Year mark (30% of final mark)

#### Summative assessment:

Examination

Exam mark (70% of final mark)

Final mark

## 8.2 Assignment numbers

### 8.2.1 General assignment numbers

Each assignment in this module is numbered consecutively, starting from 01. Only Arabic numerals are used, for example: Assignment 01, 02, 03, and 04.

### 8.2.2 Unique assignment numbers

Please supply the unique assignment numbers provided in the table below in the assigned places.

Assignment Number	Semester 1	Semester 2
	Unique Number	Unique Number
01	805581	801008
02	761578	690494
03	707219	668046
04	693837	792580

### 8.3 Assignment due dates

The following due dates have to be adhered to for submission of assignments:

Assignment Number	Semester 1	Semester 2
	Due Date	Due Date
01	16 February 2018	10 August 2018
02	9 March 2018	24 August 2018
03	29 March 2018	7 September 2018
04	13 April 2018	21 September 2018

### 8.4 Submission of assignments

Note that for Assignments 01 to 03 (the multiple-choice assignments), you have three options on how to submit these assignments:

1. on completed hard copy mark-reading sheets by post **or**
2. by completing the Mobile MCQ submission **or**
3. by completing the MCQs electronically via *myUnisa*.

For detailed information on submitting your assignments, please refer to the *My Studies @ Unisa* brochure, which you received with your study package. To submit an assignment via *myUnisa*:

- Go to *myUnisa*.
- Log in with your student number and password.
- Select the module.
- Click on “Assignments” in the menu on the left-hand side of the screen.
- Click on the assignment number you wish to submit.
- Follow the instructions.

### 8.5 The assignments

As mentioned you will have **four** assignments to complete for this module (for each semester). Assignments for **semester 1** (for students registered for semester 1 - January to June) will be in **Addendum A** and **semester 2** (for students registered in semester 2 - July to December) in **Addendum B**.

Unisa is implementing onscreen marking of assignments to help you receive quicker feedback on your assignments. This will not be the case for all your modules, however, most modules from the Department of Life and Consumer Sciences can be marked this way.


**Please submit your assignment as a PDF document and not in another format (e.g. MS Word or Excel).** By doing this you will ease the marking process and ensure we receive the document you finalised. Furthermore, there is the likelihood that unintended alterations could be made to a Word document once submitted, however with a PDF document no changes can be made to content (it will only receive marks and comments).

It is very easy to convert a document to PDF. Use these easy steps:

#### 1. Convert your electronic assignment to PDF format.

How do I create a PDF document from any other document format (e.g. MS Word, MS Excel etc)?

By quickly downloading FREE software (namely PrimoPDF), you can create a PDF document from any type of document you can print. Follow these easy steps:

- i. Go on the internet to the following website: <http://www.primopdf.com/index.aspx>
- ii. Download the PrimoPDF software by clicking on the DOWNLOAD FREE prompt. Follow the instructions for installing the software.
- iii. To create a PDF document from your assignment, go to your assignment on your PC and instead of printing your assignment to an actual printer, choose PrimoPDF as printer. To do this, click on the **Microsoft Office Button**  (or “File” button for other versions of Microsoft), and click **Print**. Then choose from the drop-down list on the printer, which in this case should be **PrimoPDF**.
- iv. You will now receive a pop-up message. Click the “Create PDF” button. Indicate in the “Save as:” pop-up where you want to save the PDF assignment on your PC.
- v. The PDF version of your assignment will now appear for your viewing.

2. **Submit the PDF document (your assignment) via myUnisa (online).** For guidance on how to submit an assignment via myUnisa, see section 8.3 of this tutorial letter **or** the *My Studies @ Unisa* brochure.

## 8.6 Other assessment methods

There are no other assessment methods for this module.

## 8.7 The examination

For general information and requirements as far as the examination is concerned, see the brochure *My Studies @ Unisa* which you received with your study material. For **examination admission** it is compulsory for you to hand in this module’s first assignment for the semester you are registered for. It is also to your own advantage to do the assignments in order to test your understanding of the subject, and to establish how well prepared you are for the examination. The assignments also contribute to your year mark (see section 8.2 of this tutorial letter). You need to obtain **a minimum of 40%** in your examination to pass. If you failed to do that your year mark will not count and only the less than 40% mark will reflect on your academic record.

This module is offered in a semester period of 15 weeks. This means that if you are registered for the **first semester**, you will write the examination in **May/June 2018** and the supplementary examination will be written in October/November 2018. If you are registered for the **second semester** you will write the examination in **October/November 2018** and the supplementary examination will be written in May/June 2019.

## 9 FREQUENTLY ASKED QUESTIONS

Please refer to the *My Studies @ Unisa* brochure which contains an A-Z guide of the most relevant study information.

## 10 SOURCES CONSULTED

The following websites, articles and textbooks were consulted in the compilation of this tutorial letter:

- Rolfes, SR, Pinna, K & Whitney, E. 2009. *Understanding normal and clinical nutrition*. 8<sup>th</sup> edition. Belmont, CA: Wadsworth. ISBN 0-495-55646-7
- Rolfes, SR, Pinna, K & Whitney, E. 2012. *Normal and clinical nutrition*. 9<sup>th</sup> edition. Belmont, CA: Wadsworth. ISBN 0-495-55646-7

- Rolfes, SR, Pinna, K & Whitney, E. 2013. *Normal and clinical nutrition*. 10<sup>th</sup> edition. Belmont, CA: Wadsworth. ISBN 9-781-28545-876-2

## 11 IN CLOSING

Please bear in mind that the purpose of the range of MCQs is to encourage you to familiarise yourself with the content of the study material for this module. Problems addressed in the MCQs will test your level of understanding of the work and help to identify the specific areas in which you need more assistance in order to do better in your written assignment. This module is diverse in that it contains strong theoretical and practical parts, which contribute to the broader concept of nutritional care. The full extent and level of understanding and ability to apply all of these skills successfully to a variety of case studies can only be achieved if you are keen to learn and self-motivated and determined to study. As a Unisa student, you are part of an open distance learning (ODL) institution. You are therefore expected to visit myUnisa frequently and to correspond with us, your lecturers, not only to stay on course with your studies, but also to increase your efficiency in your academic accomplishments by clarifying any uncertainties you may encounter during your studies.

All of the best with your studies and enjoy this learning experience!

Warm regards,

*Mrs Marna Smuts & Mrs Elize Symington*

## 12 ADDENDUM A: Assignments for Semester 1

### Assignment 01

**Due date:** 16 February 2018

**Unique assignment number:** 805581

**Semester period:** 1

### INSTRUCTIONS

- 1) Answer this assignment only if you are registered for Semester 1.
- 2) Read section 8 in this tutorial letter before starting this assignment.
- 3) This assignment contains only multiple-choice questions (MCQs).
- 4) The purpose of this assignment is to familiarise yourself with **Theme 1 (study units 1 to 4)** in the study guide by means of techniques designed to improve your study skills. These techniques, namely *skimming, scanning and study-reading*, are discussed in the study guide under the *general introduction*. Read it thoroughly before starting this assignment. This assignment thus focuses on the content of the study guide and prescribed book.

After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming study unit 1 in the study guide and the relevant sections in the prescribed book. Now answer the questions that follow.

