



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020**

COURSE NAME : INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY
COURSE CODE : BWD 10302
PROGRAMME CODE : BWD
EXAMINATION DATE : DECEMBER 2019/JANUARY 2020
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

- Q1** Nutrients are compounds in foods essential to life and health.
- (a) List **TWO (2)** categories of nutrients. (2 marks)
 - (b) Differentiate between the two categories of nutrients listed in **Q1(a)**. (6 marks)
 - (c) Tabulate the nutritive value of **TWO (2)** minerals which include the information below:
 - (i) Reference Daily Intake (RDI) for male and female.
 - (ii) Function, deficiencies and
 - (iii) **TWO (2)** food sources for each type of minerals. (12 marks)
- Q2** Suhaila, who is 18 years old, works as a cashier at Wellmart supermarket. She has a small body with a height of 150 cm and weighs 70 kg. Suhaila wants to know whether her weight is ideal and she had practiced proper diet. In order to provide the information to Suhaila,
- (a) Define BMI and BMR. (4 marks)
 - (b) Determine the daily calorie needed for Suhaila using Harris Benedict formula. (6 marks)
 - (c) Based on the answer in **Q2(b)**, outline **FIVE (5)** meals plan for a day and a suitable physical activity for Suhaila. (10 marks)
- Q3** Metabolism refers to biochemical processes that involved in maintaining the living state of the cells. Metabolism can be divided into two categories that are catabolism and anabolism.
- (a) Define catabolism and anabolism. (4 marks)
 - (b) List **FOUR (4)** types of catabolic and anabolic hormones. (8 marks)
 - (c) Based on the answer in **Q3(b)**, describe **ONE (1)** role of each hormone. (8 marks)

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- Q4** There are terms and concepts being used and applied in food industry to improve people's understanding on this field.
- (a) Differentiate between food technology and food engineering. (4 marks)
 - (b) Explain **TWO (2)** differences between food formulation and food functionality and state **ONE (1)** example for each difference. (4 marks)
 - (c) Discuss **THREE (3)** importance of good manufacturing practices (GMP) in food manufacturing industries. (12 marks)
- Q5** Food preservation is a process of treating and handling food. The food is processed, preserved, packaged and stored according to the specifications by industry and government.
- (a) Describe **TWO (2)** principles of food preservation. (4 marks)
 - (b) Compare and contrast between drying and dehydration of preservation methods. (6 marks)
 - (c) Suggest and discuss **TWO (2)** modern preservation methods that are suitable for perishable product. (10 marks)

-END OF QUESTIONS-

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