

EXAMINATION QUESTION PAPER: Reassessment, 2014

Module code:	DI6061
Module title:	Applied Dietetics and Nutrition
Module leader:	Sarah Illingworth

Date:	July/August 2014
Duration:	2 hours

Exam type:	Seen, Closed
Materials supplied:	Weight, Height, Body Mass Index Charts, Henry Equation and standard adjustments
Materials permitted:	Writing materials, calculator
Warning:	Candidates are warned that possession of unauthorised materials in an examination is a serious assessment offence.

Instructions to candidates:	<p>Before starting the paper candidates are required to read all of the questions carefully.</p> <p>Candidates are required to answer ALL FOUR QUESTIONS making sure that they address all sections in the questions you answer</p> <p>Answer each question in a separate booklet</p> <p>DO NOT TURN PAGE OVER UNTIL INSTRUCTED</p>
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QUESTION ONE

Jake is a 16 year old adolescent who is referred to dietetic outpatients following a recent diagnosis of type 2 diabetes. He is currently studying for his A levels.

He walks to college, which takes 10 minutes from his house, and this is the only exercise that he routinely undertakes.

Jake weighs 89 kg and his height is 1.67 m. His blood pressure is 132/76mmHg

His recent blood results are:

Total Cholesterol	5.8mmol/L (2.5-5.5 mmol/l)
LDL Cholesterol	3.7mmol/L (0.89-2.05 mmol/l)
HDL	0.9mmol/L (0.89-2.05 mmol/l)
Triglycerides	3.2 mmol/L (0.5-2.2 mmol/l)
Fasting Blood Glucose:	7.6 mmol/L (4.0-5.5 mmol/L)
HbA1c	9.9% (4-6.5%)

A 24 hour recall reveals the following:

11.00am:	2 large flapjacks and a large mug of hot chocolate (
13.00:	A large portion of chips and 2 battered sausages Can of energy drink
Mid-Afternoon:	2 finger KitKat and a 330ml can of coke
19.00:	A large plate of Chicken pie new potatoes, peas and gravy Large bowl of sponge cake and custard Water

From the information you have available, undertake a nutritional assessment. Include a quantitative and qualitative dietary assessment of his energy and protein intake.

Include an estimation of John's requirements for energy, protein and fluid over a 24 hour period.

Indicate any additional information you may require to undertake a complete nutritional assessment.

QUESTION TWO

Mrs Jones is 78 years old and has been living in a nursing home for the past three years. She suffered from a cerebrovascular accident (CVA) which left her unable to swallow and reliant on a gastrostomy tube feed as her sole source of nutrition. She is wheelchair bound and dysphasic.

Six months ago, the staff in the nursing home noticed an improvement in Mrs Jones functional ability and she was referred to the speech and language therapist for an assessment of her ability to swallow food and drink.

After an initial assessment of her swallow, the speech and language therapist recommended that Mrs Jones should have a thin pureed dysphagia diet (texture B) and thickened fluids (stage 3) and reviewed her on a regular basis. More recently, under the speech and language therapist's guidance she is currently managing a thick pureed dysphagia diet (texture C) and fluids thickened to a syrupy consistency (stage 1).

Her weight is currently 60 kg and her height is approximately 1.5m. When she was admitted to the nursing home 3 years ago, she weighed 45 kg and has steadily gained weight since. Before she started to eat, 6 months ago she weighed 57 kg.

She is afebrile and has been prescribed the anti-platelet drug clopidogrel, 75 mg once daily and 40 mg simvastatin once daily. She opens her bowels on a daily basis and her skin condition is intact.

Her recent blood biochemistry is

Sodium	138 mmol/L, (135-145 mmol/L)
Potassium	3.8 mmol/L, (3.4 - 4.9 mmol/L)
Urea	4.6 mmol/L, (2.5-8.0 mmol/L)
CRP	1 mg/L (<10 mg/L)
Creatinine	110 µmol/L (40-130 µmol/L)

She is currently receiving 1500 mls of a 1 kcal/ml fibre enriched feed at 125 mls/hour for twelve hours overnight with additional flushes of water. She is having ~2100 mls fluid via the gastrostomy tube over 24 hours.

Her average oral intake over 24 hours is:

- 2 tablespoons of pureed porridge made with full fat milk
- 3 tablespoons of a smooth thick and creamy yogurt
- 60 mls of thickened orange juice
- 1 tablespoon of smooth mashed potato pureed with gravy
- 1 tablespoon of pureed meat
- 2 tablespoons of fruit pureed with custard
- 300 mls thickened water

The nursing staff are concerned about her slow but continuous weight gain and have asked for a dietetic review to reduce her feed in light of the fact that she is eating.