**Question 1: Multiple-choice questions**

- 1.1 The compound secreted by the parietal cells of the stomach that facilitates the intestinal absorption of vitamin B<sub>12</sub> is \_\_\_\_\_.
1. pancreatic amylase
  2. HCl
  3. the intrinsic factor
  4. mucus
- 1.2 What is the chief reason people choose the foods they eat?
1. Cost
  2. Taste
  3. Convenience
  4. Nutritional value
- 1.3 The process by which food is broken down into absorbable components is called
1. digestion.
  2. absorption
  3. excretion
  4. mastication
- 1.4 The following is **incorrect** about dietary fibre:
1. fibres are fermented in the colon
  2. lack of fibre in the diet can sometimes contribute to diverticulitis
  3. it is digested in the small intestine *via* pancreatic amylase
  4. its main role in the stomach is to delay gastric emptying and give a feeling of fullness and satiety
- 1.5 Which one of the energy-yielding nutrients has the strongest effect on satiation during a meal?
1. carbohydrates
  2. fat
  3. protein
  4. None of the above
- 1.6. Which of the following organs stores and concentrates bile?
1. the gall bladder
  2. the pancreas
  3. the liver
  4. the bile duct
- 1.7 The transport vehicle(s) for fat is (are) known as...
1. chylomicrons
  2. high-density lipoproteins
  3. low-density lipoproteins
  4. All of the above

- 1.8 What part of the gastrointestinal tract is the predominant site of dietary fat digestion?
1. Mouth
  2. Stomach
  3. Small intestine
  4. Large intestine
- 1.9 Which one of the following outlines the overall sequence of events in the complete oxidation of glucose?
1. Glycolysis, TCA cycle, electron transport chain
  2. TCA cycle, electron transport chain, glycolysis
  3. Electron transport chain, TCA cycle, Cori cycle
  4. Cori cycle, TCA cycle, glycolysis
- 1.10 The enzyme that breaks down polysaccharides, which is produced by the salivary glands and the pancreas is \_\_\_\_\_.
1. saliva
  2. hydrochloric acid
  3. bile
  4. amylase
- 1.11 What is the most likely explanation for the fatty liver that develops from protein deficiency?
1. increased uptake of circulating fats
  2. inability of adipose tissue to remove circulating fats
  3. increased absorption of dietary fats
  4. inability of the liver to synthesize lipoproteins for fat export
- 1.12 The process of food utilisation comprises a series of physiological processes. Which of the following process arrangements is in the correct chronological order?
1. ingestion – digestion – absorption – transportation – metabolism – excretion
  2. ingestion – digestion – transportation – absorption – metabolism – excretion
  3. ingestion – mechanical digestion – absorption – chemical digestion – metabolism – transportation – excretion
  4. ingestion – chemical digestion – mechanical digestion – absorption – metabolism – transportation – excretion
- 1.13. The regulation of the pH in the stomach is an example of \_\_\_\_\_.
1. a negative feedback mechanism
  2. a positive feedback mechanism
  3. hormonal regulation
  4. None of the above
- 1.14. Digestion and absorption are coordinated by the \_\_\_\_\_.
1. pancreas and kidneys
  2. liver and gall bladder
  3. hormonal and nervous systems
  4. vascular and lymphatic systems



- 1.15. Calculate the daily requirement of protein intake of a 60 kg adult male
1. 58g of protein
  2. 148 g protein
  3. 48g protein
  4. None of the above
- 1.16. Which one of the following statements on sphincter contraction is **false**?
1. The ileocecal valve prevents food in the colon from moving back into the ileum.
  2. The pyloric sphincter keeps the chyme in the stomach long enough for it to mix with gastric juices.
  3. The pyloric sphincter regulates the flow of chyme into the jejunum.
  4. The lower oesophageal sphincter prevents reflux of the stomach contents into the oesophagus.
- 1.17. To what extent is the digestive enzyme, pancreatic amylase, responsible for the digestion of carbohydrates?
1. 50 to 80%
  2. 20 to 40 %
  3. 45 to 64%
  4. None of the above
- 1.18. Positive nitrogen balance occurs when:
1. children grow
  2. a person has burns
  3. a person follows a strict weight reducing diet
  4. a person has an infection
- 1.19 You take a diet history from Mr Maponya and this shows that his diet is currently providing 9195kJ and is made up of 375g carbohydrates, 72g protein and 42g fat. Calculate the kJ provide from Carbohydrates
1. 6375kJ
  2. 1224kJ
  3. 14250kJ
  4. Not sufficient information to calculate this
- 1.20 You take a diet history from Mr Maponya and this shows that his diet is currently providing 9195kJ and is made up of 375g carbohydrates, 72g protein and 42g fat. Calculate the kJ provide from fat
1. 714kJ
  2. 1596kJ
  3. 42kJ
  4. 1224kJ

- 1.21 You take a diet history from Mr Maponya and this shows that his diet is currently providing 9195kJ and is made up of 375g carbohydrates, 72g protein and 42g fat. Calculate the energy distribution % for carbohydrates
1. 45 – 65%
  2. 69%
  3. 24%
  4. None of the above
- 1.22 You take a diet history from Mr Maponya and this shows that his diet is currently providing 9195kJ and is made up of 375g carbohydrates, 72g protein and 42g fat. Calculate the energy distribution % for protein
1. 10 - 35%
  2. 127%
  3. 13%
  4. 3.3%
- 1.23 Calculate the kilojoule value of 2456kcal...
1. 10 315.2kJ
  2. 2456kJ
  3. 41 752kJ
  4. 6546kJ
- 1.24 Calculate how much kJ is 231g of alcohol...
1. 3927kJ
  2. 8778kJ
  3. 231kJ
  4. 6699kJ
- 1.25 After swallowing, in what order does food pass through the regions of the GI tract?
1. Jejunum, duodenum, colon, ileum, rectum
  2. Jejunum, ileum, duodenum, rectum, colon
  3. Stomach, duodenum, jejunum, ileum, colon
  4. Stomach, jejunum, duodenum, colon, ileum

**TOTAL [25]**

## Assignment 02

**Due date: 9 March 2018**

**Unique assignment number: 761578**

**Semester period: 01**

### INSTRUCTIONS

- 1) Answer this assignment only if you are registered for Semester 1.
- 2) Read section 8 in this tutorial letter before starting this assignment.
- 3) This assignment contains only multiple-choice questions (MCQs).
- 4) The purpose of this assignment is to familiarise you with **Theme 2 & 3 (study units 5 to 8)** in the study guide by means of techniques designed to improve your study skills. These techniques, namely *skimming*, *scanning* and *study-reading*, are discussed in the study guide under the *general introduction*. Read it carefully before starting this assignment. This assignment thus focuses on the study guide only.
- 5) After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming **study units 5 to 8** in the study guide. Now answer the questions that follow.
- 6) Bear in mind that a part of the format of the following MCQs is different from the standard and previous formats. For these MCQs, study the tables below and choose whether the information provided per row is correct, option number 1, or incorrect, option number 2 (as per the numbering options provided in the MCQ answer sheets).

**QUESTION 1: Multiple-choice questions**

Read the case study below and answer the following questions:

Mrs Mbita used to weigh 90 kg, but after implementing the nutritional advice she obtained from her health care professional, she now weighs 78 kg after six months. Her height is 1.62 m and her waist circumference 93 cm. Answer the following questions:

- 1.1. What is Mrs Mbita's current body mass index (BMI)?
  1. 34.29 kg/m<sup>2</sup>
  2. 55.55 kg/m<sup>2</sup>
  3. 29.72 kg/m<sup>2</sup>
  4. 48.14 kg/m<sup>2</sup>
  
- 1.2. How would you classify Mrs Mbita's BMI?
  1. overweight
  2. Obesity Class I
  3. Obesity Class II
  4. Obesity Class III
  
- 1.3. Mrs Mbita's ideal body weight is \_\_\_\_\_.
  1. < 48.55 kg
  2. > 65.35 kg
  3. between 48.55 kg and 65.35 kg
  4. 77.76 kg
  
- 1.4. Calculate the percentage weight loss of Mrs Mbita over the six months.
  1. 13.33%
  2. 115.38%
  3. 25.30%
  4. 15.38%
  
- 1.5. Mrs Mbita's waist circumference can be interpreted as \_\_\_\_\_.
  1. normal
  2. ideal
  3. low risk
  4. at a substantial risk
  
- 1.6. Which one of the following options **does not** form part of the four categories of Dietary Reference Intake (DRI)?
  1. average intake
  2. estimated average requirement
  3. tolerable upper intake levels
  4. recommended dietary allowance
  
- 1.7. In the exchange list system, each exchange provides more or less the same amount of \_\_\_\_\_.
  1. minerals
  2. energy
  3. water
  4. vitamins

Study the table below on the energy and macronutrient information for the following food items when using the South African Exchange List (provided in Addendum E in the Study Guide). Choose between options number 1 or 2 (provided in the MCQ answer sheet) as to whether the information provided per row is **TRUE (option number 1)** or **FALSE (option number 2)**.

