

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Winter Examinations 2016

Module Title: Clinical Nutrition

Module Code: BIOL 8001

School: Biological Science

Programme Title: Bachelor of Science (Honours) in Herbal Science – Year 4

Programme Code: SHERB_8_Y4

External Examiner(s): Dr. Eibhlís O'Connor

Internal Examiner(s): Dr. Aoife McCarthy

Instructions: Answer question 1 and two other questions.
All questions carry equal marks.

Duration: 2 Hours

Sitting: Winter, 2016

Requirements for this examination: Calculator

Note to Candidates: Please check the Programme Title and the Module Title to ensure that you have received the correct examination paper.
If in doubt please contact an Invigilator.

Answer **Question 1** and **two other** questions.

Q1: Write a **short note** on **four** of the following: [20 marks]

- (a) Screening for malnutrition in hospital patients
- (b) Health consequences of anorexia nervosa
- (c) Dietary prevention of osteoporosis
- (d) Dietary management of cystic fibrosis
- (e) Renal replacement therapy

Q2: Case study. A 56-year old Irish man is to undergo surgery for the removal of an oesophageal cancerous tumour. Following surgery, complete rest of the oesophagus has been advised. The patient will also receive chemotherapy. The following anthropometric data is available for the patient - height 165cm, usual weight 220lbs, present weight 190 lbs. The patient is described as being moderately stressed. His body temperature is 37.2°C, respiratory rate is 20 breaths per minute and tidal volume is 550ml.

$$\text{RMR (kcal/day)} = (\text{BSA} \times 940) - (\text{age in yrs} \times 6.3) + (\text{T} \times 104) + (\text{RR} \times 24) + (\text{Vt} \times 804) - 4243$$

$$\text{RMR (kcal/day)} = (\text{HBE} \times 0.85) + (\text{Vt} \times 33) + (\text{Tm} \times 175) - 6433$$

$$\text{BSA} = 0.20247 \times \text{height (m)}^{0.725} \times \text{weight (kg)}^{0.425}$$

$$\text{HBE (BMR, males)} = 66 + (13.7 \times \text{weight in kg} + (5 \times \text{height in cm}) - (6.8 \times \text{age years}))$$

- (a) Calculate the patient's BMI, % weight loss, IBW and adjusted body weight. [8 marks]
- (b) Calculate the post-operative energy, protein and fluid requirements for this patient. [6 marks]
- (c) Suggest a suitable feeding method for this patient. Provide a reason for your answer. [3 marks]
- (d) Outline the nutrition-related side effects of chemotherapy. [3 marks]

Q3: Write an essay on diabetes mellitus under the following headings:

- (a) Diagnosis [5 marks]
- (b) Complications associated with uncontrolled diabetes [7 marks]
- (c) Dietary advice for diabetic patients [8 marks]

Q4: Write an essay on the role of atherosclerosis in the aetiology of cardiovascular disease.

In your essay, include a description of the development of an atherosclerotic plaque, impact on cardiovascular health and protecting against atherosclerosis. [20 marks]