- a) Describe a suitable nutritional care plan to meet the patient specific goals you have set. Justify your answers. (80%).**
- b) State how you will monitor your patient. Justify your monitoring plan (20%)**

QUESTION THREE

Mr Regan is a 42 year old gentleman who has been under the care of the gastroenterologist for 4 years due to his progressive alcohol and drug related liver disease. At a recent clinic appointment he has been informed that his as a result of his cirrhosis he now has decompensated liver disease. He has moderate ascites and mild steatorrhoea (bowels open 6 times per day). He is unemployed and lives alone, but family members live close by. He stopped alcohol and drugs 3 months ago.

Mr Regan is 1.8 m tall and 65 kg. His dry weight 6 weeks ago was 66 kg. He is apyrexial and reports a reduced appetite over the past 2 months.

His most recent biochemistry results are:

Sodium	135 mmol/l	(135-145 mmol/l)
Potassium	3.9 mmol/l	(3.4 - 4.9 mmol/l)
Urea	7.2 mmol/l	(2.5-8.0 mmol/l)
Creatinine	110 µmol/l	(40-130 µmol/l)
Albumin	29 g/l	(40-52 g/l)
Bilirubin	35 µmol/l	(3-22 µmol/l)
Gamma Glutamyl Transpetidase	44 U/l	(<36 U/l)
Alkaline Phosphatase	276 U/l	(80-280 U/l)
Alanine Transaminase	53 U/L	(3-55 U/l)

Medications include Diazepam, Spironolactone and Lactulose.

A 24-hour recall reveals the following:

Breakfast:	No food. 2 mugs of tea + semi-skimmed milk + 2 tsp sugar.
Mid morning:	Crisps. Mug coffee + semi-skimmed milk + sugar
Lunch	Can chicken soup + 1 slices white bread + butter Mug of tea as above.
Mid Afternoon:	2 chocolate digestive biscuits. Mug coffee as above.
Supper	Small portion oven chips + 1 sausage + small tin beans. Mug of tea as above.
Bed	Mug of tea as above. 4 cheddar crackers with cheddar cheese.

Mr Regan has been referred to your outpatient clinic for nutrition support and dietary advice for his steatorrhoea.

- a) **Explain the difference between compensated and decompensated liver disease. (20%)**
- b) **Conduct a nutritional assessment of this patient. Include calculations of Mr Regan's daily requirements for energy and protein. Include a qualitative assessment of his nutritional intake. (80%)**

QUESTION FOUR

Ms Kennedy a 39 year old advertising executive who has been recently diagnosed with irritable bowel syndrome (IBS). She has been referred to you by her GP for dietary advice. She suffers from frequent bouts of constipation and feels bloated a lot of the time. These symptoms are making her feel quite unhappy. Ms Kennedy is very busy in her job, often working long hours. As a result she frequently eats her lunch quickly at her desk and does not have supper until 10 pm. She regularly finds it difficult to sleep at night. She occasionally goes for a swim when she has the time and eats out 2-3 times a week. Her GP prescribed her Fybrogel 3 months ago.

Her weight is 62 and height is 1.68 kg. Her weight has been stable for the past 3 years.

A 24 hour recall reveals the following:

Breakfast:	1 croissant or 2 slices of white toast + olive oil spread + jam 4/7+ 2 mug of black coffee, skips breakfast 3/7
Mid Morning:	1 Mug black coffee + 2 chocolate biscuits 2/7 or banana 3/7 or coffee alone 2/7
Lunchtime:	Baguette with cheddar cheese + tomato or tuna + mayonnaise 2/7, soup (chicken or tomato) + roll with olive oil spread 3/7 skips lunch 2/7 1 low fat yoghurt
Afternoon:	Packet of crisps + diet coke
Supper:	Ready-made chicken lasagne + oven chips + peas or ready- made spaghetti bolognese + small green salad, or sausages + mash + broccoli. Eats out 2/7 e.g. Lime and coriander cous cous, pan fried chicken breast in a restaurant. ½ bottle of wine 5/7

- What is the first-line lifestyle and dietary advice that you would give to Ms Kennedy at her initial appointment? (70 %)**
- What further advice could you give Ms Kennedy at her next appointment should her constipation and bloating persist? (30%)**