Question number	Food	Mass / volume	Number of exchanges	CHO (g)	Prot (g)	Fat (g)	Energy (kJ)
1.8.	Pronutro	½ cup	2	15	6	0	600
1.9.	Prunes	25 g	1	15	0	0	250
1.10.	100 % mango juice	250 ml	2	30	0	0	500
1.11.	Raw Tomatoes	½ cup	1	5	2	0	120
1.12.	Cooked peas, dried beans and lentils	1 cup	1	0	7	1	155
1.13.	Inkomazi	250 ml	1	12	8	8	640
1.14.	Mackerel	90 g	3	0	21	9	690
1.15.	Peanut butter	90 g	1	0	7	5	310
1.16.	Fat free/ skimmed milk	250 ml	1	12	8	1	375
1.17.	Provitas	40 g	1	15	3	0	300

Study the table below on the energy and macronutrient content of food items using the *South African Food Composition Tables* (provided as part of your study package). Choose between option number 1 or 2 (provided in the MCQ answer sheet) as to whether the information provided per row is TRUE (option number 1) or FALSE (option number 2).

**NOTE:** If you have not received the prescribed Food Composition Tables in time, the tables needed for this assignment will be posted on MyUnisa

Question number	Food	Mass/ volume	CHO (g)	Protein (g)	Fat (g)	Energy (kJ)
1.18.	Bacon, cured, pan-fried/grilled	30g	0.6	30.5	49.2	2339
1.19.	Bread, pita	90g	52.11	8.3	1.08	1125.9
1.20.	Scrambled eggs (LFM only)	55 g	1.32	5.22	4.18	266.2
1.21.	Apple juice (Ceres)	250 ml	33.25	0.25	0.0	575
1.22.	Low fat fruit yoghurt, sweetened	125 ml	15.0	3.8	1.5	375
1.23.	Corned, beef (canned)	300g	15	58.5	44.7	2904
1.24.	Health bread	70 g	31.92	5.46	5.39	935.9
1.25.	Soy yogurt	140 g	5.32	7	5.88	427

- 1.26. The following are some of different methods to obtain food intake data:
1. 24-hour recall and Food Frequency Questionnaire (FFQ)
  2. Anthropometric measurements
  3. Biochemical analyses
  4. Option 2 and 3 are both correct
- 1.27. An EAR represents the ....
1. highest amount that appears safe for most healthy people
  2. lowest amount of a nutrient that will maintain a specified criterion of adequacy
  3. Average amount of a nutrient considered adequate to meet the known nutrient needs of practically all healthy people.
  4. amount of a nutrient that will maintain a specific biochemical or physiological function in half the people of a given age or gender group
- 1.28. The Upper Level (UL) for safe daily intake of sodium for adults is ....
1. 230 mg
  2. 2300 µg
  3. 2300 mg
  4. 1500 mg
- 1.29. Which one of the following options does not form part of the four categories of dietary reference intake (DRI)?
1. adequate intake
  2. estimated average requirement
  3. recommended daily allowance
  4. tolerable upper intake levels
- 1.30. Which of the following statements on dietary reference intakes (DRIs) is **true**?
1. They are a set of nutrient recommendations used to evaluate and plan a healthy diet.
  2. They decrease the risk of development of chronic diseases.
  3. They are only used for healthy individuals and not for people with specific disease conditions.
  4. All of the above are true.

**TOTAL: [30]**

**Assignment 03****Due date:** 29 March 2018**Unique assignment number:** 707219**Semester period:** 1**INSTRUCTIONS**

- (1) Answer this assignment only if you are registered for Semester 1.
- (2) Read section 8 in this tutorial letter before starting this assignment.
- (3) This assignment contains only multiple-choice questions (MCQs).
- (4) The purpose of this assignment is to familiarise yourself with **theme 4 (study units 9 & 10)** in the study guides by means of techniques designed to improve your study skills. These techniques, namely *skimming, scanning and study-reading*, are discussed in the study guide under the *general introduction*. Read it thoroughly before starting this assignment. This assignment thus focuses on the study guide and prescribed books.
- (5) **PLEASE NOTE: if a particular question refers you to one of the Food Based Dietary Guidelines' articles, note that these articles all form part of your Study guides: Study unit 9. Therefore, please do not search for these articles elsewhere.**
- (6) After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming study unit 9 & 10 in the study guide and the relevant sections in the prescribed books. Now answer the questions in the assignment below.

**QUESTION 1: Multiple-choice questions**

- 1.1. Dietary variety is defined as including \_\_\_\_\_.
1. different foods from the same food group as part of the diet
  2. the same foods from different food groups as part of the diet
  3. the same foods and the same food groups as part of the diet
  4. different foods and different food groups as part of the diet
- 1.2 Which one of the following options is not a characteristic of the Food Based Dietary Guidelines (FBDGs)?
1. It should have one easy, understandable simple message.
  2. It should only address overnutrition since this is a pandemic.
  3. It should be based on affordable and available foods.
  4. It should avoid using words such as “decrease”, “avoid” and “cut out”.
- 1.3 Which option is NOT a role of water in the body?
1. to isolate the body from cold
  2. to dissolve and transport nutrients from the blood to the cells
  3. to transport blood components
  4. to remove metabolic waste
- 1.4 Studies have shown that legumes \_\_\_\_\_.
1. increase triglyceride concentrations
  2. increase total serum cholesterol concentrations
  3. decrease the serum high-density lipoprotein (HDL) levels
  4. lower the total serum cholesterol concentration
- 1.5 The article, “Enjoy a variety of foods”, mentions the potential problems associated with the guideline. Which of the following phrases is **correct** regarding the potential problems arising from the guideline?
1. the development of obesity and other chronic lifestyle diseases
  2. misinterpretation of the guideline, which can lead to increased consumption of fruits and vegetables which have a good micronutrient and phytochemical content
  3. a low level of household food security
  4. increased energy intakes, accompanied by low micronutrient levels
1. 1, 3 & 4
  2. 1, 2 & 4
  3. 1 & 4
  4. 3 & 4
- 1.6 According to the article, “Water – the neglected nutrient”, what could soft drinks be replaced with to help with weight control and overall health?
1. water and low-fat/fat-free milk
  2. water and full-cream milk
  3. alcohol and soup
  4. fruit juice and milk



- 1.7 Which recommendation about eggs is **incorrect** (see the article, “Food from animals can be eaten every day”)?
1. Eggs can be a good source of protein in undernourished individuals.
  2. Eggs should be avoided because of their high cholesterol content.
  3. Three to four eggs per week are allowed
  4. Option 1 and 3.
- 1.8 In the article, “Eat fats sparingly”, what level of fat intake is recommended for the treatment and prevention of chronic lifestyle diseases?
1. a moderate-fat diet
  2. a high-fat diet
  3. a low-fat diet
  4. None of the above is correct
- 1.9 According to the article, “Be active”, inactivity is associated with an increased risk of developing \_\_\_\_\_.
1. high cholesterol, obesity, stroke and colon cancer
  2. raised blood sugar levels, colon cancer and kidney stones
  3. decreased bone density, spastic colon and kidney stones
  4. high cholesterol, breast cancer and raised blood sugar.
- 1.10 Which one of the following options serves as a correct example of a “positive correlation”?
1. The higher the fat intake, the lower heart disease incidences.
  2. Higher salt intakes lead to a higher risk of hypertension.
  3. The protective effect of alcohol against heart disease increases when less alcohol is consumed.
  4. Higher vegetable intakes result in lower heart disease incidences
- 1.11 The following is an example of a food item which contains monounsaturated fatty acid?
1. Soya bean oil
  2. Avocado
  3. Sunflower oil
  4. All of the above
- 1.12 Which one of the following options serves as a correct example of a “negative correlation”?
1. Higher vegetable intakes result in lower heart disease incidences.
  2. Higher fat intakes lead to higher heart disease incidences.
  3. The higher the salt intake, the lower the risk of hypertension will be.
  4. The protective effect of legumes and split-peas against heart disease increases the more is consumed

- 1.13 According to the article, “Evidence to support a food-based dietary guideline on sugar consumption in SA”, which of the following statements relating to dietary management of obesity is **incorrect**?
1. Decrease the intake of low-calorie foods.
  2. Choose foods and beverages low in sugar and added sugar.
  3. Increase the consumption of foods with a high nutritional quality.
  4. Prevent weight gain by matching energy intake with overall energy needs
- 1.14. According to table II in the article, “Foods from animals can be eaten every day”, which food from animals contains the most cholesterol per 100 g?
1. beef topside mince
  2. chicken
  3. pilchards in tomato sauce
  4. fresh full-fat milk
- 1.15 99% of the calcium in the body is contained in the bones and the remaining 1% plays an essential role in a number of vital functions in the body, such as coagulation of the blood, muscle and heart activity, arterial blood pressure, transmission of nerve impulses to muscle, the function of a number of enzymes, *etc.*”
1. True
  2. False

**TOTAL [15]**

**Assignment 04**

**Due date:** 13 April 2018

**Unique assignment number:** 693837

**Semester period:** 01

**INSTRUCTIONS**

- 1) Answer this assignment only if you are registered for Semester 1.
- 2) Read section 8 in this tutorial letter before starting this assignment.
- 3) Carefully read **ALL** the study units in the study guides.
- 4) Remember to refer to the prescribed book as referred to in the study guide.
- 5) Answer all the questions as clearly as possible.
- 6) Except for definitions, formulate the answers in your own words.
- 7) Now answer the questions that follow.

