



FACULTY OF CULINARY ARTS

FINAL EXAMINATION

MARKING SCHEME

Subject Code & Name : **CUL1553 : NUTRITION**
Semester & Year : September -December 2018
Lecturer/Examiner : Haryati Abu Husin
Duration : 3 Hours

Total Number of pages = 6 (Including the cover page)

PART A : SHORT ANSWER QUESTIONS (20 MARKS)

INSTRUCTION(S) : **TWO (2)** short answer questions. Answer **ALL** questions in the Answer Booklet(s) provided.

1. Discuss the functions of food labeling in food product. (10 marks)

(Each point worth 1 mark, max = 4 marks; explanation for each point worth 2.5 mark)

- **To inform the customers the nutrients value of the product.**
- **As one of the marketing tool to attract consumer to buy the product.**
- **To give the customer vital information regarding the product.**
- **To guide consumer on healthy eating by stating the number of servings in the product.**
- **To allow customer to be well informed about the ingredients that may cause allergies in the product.**

2. Discuss **FOUR (4)** characteristics of a nutritious diet. (10 marks)

* **Adequate**

Enough kcalories, essential nutrients, and fiber to keep a person healthy.

* **Balanced**

Provide kcalories, essential nutrients, and fiber in the right proportions.

* **Moderate**

Avoids excess amounts of kcalories or any particular food or nutrient.

* **Varied**

Wide selection of foods are chosen to get necessary nutrients.

-each points worth 1 mark, explanation worth 1.5 marks each .

END OF PART A

PART B : SCENARIO QUESTIONS (60 MARKS)

INSTRUCTION(S) : TWO (2) scenario questions. Answer ALL questions in the Answer Booklet(s) provided.

Answer these questions based on the scenario below:

SCENARIO QUESTION 1

Valentine a 60 year-old retired high school teacher, was admitted to the hospital last week due to excessive dehydration and hypoglycemia. Her blood glucose level was 3.4mg/dl. She has a family history of having diabetes.

Recently, before she was admitted, she was advised by the doctor to monitor her blood glucose as her blood glucose was high and she was given insulin to help lower the blood glucose. The doctor suggested she reduce her weight, as her BMI was at the border line. Because of that, she limited her consumption of food and hardly took any breakfast.

1. After being discharged, she was told to check her blood glucose everyday and the insulin volume taken was reduced.
2. Based on the information given, discuss Valentine's health issues. (10 marks)
 - **Dehydration(1 mark)- less amount of liquid, in body(1 mark) as being an elderly she might reduce her water intake, as afraid that she might urinate often(1 mark) = Total 3 marks**
 - **Hypoglycemia (1 mark)- cases happen mostly in diabetic patient who took insulin but refuses to eat food (3 marks), as insulin level high(1 mark) glucose level low(1 mark) will lead to lack of energy in body(1 mark) = total 7 marks**
3. What can Valentine do to overcome this problem? (10 marks)

Example of points :

 - **Cook own food, healthier – less oil and salt and sugar (2 marks) Don't skip meal (1 mark)**
 - **More intake of vegetables and less sweet fruits (2 marks)**
 - **Monitor glucose level, before and after on daily basis (before taking insulin, as to ensure glucose level consistent (3 marks)**
 - **Drink plenty of water at least 2.7 L or 8 glasses per day (2 marks)**

3. Design **ONE (1)** complete lunch recipe (main meal) suitable for Valentine. (10 marks)

One recipe; Ingredients =5 marks ; Methods= 5 marks

SCENARIO QUESTION 2

Kat is five year-old kindergarten child who was diagnosed with diabetes since she was an infant. She is an active kid where most of the time she will be playing with her friends.

Her mother, Jessy was instructed by the doctor to put her on a low intake of processed carbohydrates and concentrate on high amounts of vegetables and fruits.

Currently, Kat has low weight and has to rely on insulin injections. This has affected her active behaviour.

1. Design a recipe for breakfast for Kat based on her condition. (10 marks)
One recipe; Ingredients =5 marks; Methods= 5 marks # recipe should include as much as vegetables and whole grain as possible. #

2. Based on the information given, suggest how you can help Kat's mother help Kat in gaining her weight, thus helping Kat to become more active. (10 marks)

Example of points:

- **Schedule the mealtime and making sure Kat eat accordingly.**
 - **Meal for Kat should consist of high fibre food.**
 - **Time the injection of insulin 1 hour before mealtime.**
 - **Make sure Kat able to play with her friend, despite of her condition.**
 - **Increase the intake fruits as a replacement for sugar intake.**
 - **Schedule the playtime as it will allow Kat know when she has to rest.**
- (any 4 of above points = 6 marks; explanation for points , each 1 marks)

3. Elaborate how diabetes type 1 and 2 occurs. (10 marks)

☞ Type 1 Diabetes

Seen mostly in children and adolescents- (1 mark) insulin injections (1mark) are needed because the person makes none (1 mark), less than 10% of persons (1 mark) with diabetes have Type I. It is known as juvenile diabetes (1 mark).

☞ Type 2 Diabetes

Seen in older, usually obese adults (1 mark) these adults make insulin but their tissues aren't sensitive enough to insulin (1 mark), treatment is with diet (1

mark), weight reduction when needed (1 mark) exercise, and sometimes oral medications that improve the body's sensitivity to insulin (1 mark).

END OF PART B

PART C : ESSAY QUESTIONS (20 MARKS)

INSTRUCTION(S) : ONE (1) essay question. Answer ALL questions in the Answer Booklet(s) provided.

1. Current nutritional trend has shifted to the focus on the higher consumption of vegetables and fruits; lower consumption of fat content in the diet. Health care experts and nutritionists have concluded that too much of fatty food consumption will increase the number of obesity and heart diseases cases. This will eventually lead to more severe health issues such as cancer.

State your opinion whether you agree or disagree with the changes in the meal patterns (based on high consumption of vegetables and fruits; lower amount of fat in diet). Justify your opinion with relevant information and facts. (20 marks)

Listing max 5marks: each point =1 marks ; elaborations of points = 4 marks

Example of Points :

Agree

- **Content of saturated fat and cholesterol**
- **Lead to more severe cases of oxidization of cell(LDL and VLDL)**
- **Accumulation of sat. fat and cholesterol in blood vessel → cases of atherosclerosis**
- **Cancer cases high , causes by all the free radical (by LDL oxidization)**

Disagree

- **Unsaturated fat → could protect heart, and cell oxidization**
- **For transportation vitamins (soluble in fat)**
- **For calcium and Vit D absorption**
- **Each cell requires fat as one of the component of membrane cell.**

END OF EXAM PAPER