**QUESTION 1****[47]**

- 1.1 Name **and** discuss the six (6) physiological processes involved in the utilisation of food (12X½=6)
- 1.2 Complete the following table of the digestive secretions and their major actions (8)

Organ or Gland	Target organ	Secretion	Action
Salivary glands	1.2.1	Saliva	Salivary enzyme breaks down some carbohydrate
Gastric glands	Stomach	1.2.2	Hydrochloric acid uncoils 1.2.3
1.2.4	Small intestines	1.2.5	Pancreatic enzymes break down carbohydrates, fats and proteins
Liver	1.2.6	Bile	Bile is sorted until needed
Gallbladder	Small intestine	Bile	1.2.7
1.2.8	Small intestine	Intestinal juice	Intestinal enzymes break down carbohydrates, fat and protein

- 1.3 Indicate through which transport mechanism each of the different monosaccharides (glucose, galactose and fructose) are absorbed? (3)
- 1.4 Discuss the two types of feedback mechanisms involved in the regulation of the gastrointestinal processes AND give an example of each (6)
- 1.5 What is the difference between food bolus and chyme? (2)
- 1.6 Describe the process in detail of digestion of 1 cup of cooked oats porridge with respect to digestion in the **stomach** and **large intestine** focusing on the digestive enzymes and secretions involved and the products of digestion that is formed. (5)
- 1.7 For which parts of the body is glucose preferred as the source of energy? (3)
- 1.8 Differentiate between gastric juice, pancreatic juice and intestinal juice by discussing the target organ in which these digestive secretions are secreted and the major actions of each of these digestive secretions, respectively. (8)
- 1.9 Explain what causes lactose intolerance and describe how it results in the typical symptoms of lactose intolerance. (4)
- 1.10 Which of the nutrients are transported in the vascular system? 4 x ½ = (2)

**QUESTION 2:****[48]**

Mrs Davis asks you to evaluate her nutritional status. She is 61 years old, is 172 cm tall, weighs 78 kg and has a waist circumference of 91.2 cm.

- 2.1. Calculate and interpret her BMI together with her waist circumference measurement. Remember to indicate whether she is at risk for developing chronic lifestyle diseases. (5)
- 2.2. Calculate Mrs Davis's ideal body weight. (2)
- 2.3. You provide Mrs Davis dietary suggestions and as a result thereof, your aunt tells you that she has lost 8 kg in the last three months. Calculate and interpret her percentage of weight loss over three months. (3)
- 2.4. Complete the shortened food frequency questionnaire (FFQ) of any family member or friend. Submit the FFQ as you recorded it. (2)

**HINT:** Use the FFQ form attached in Addendum C of this tutorial letter as a template. Use the guidelines in Addendum C in study guide 2 on how to conduct a successful interview to help you complete the questionnaire.

- 2.5. In practice the shortened FFQ should always be done together with a 24-hour recall. Therefore, conduct a 24-hour recall with the same family member or friend referred to in question 2.4 after completing the shortened FFQ. Submit the 24-hour recall as you recorded it. Note that negative marking will apply, which means that a mark will be deducted if you leave out important information. For example, when recording "bread" as the type of food consumed, a mark will be deducted if you do not state whether it is white, brown or whole-wheat bread or even if you do not state the number of slices. Use the 24-hour recall template attached in addendum D of this tutorial letter 101. (10)

**HINT:** Use the tips on how to conduct a successful interview in addendum C of your Study guide 2 to assist you in conducting the interview and also refer to the section on 24-hour recalls on pages 543-544 of your textbook. Practice how to avoid asking leading or closed-ended questions

- 2.6. Nutrition assessment is the process of collecting nutritional information relating to health. Name and describe the four processes involved in nutrition assessment. (8 x ½ = 4)
- 2.7. Foods are divided into six exchange lists according to their basic composition. Name the six exchange lists and give **one** main **micronutrient** for each. (12 x ½ = 6)

- 2.8 You teach Mr van Dyk about the 'exchange system' as a way to manage his intake and he has been following your recommendations. Re-draw and complete the following table in order to determine the macronutrient and energy content of what he is consuming during his lunch time meal. Make sure to fill in the grey blocks. (10)

Food	Size	Exchanges	CHO (g)	Prot (g)	Fat (g)	Energy (kJ)
6 slices of white bread	180g	6			-	
Margarine	45g		-	-	4 5	
Apricot jam	45g	3		-		765
Cheddar cheese	90g		-	2 1		

- 2.9 The FBDG's state "Eat plenty of vegetables and fruits every day" Fruits and vegetables have anticarcinogenic properties. Summarise the possible anticarcinogenic mechanisms of action of substances in vegetables and fruits. (6)

### QUESTION 3:

[45]

You take a diet history from Mrs Nienaber and this shows that her diet is currently made up of 410g carbohydrates, 80g protein and 130g fat.

- 3.1 Calculate the energy distribution of Mrs Nienaber's diet and also indicate the total amount of energy she is consuming per day (in kJ). Show all calculations. (7)
- 3.2 Based on your answer from question 3.1, interpret the macronutrient distribution by comparing each nutrient's energy distribution to the Acceptable Macronutrient Distribution Ranges (AMDR) and then make practical recommendations to Mrs Nienaber accordingly. (6)
- 3.3 From the historical information you have obtained from Mrs Nienaber you notice that she has a family history of heart disease, yet she is not physically active and lists doughnuts and burgers as the food items she consumed the most often. Explain to her how the implementation of the Food Based Dietary Guidelines (FBDG) "Be active!" affects health and protects against heart disease. (5)
- 3.4 Give Mrs Nienaber three practical recommendations on how to reduce her total daily fat intake. (3)
- 3.5 Mrs Nienaber's diet does not adhere to the FBDG "Enjoy a variety of food". Explain the three consequences resulting from a lack of dietary variety. (3)

- 3.6 In your own words, summarise seven (7) of the health benefits and physiological effects of making starchy foods the basis of most meals (refer to the FBDG article). (7)
- 3.7 What general recommendations in terms of quantity and frequency of consumption would you give Mrs Nienaber concerning her dairy, fish, eggs and red meat intake? (4)

**TOTAL MARKS: [130]**

**13 ADDENDUM B: Assignments for Semester 2****Assignment 01**

**Due date:** 10 August 2018

**Unique assignment number:** 801008

**Semester period:** 02

**INSTRUCTIONS**

- (1) Answer this assignment only if you are registered for Semester 2.
- (2) Read section 8 in this tutorial letter before starting this assignment.
- (3) This assignment contains only multiple-choice questions (MCQs).
- (4) The purpose of this assignment is to familiarise yourself with **Theme 1 (Study Units 1-4)** in the study guide by means of techniques designed to improve your study skills. These techniques, namely *skimming, scanning and study-reading*, are discussed in the study guide under the *general introduction*. Read this introduction carefully before starting this assignment. This assignment thus focuses on the study guide and prescribed book.
- (5) After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming study units 1-4 in the study guide and the relevant sections in the prescribed book. Now answer the questions that follow.



**QUESTION 1: Multiple-choice questions**

- 1.1 Hunger, satiation and satiety are the response to both internal and external stimuli. Which of the following is not a physiological influence in the hunger, satiation and satiety cycle?
1. the taste of food
  2. gastric contractions
  2. the brain's pleasure chemicals
  3. the absence of nutrients in the small intestine
- 1.2 The process of food utilisation comprises a series of physiological processes. Which of the following process arrangements is in the correct chronological order?
1. ingestion – digestion – transportation – absorption – metabolism – excretion
  2. ingestion – digestion – absorption – transportation – metabolism – excretion
  3. ingestion – chemical digestion – mechanical digestion – absorption – metabolism – transportation – excretion
  4. ingestion – mechanical digestion – absorption – chemical digestion – metabolism – transportation – excretion
- 1.3. The main site for fat digestion is the \_\_\_\_\_.
1. mouth
  2. small intestine
  3. stomach
  4. gall bladder
- 1.4 The digestive organ that contains exocrine (secretes pancreatic juice) and endocrine (secretes the hormones glucagon and insulin) tissues is the \_\_\_\_\_.
1. liver
  2. gall bladder
  3. pancreas
  4. stomach
- 1.5 The regulation of the pH in the stomach is an example of \_\_\_\_\_.
1. a negative feedback mechanism
  2. hormonal regulation
  3. a positive feedback mechanism
  4. None of the above
- 1.6 Hunger, satiation and satiety are the response to both internal and external stimuli. Which of the following is not a cognitive influence to the hunger, satiation and satiety cycle?
1. hunger developing
  2. the perception of hunger
  3. favourite foods
  4. abundance of food

- 1.7 Which sphincter prevents the large intestine contents from moving back into the small intestine?
1. the upper oesophageal sphincter
  2. the ileocecal valve
  3. the lower oesophageal sphincter
  4. the pyloric sphincter
- 1.8 The main site of absorption of the calcium is the \_\_\_\_\_.
1. colon
  2. ileum
  3. jejunum
  4. duodenum
- 1.9 To what extent is the digestive enzyme, pancreatic amylase, responsible for the digestion of carbohydrates?
1. 20 to 40 %
  2. 50 to 80%
  3. 45 to 64%
  4. None of the above
- 1.10 Which one of the following statements on sphincter contraction is **false**?
1. The pyloric sphincter regulates the flow of chyme into the jejunum.
  2. The lower oesophageal sphincter prevents reflux of the stomach contents into the oesophagus.
  3. The pyloric sphincter keeps the chyme in the stomach long enough for it to mix with gastric juices.
  4. The ileocecal valve prevents food in the colon from moving back into the ileum
- 1.11 The main site of absorption of the calcium is the \_\_\_\_\_.
1. colon
  2. duodenum
  3. ileum
  4. jejunum
- 1.12 Which of the following is true for persons with lactose intolerance?
1. they should avoid milk consumption
  2. increase milk products gradually and consume them with other foods in meals
  3. they should not take fermented milk
  4. calcium supplementation might not be necessary
- 1.13 What is the most likely explanation for the fatty liver that develops from protein deficiency?
1. inability of the liver to synthesize lipoproteins for fat export
  2. increased uptake of circulating fats
  3. inability of adipose tissue to remove circulating fats
  4. increased absorption of dietary fats

- 1.14 Which one of the following outlines the overall sequence of events in the complete oxidation of glucose?
1. Glycolysis, TCA cycle, electron transport chain
  2. TCA cycle, electron transport chain, glycolysis
  3. Electron transport chain, TCA cycle, Cori cycle
  4. Cori cycle, TCA cycle, glycolysis
- 1.15 The compound secreted by the parietal cells of the stomach that facilitates the intestinal absorption of vitamin B<sub>12</sub> is \_\_\_\_\_.
1. the intrinsic factor
  2. pancreatic amylase
  3. HCl
  4. mucus
- 1.16 After protein is digested into amino acids in the GIT, they are absorbed by \_\_\_\_\_ into the gastrointestinal cells from where they enter the \_\_\_\_\_.
1. GIT lumen; capillary vein
  2. active transport; vascular system
  3. facilitated diffusion; hepatic portal vein
  4. simple diffusion; vascular system
- 1.17 Which of the following metabolic reactions occurs when a cell uses energy?
1. ATP releases a phosphate group and becomes ADP
  2. ADP gains a phosphate group and becomes ATP
  3. ADP releases a phosphate group and becomes ATP
  4. ATP gains a phosphate group and becomes ADP
- 1.18 The amount of energy in 1 grams of carbohydrates, 1 grams of protein and 1 grams of fat is:
1. 29kJ; 38kJ and 17kJ
  2. 17kJ; 38kJ and 17kJ
  3. 17kJ; 17kJ and 38kJ
  4. 29kJ, 17kJ and 17kJ
- 1.19 You take a diet history from Mr Maponya and this shows that his diet is currently providing 13456kJ and is made up of 443g carbohydrates, 172g protein and 99g fat. Calculate the kJ provide from Carbohydrates
1. 7531kJ
  2. 2924kJ
  3. 16834kJ
  4. Not sufficient information to calculate this
- 1.20 You take a diet history from Mr Maponya and this shows that his diet is currently providing 13456kJ and is made up of 443g carbohydrates, 172g protein and 99g fat. Calculate the kJ provide from fat
1. 99kJ
  2. 3762kJ
  3. 1683kJ
  4. 13456kJ

- 1.21 You take a diet history from Mr Maponya and this shows that his diet is currently providing 13456kJ and is made up of 443g carbohydrates, 172g protein and 99g fat. Calculate the energy distribution % for carbohydrates
1. 45 – 65%
  2. 55.9%
  3. 178%
  4. 60%
- 1.22 You take a diet history from Mr Maponya and this shows that his diet is currently providing 13456kJ and is made up of 443g carbohydrates, 172g protein and 99g fat. Calculate the energy distribution % for protein
1. 10 - 35%
  2. 460%
  3. 21.7%
  4. 17.2%
- 1.23 Calculate the kilojoule value of 678kcal...
1. 2847.1kJ
  2. 678kJ
  3. 41 752kJ
  4. 6546,6kJ
- 1.24 Calculate how much kJ is 124g of alcohol...
1. 4712kJ
  2. 2108kJ
  3. 124kJ
  4. 3596kJ
- 1.25 Which of the following is **NOT** true?
1. Maltose = glucose + glucose
  2. Sucrose = fructose + glucose
  3. Lactase will digest a certain carbohydrate into galactose and fructose
  4. Maltase will digest a certain carbohydrate into glucose and glucose

**TOTAL: [25]**

## Assignment 02

**Due date:** 24 August 2018

**Unique assignment number:** 690494

**Semester period:** 02

### INSTRUCTIONS

- (1) Answer this assignment only if you are registered for Semester 2.
- (2) Read section 8 in this tutorial letter before starting this assignment.
- (3) This assignment contains only multiple-choice questions (MCQs).
- (4) The purpose of this assignment is to familiarise you with **Theme 2 & 3 (study units 5-8)** in the study guide by means of techniques designed to improve your study skills. These techniques, namely *skimming*, *scanning* and *study-reading*, are discussed in the study guide under the *general introduction*. Read this introduction carefully before starting this assignment. This assignment thus focuses on the study guide only.
- (5) After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming study units 5-8 in the study guide. Now answer the questions that follow.

**QUESTION 1: Multiple-choice questions**

Study the case study that follows:

Mr Swanepoel used to weigh 120 kg, but after implementing the nutritional advice he obtained from his health care professional, he now weighs 98 kg after three months. His height is 1.78 m and his waist circumference 110 cm. Answer the following questions:

- 1.1. What is Mr Swanepoel's current body mass index (BMI)?
  1. 37.87 kg/m
  2. 30.93 kg/m<sup>2</sup>
  3. 37.87 kg/m<sup>2</sup>
  4. 25.00 kg/m<sup>2</sup>
  
- 1.2. How would you classify Mr Swanepoel's BMI?
  1. Obesity Class I
  2. Obesity Class II
  3. Overweight
  4. Obesity Class III
  
- 1.3. If Mr Swanepoel is to lose more weight, what would his first goal body weight be?
  1. 79.2 kg
  2. 90 kg
  3. 91.7 kg
  4. 62.0 kg
  
- 1.4. Calculate the percentage weight loss of Mr Swanepoel over the three months.
  1. 10 %
  2. 22.00 %
  3. 18.33 %
  4. 7.5 %
  
- 1.5. Mr Swanepoel's waist circumference can be interpreted as \_\_\_\_\_.
  1. normal
  2. ideal
  3. low risk
  4. at a substantial risk
  
- 1.6. Which one of the following options is not an example of a nutrient dense food?
  1. milk and milk products (preferably low fat or fat free)
  2. legumes
  3. vegetables
  4. biscuits
  
- 1.7. Which one of the following options **does not** form part of the four categories of Dietary Reference Intake (DRI)?
  1. average intake
  2. estimated average requirement
  3. tolerable upper intake levels
  4. recommended dietary allowance

- 1.8 What is the **RDA** for vitamin C for a 24 year old pregnant woman?
1. 60 mg
  2. 70 mg
  3. 75 mg
  4. 85 mg
- 1.9 The Upper Level (UL) for safe daily intake of folic acid for adults is ....
1. 100 mg
  2. 250 µg
  3. 1000 µg
  4. 5000 µg
- 1.10 An AI represents the ....
1. highest amount that appears safe for most healthy people
  2. average amount of a nutrient that a group of healthy people consumes
  3. lowest amount of a nutrient that will maintain a specified criterion of adequacy
  4. amount of a nutrient that will maintain a specific biochemical or physiological function in half the people of a given age or gender group

Study the table below on the energy and macronutrient information for the following food items when using the **South African Exchange List** (provided in Addendum E in the Study Guide). Choose between options number **1** or **2** (provided in the MCQ answer sheet) as to whether the information provided per row is **TRUE (option number 1)** or **FALSE (option number 2)**.

Question	Food	Mass/ volume	Nr of exchanges	CHO (g)	Protein (g)	Fat (g)	Energy (kJ)
1.11	Pronutro	½ cup	1	15	2	0	280
1.12	Raisins	2 tbs	1	15	0	0	250
1.13	100 % apple juice	250ml	1	15	0	0	250
1.14	Cooked broccoli and cauliflower	1 cup	1	5	2	0	120
1.15	Reduced fat salad dressing	25ml	1	0	0	5	190
1.16	Canned sardines	2 medium	1	0	7	3	230
1.17	T-bone steak	240g	8	0	56	24	1840
1.18	Full-cream milk	250 ml	1	12	8	5	640
1.19	Brown rice	100 g	1	15	3	0	300

Mr. van der Westhuizen has a waist circumference of 105cm, a hip circumference of 90cm and is 1.67m in height.

- 1.20 What is Mr van der Westhuizen's waist-to-height ratio (WHTR)?
1. 62.9
  2. 0.6
  3. 0.02
  4. 1.6
- 1.21 What is Mr van der Westhuizen's waist-to-hip ratio (WHR)?
1. 3.5
  2. 1.0
  3. 0.9
  4. 1.2
- 1.22 How would you classify Mr. van der Westhuizen's risk to develop a chronic lifestyle disease based on your answer in 1.24?
1. **Low** because the ratio is below 0.8
  2. **High** because the ratio is above 0.9
  3. **High** because the ratio is below 0.9
  4. **Low** because the ratio is above 0.8

Study the table below on the energy and macronutrient content of food items using the **South African food composition tables** (provided as part of your study package). Choose between options number 1 or 2 (provided in the MCQ answer sheet) as to whether the information provided per row is **TRUE (option number 1)** or **FALSE (option number 2)**.

**NOTE:** If you have not received the prescribed *South African food composition tables* in time, you can find the tables you will need on MyUnisa.

Question number	Food	Mass/ volume	CHO (g)	Protein (g)	Fat (g)	Energy (kJ)
1.23.	Bacon, cured, pan-fried/grilled	30g	0.18	9.15	14.76	701.7
1.24.	Bread, pita (15 cm)	90	57.9	9.2	1.2	1251.0
1.25.	Scrambled eggs (LFM only)	55 g	1.32	5.22	4.18	266.2
1.26.	Apple juice (Ceres)	125 ml	33.25	0.25	0.0	575
1.27.	Low fat fruit yoghurt, sweetened	125 ml	15.0	3.8	1.5	350.0

- 1.28 A meal consist out of 1 cup of pasta, 120g mince meat (beef – medium fat); 125ml tomato stew and ½ cup of fresh carrot salad. What is the energy value of this meal?
1. 1980kJ
  2. 2160kJ
  3. 2200kJ
  4. 4000kJ



- 1.29 Medical and dietary history, physical examinations, laboratory tests and anthropometric measures are:
1. techniques used in diet planning
  2. steps used in the scientific method
  3. approaches used in disease prevention
  4. methods used in a nutrition assessment
- 1.30 One of the limitations of the DRIs is that the allowances for some age groups, such as adolescents and the elderly, are based on limited data.
1. True
  2. False

**TOTAL [30]**

## Assignment 03

**Due date:** 7 September 2018

**Unique assignment number:** 668046

**Semester period:** 02

### INSTRUCTIONS

- (1) Answer this assignment only if you are registered for Semester 2.
- (2) Read section 8 in this tutorial letter before starting this assignment.
- (3) This assignment contains only multiple-choice questions (MCQs).
- (4) The purpose of this assignment is to familiarise yourself with **Theme 3 & 4 (study units 9 & 10)** in the study guide by means of techniques designed to improve your study skills. These techniques, namely *skimming, scanning and study-reading*, are discussed in the study guide under the *general introduction*. Read this introduction carefully before starting this assignment. This assignment thus focuses on the study guide and prescribed books.
- (5) **PLEASE NOTE: if a particular question refers you to one of the Food Based Dietary Guidelines' articles, note that these articles all form part of your Study guide 1: study unit 9. Therefore, please do not search for these articles elsewhere.**
- (6) After reading the section on improved study skills in the study guide, **implement steps 1 and 2** by skimming study unit 9 & 10 in the study guide and the relevant sections in the prescribed books. Now answer the questions that follow.

**QUESTION 1: Multiple-choice questions****[15]**

- 1.1. Which one of the following options is not a characteristic of the Food Based Dietary Guidelines (FBDGs)?
1. It should not use words such as “decrease”, “avoid” and “cut out”.
  2. It should be based on affordable and available foods.
  3. It should have one easy, understandable simple message.
  4. It should address overnutrition.
- 1.2. Dietary variety is defined as including \_\_\_\_\_.
1. the same foods and the same food groups as part of the diet
  2. the same foods from different food groups as part of the diet
  3. different foods from the same food group as part of the diet
  4. different foods and different food groups as part of the diet.
- 1.3. According to the article, “Enjoy a variety of foods”, dietary variety will contribute to\_\_\_\_\_.
1. the prevention of undernutrition and overnutrition
  2. the development of chronic lifestyle diseases
  3. poor micronutrient status
  4. a low energy intake.
- 1.4. In the article, “Be active”, the authors state that there was “... an inverse relationship between the average duration of exercise sessions and coronary heart disease (CHD) risk ...”. This means that \_\_\_\_\_.
1. when the duration of exercise increases, the risk of CHD increases
  2. when the duration of exercise increases, the risk of CHD decreases
  3. when the duration of exercise decreases, the risk of CHD decreases
  4. none of the above are correct
- 1.5. Nonstarch polysaccharides can also be called \_\_\_\_\_.
1. maltodextrins
  2. dietary fibre
  3. amylose
  4. oligosaccharides
- 1.6. Which of the following statements relating to legumes is **true**?
1. Legumes reduce the risk of developing diabetes because of their low fibre and fat content.
  2. Dried beans are more protective against cancer than soy foods.
  3. Soy foods are more protective against cancer than dried beans.
  4. Soy foods decrease bone mineral density.
- 1.7. Which one of the following statements regarding calcium is not true?
1. Calcium is not an important nutrient for bone health
  2. Only 50% of calcium consumed in adults is absorbed
  3. The adequate intake (AI) for calcium in teenagers is 1300 mg/day
  4. Yoghurt is a source of calcium

- 1.8 In the article, “Eat plenty of vegetables and fruit every day”, routine vitamin A supplementation for children leads to \_\_\_\_\_.
1. decreased mortality and complications from measles
  2. increased incidence of diarrhoea
  3. increased mortality in children with HIV infection
  4. None of the above is correct.
- 1.9 After reading the article, “Eat plenty of vegetables and fruit every day”, indicate what the word “plenty” means?
1. Eat at least five portions of vegetables or fruit per day.
  2. Eat at least two vegetables and two fruits per day.
  3. Eat at least one fruit and one vegetable per day.
  4. All of the above are correct.
- 1.10 Studies have shown that legumes \_\_\_\_\_.
1. increase triglyceride concentrations
  2. decrease the serum high-density lipoprotein (HDL) levels
  3. increase total serum cholesterol concentrations
  4. lower the total serum cholesterol concentration
- 1.11 Which one of the following options serves as a correct example of a “positive correlation”?
1. The higher the salt intake, the lower the risk of hypertension will be.
  2. Higher fat intakes lead to higher heart disease incidences.
  3. The protective effect of alcohol against heart disease increases when less alcohol is consumed.
  4. Higher vegetable intakes result in lower heart disease incidences.
- 1.12 Which one of the following options serves as a correct example of a “negative correlation”?
1. Higher vegetable intakes result in lower heart disease incidences.
  2. Higher fat intakes lead to higher heart disease incidences.
  3. The higher the salt intake, the lower the risk of hypertension will be.
  4. The protective effect of legumes and split-peas against heart disease increases the more is consumed.
- 1.13 Which recommendation for sugar consumption is incorrect?
1. Sugar intake should be < 40 g/day in the absence of fluoride in the water.
  2. Sugar intake should be 40 to 50 g/day in the presence of fluoride in the water.
  3. Sugar intake should be between 10 and 15% of total energy intake.
  4. Sugar intake should be < 10% of total energy intake.
- 1.14 According to the article, “Evidence to support a food-based dietary guideline on sugar consumption in SA”, which of the following statements relating to dietary management of obesity is **incorrect**?
1. Increase the consumption of foods with a high nutritional quality.
  2. Choose foods and beverages low in sugar and added sugar.
  3. Decrease the intake of low-calorie foods.
  4. Prevent weight gain by matching energy intake with overall energy needs.

- 1.15 The following is an example of a food item which contains monounsaturated fatty acid?
1. Soya bean oil
  2. Avocado
  3. Sunflower oil
  4. All of the above

**TOTAL MARKS: [15]**

## **Assignment 04**

**Due date:** 21 September 2018

**Unique assignment number:** 792580

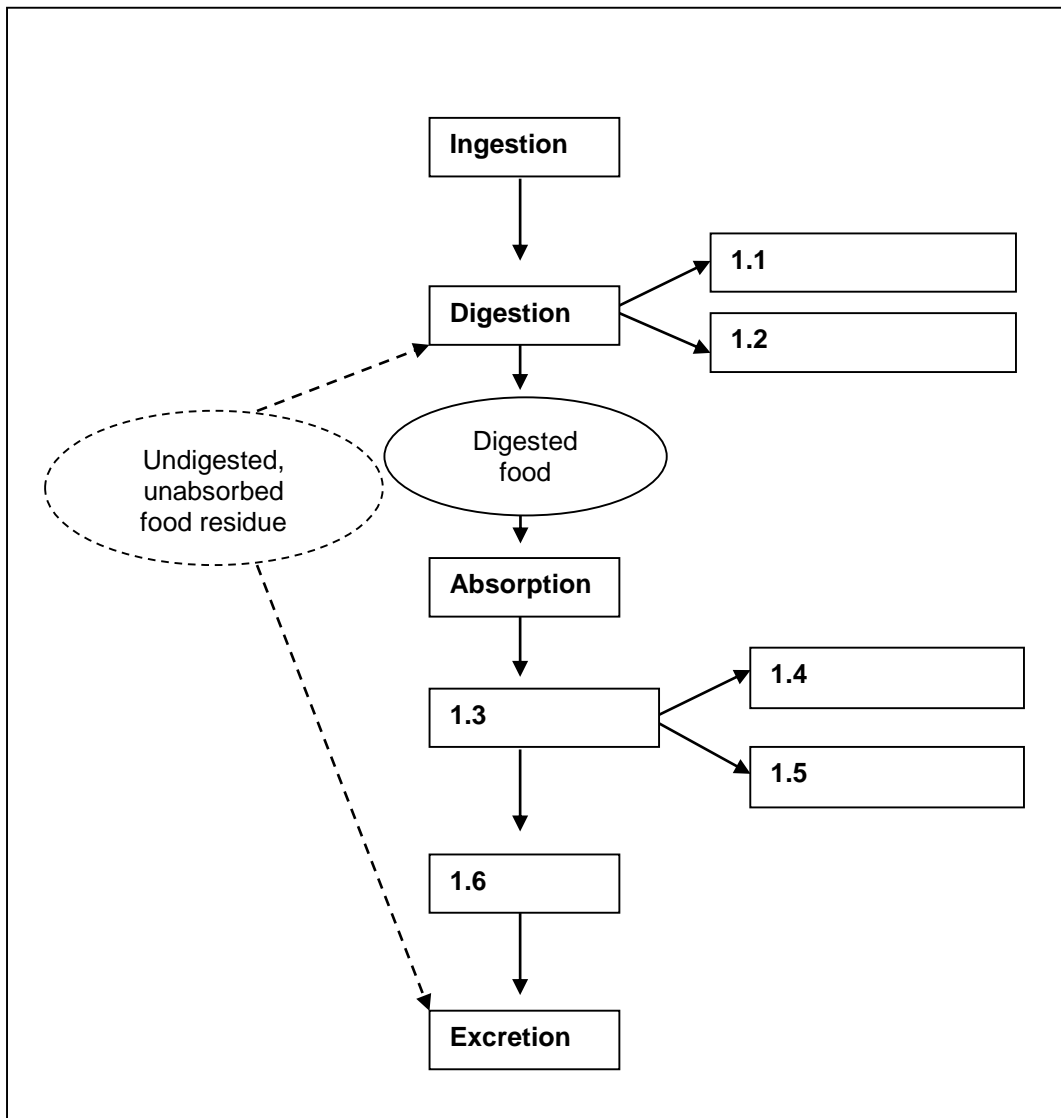
**Semester period:** 02

### **INSTRUCTIONS**

- (1) Answer this assignment only if you are registered for semester 2.
- (2) Read section 8 in this tutorial letter before starting this assignment.
- (3) Carefully study **ALL** the study units in the study guide in order to complete Assignment 04.
- (4) Remember to refer to the prescribed book as referred to in the study guide.
- (5) Answer all the questions as clearly as possible.
- (6) Except for definitions, formulate your answers in your own words.
- (7) Now answer the questions that follow.

**QUESTION 1**

After reading through the relevant sections in the prescribed book, label the sections A-F in the following diagram. (6)



- 1.7 Explain the form in which protein is excreted and describe how these products are formed. (4)
- 1.8 Explain how the fat in your diet would be metabolised and stored as fat in his body. (4)
- 1.9 Draw a diagram to illustrate the hormonal regulation of the pH of the stomach.  $6 \times \frac{1}{2} = (3)$
- 1.10 Nutrients are absorbed and transported via the blood and lymph to all the body cells where it will be utilised for metabolic functions. What is the difference between the vascular and the lymphatic system? (4)
- 1.11 Paula is overweight and complains of food cravings and wants to know why this happens. Explain to her what factors override the hunger and satiety signals? (6)

- 1.12 Explain to Paula how fat affects satiety. (1)
- 1.13 What are the main function(s) of the hormone secretin and what stimulates its secretion? (2)
- 1.14 Describe how monoglycerides and long-chain fatty acids are absorbed. (7)
- 1.15 Why do absorbed nutrients firstly go to the liver and not directly to the heart? (2)
- 1.16 Explain what you understand by “facilitated diffusion of nutrients” and give an example of a nutrient that is transported in this way (4)

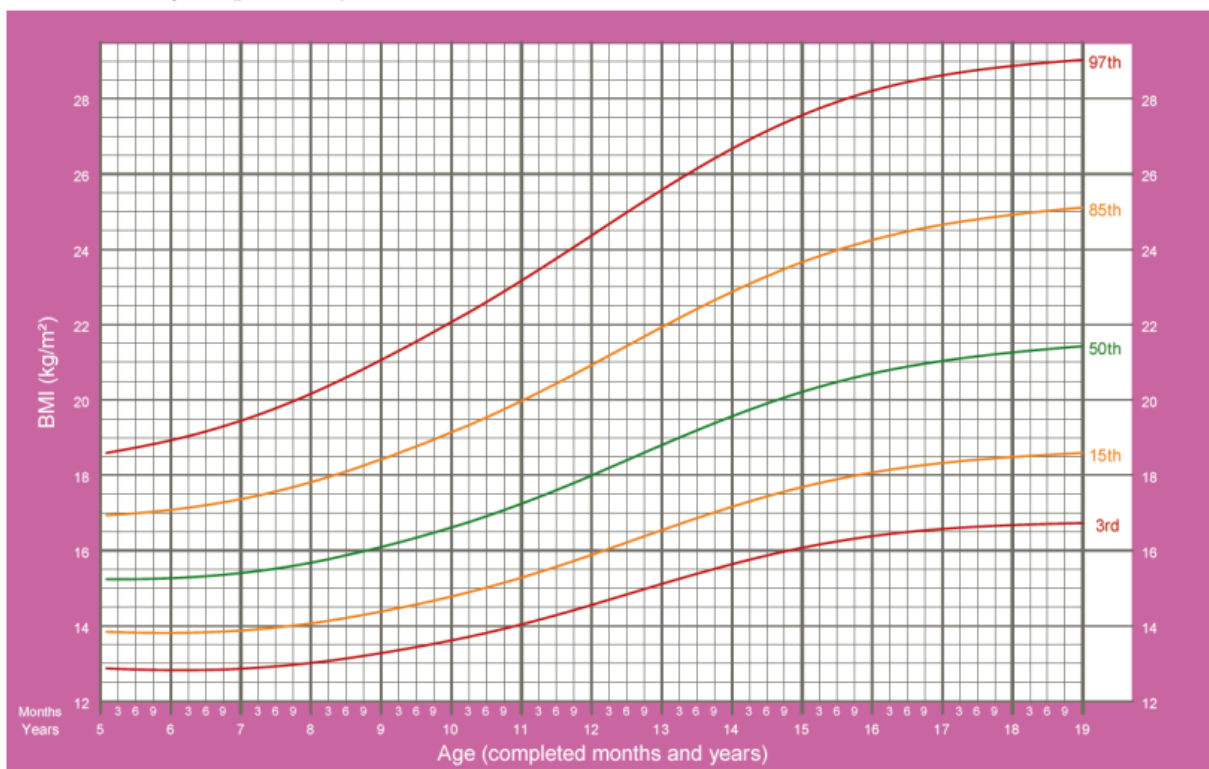
**QUESTION 2:****[33]**

Mr Maponya is a 40 year old male, with a weight of 106 kg, a height of 1.82 m and a waist circumference of 135 cm

- 2.1. Calculate and interpret his body mass index. (3)
- 2.2. Interpret Mr Maponya’s waist circumference measurement. (2)
- 2.3. You provide Mr Maponya dietary suggestions and as a result thereof, he tells you that he has lost 9 kg in the last three months. Calculate and interpret his percentage weight loss over three months. (3)
- 2.4. Thandi is Mr Maponya’s 8 year old girl who weighs 40 kg and is 1.55 m tall. Calculate and interpret her BMI with the use of the relevant WHO growth chart (BMI-for-age) (3)

**BMI-for-age GIRLS**

5 to 19 years (percentiles)



2007 WHO Reference



- 2.5. Complete the shortened food frequency questionnaire (FFQ) of a family member or friend. Submit the FFQ as you recorded it. (2)

**HINT:** Use the FFQ form attached in Addendum C of this tutorial letter as a template. Use the guidelines in Addendum B in study guide 1 on how to conduct a successful interview to help you complete the questionnaire.

- 2.6. In practice the shortened FFQ should always be done together with a 24-hour recall. Therefore, conduct a 24-hour recall with the same family member or friend referred to in question 2.6. Submit the 24-hour recall as you recorded it. Note that negative marking will apply, which means that a mark will be deducted if you leave out important information. For example, when recording "bread" as the type of food consumed, a mark will be deducted if you do not state whether it is white, brown or whole-wheat bread or even if you do not state the number of slices. Use the 24-hour recall form attached in Addendum C of this tutorial letter as a template. (10)

**HINT:** Use the tips on how to conduct a successful interview in addendum C of Study Guide 2 to assist you in conducting the interview and also refer to the section on 24-hour recalls on pages 543-544 of your textbook. Practice how to avoid asking leading or closed-ended questions.

- 2.7. Differentiate between a sign and a symptom with the use of an example. (No marks will be awarded for examples provided in your Study guide). (4)

- 2.8. Explain the role biochemical and clinical measurements play in the nutrition assessment process. (6)

### QUESTION 3:

[54]

- 3.1 At lunch time Mrs Hlabisa is having a whole-wheat roll with margarine, cold ham, salad and a glass of milk. Re-draw and complete the following table (grey blocks) in order to determine the macronutrient and energy content of what she is consuming. (12)

Food	Size	Exchanges	CHO (g)	Prot (g)	Fat (g)	Energy (kJ)
1 whole wheat bread roll	60g	2			-	
margarine	5g		-	-	5	
Cold ham	30g	1		7	3	
Mixed salad	1 cup			2	-	
Full cream milk	125ml		6	4		320

You take a diet history from Mr Maponya and this shows that his diet is currently providing 9195kJ and is made up of 375g carbohydrates, 72g protein and 42g fat.

- 3.2 Calculate the energy distribution of Mr Maponya's diet and show all calculations. (6)

- 3.3 Based on your answer from question 1.4.1, interpret the macronutrient distribution by comparing each nutrient's energy distribution to the Acceptable Macronutrient Distribution Ranges (AMDR) and then make recommendations to Mr Maponya accordingly. (6)
- 3.4 Which aspects of the guideline "enjoy a variety of food" make it difficult to implement?(3)
- 3.5. Name three of the health benefits of regular fish intake. (4)
- 3.6. Summarise the possible anticarcinogenic mechanisms of action of substances in vegetables and fruits (8)
- 3.7 Give four (4) practical recommendations on how people can increase their fruit and vegetable intake. (4)
- 3.8 The Dietary Reference Intakes (DRIs) contain four reference values. Write out the abbreviation of and explain the difference between the following 2 DRIs: EAR and the AI. (4)
- 3.9 Indicate whether the following statements are true or false. For each answer of "**false**", you need to explain **why** the statement is incorrect. (7)
- 3.9.1. The DRIs only consist of three reference values, including: EAR, RDA and AI
- 3.9.2. DRIs are ideal for direct use by the consumer.
- 3.9.3. DRIs are used to set guidelines for the formulation of new food products.
- 3.9.4 The DRI for folate if a woman is pregnant is 400mcg/day

**TOTAL MARKS: [130]**

## 14 ADDENDUM C: Shortened food frequency questionnaire (FFQ) template

Foods and drinks consumed		Frequency of food consumed (Make a tick next to your choice)								
Food	Specify type of food usually eaten	Once /day	2-3 x /day	4-5 x /day	6/more x /day	Once/ week	2-4 x /week	5-6 x /week	1-3 x /month	Never or less than once /month
<b>Milk and milk products</b>										
Milk (e.g. full-cream, 2%, low-fat, fat-free or skimmed)										
Yogurt										
Cheese										
Creamer (e.g. Cremora)										
Inkomasi										
<b>Meat, chicken, fish, eggs and other protein products</b>										
Eggs										
Chicken										
Fish (e.g. hake, herring, sole & kingklip – fried/not fried)										
Tinned fish (e.g. pilchards, sardines & tuna)										
Red meat (e.g. beef/minced meat/mutton)										
Pork										
Bacon										
Meat pie										
Processed meat (e.g. polony, viennas, salami, boerewors, Russians, sausages & canned meat)										
Cold meat (e.g. ham)										
Organ meats/tripe										
<b>Starches</b>										
Porridge (e.g. mieliepap, Maltabella or oats)										
Breakfast cereals										
Breads/rolls										

Starch vegetables, (e.g. potato, sweet potato, corn, peas & pumpkin)										
Starch (e.g. rice, pasta, samp & mieliepap)										
Legumes (e.g. soya, dried beans, peas & lentils)										
Vetkoek										
Mageu										
<b>Fruit and vegetables</b>										
Fruit										
Vegetables										
<b>Fats and oils</b>										
Nuts										
Peanut butter										
Margarine/ butter										
Oil										
<b>Sugar, snacks, sweets and treats</b>										
Sugar										
Chocolates										
Sweets										
Cakes										
Tarts										
Biscuits/cookies / rusks										
Chips										
<b>Drinks</b>										
Juice										
Cold drinks										
Other drinks (e.g. tea & coffee)										
Alcohol										
<b>Other</b>										
Sauces or gravy										
Condiments (e.g. jam, Marmite, syrup & honey)										
Takeaways										

