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**KOLEJ YAYASAN PELAJARAN JOHOR  
ONLINE FINAL EXAMINATION**

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**COURSE NAME : FOOD NUTRITION**  
**COURSE CODE : DCA1083**  
**EXAMINATION : DECEMBER 2021**  
**DURATION : 3 HOURS**

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**INSTRUCTION TO CANDIDATES**

1. This question paper consists of **THREE (3)** parts :  
PART A (20 Marks)  
PART B (60 Marks)  
PART C (20 Marks)
2. Please refer to the detailed instructions in this question paper.
3. Answer ALL questions in the answer sheet which is A4 size paper  
(Or other paper with the consent of the relevant lecturer).
3. Write your details as follows in the upper left corner for each answer sheet:
  - i. Student Full Name
  - ii. Identification Card (I/C) No.
  - iii. Class Section
  - iv. Course Code
  - v. Course Name
  - vi. Lecturer Name
4. Each answer sheet must have a page number written at the bottom right corner.
5. Answers should be **neat and clear in handwritten form**.

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**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO**

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*This examination paper consists of 12 printed pages including front page*

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**PART A**

This part consists of **TWENTY (20)** questions.

Answer ALL questions in Answer Sheet.

1. The BMI (Body Mass Index) range shown below indicate that he is \_\_\_\_\_.



Figure 1

- A** obese  
**B** normal  
**C** overweight  
**D** underweight
2. Our body \_\_\_\_\_ is generated from the excess amount of energy \_\_\_\_\_.
- A** fat, energy  
**B** calorie, energy  
**C** protein, energy  
**D** kilocalorie, nutrient
3. The primary energy provided to fuel sports activity is provided by \_\_\_\_\_.
- A** dietary carbohydrates  
**B** protein supplementation  
**C** dietary polyunsaturated fats  
**D** daily vitamins and minerals intake
4. What is the specific enzyme released during the digestion of fat?
- A** Lipase.  
**B** Pepsin.  
**C** Amylase.  
**D** Gelatinase.

5. Total energy expended through metabolic processes and physical activities is more than calorie intake from food cause our body to \_\_\_\_\_ weight.

- A lose
- B gain
- C maintain
- D fluctuate

6. Which organ in the human digestive system below is involved in the secretion of insulin?

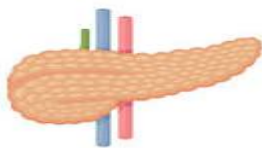
A



B



C



D



7. Which organ is involved in the secretion of amylase enzyme during the digestion process?

- A Mouth.
- B Stomach.
- C Small intestines.
- D Large intestines.

8. Which important mineral is needed by our body to generate red blood cells?

- A Iron.
- B Sodium.
- C Calcium.
- D Magnesium.

9. About how much of your plate should be protein?
- A One half.
  - B One quarter.
  - C Three quarters.
  - D All of the above.
10. Sugar in fruits is commonly known as \_\_\_\_\_.
- A Maltose
  - B Lactose
  - C Sucrose
  - D Fructose
11. \_\_\_\_\_ is an estimation of the energy required for activities shown in the Figure 2.



Figure 2

- A 20% - 35%
  - B 30% - 50%
  - C 50% - 65%
  - D 60% - 75%
12. Which condition is caused by a Vitamin D deficiency among elderly?
- A Scurvy.
  - B Rickets.
  - C Marasmus.
  - D Osteomalacia.

13. A diet high in saturated fat can be linked to

- i. Stress
- ii. Stroke
- iii. Kwashiorkor
- iv. Heart disease

- A i, ii
- B i, iii
- C ii, iv
- D i, ii, iii

14. How many calories are found in one gram of carbohydrate?

- A 2
- B 4
- C 9
- D 12

15. Based on the **Figure 3**, the percentage of glycemic index shown in the food label indicate that the food have \_\_\_\_\_ glycemic level.



**Figure 3**

- A low
- B high
- C medium
- D very high

16. Which nutrient supplies calories per gram more than carbohydrates?

- A Fat.
- B Water.
- C Protein.
- D Vitamin.

17. Which food is considered as incomplete protein?
- A Fish.
  - B Quinuo.
  - C Red bean.
  - D Chia seed.
18. The amount of protein needed by children who age 4 until 8 years old is \_\_\_\_\_ grams per kilogram of body weight.
- A 0.80
  - B 0.85
  - C 0.90
  - D 0.95
19. Eating large amounts of animal based protein will increase the \_\_\_\_\_ in the body.
- A linoleic acid
  - B linolenic acid
  - C saturated fats
  - D unsaturated fats
20. Which of the followings are the functions of protein?
- i. As a messenger
  - ii. To work as enzymes
  - iii. As a defensive mechanism
  - iv. As a main sources of energy for metabolism
- A i, ii
  - B i, iii
  - C ii, iv
  - D i, ii, iii

[20 MARKS]

**PART B**

This part consists of **TEN (10)** questions.

Answer ALL questions in Answer Sheets.

**QUESTION 1**

Haziq is a soccer player and he wants to be physically fit before the final games. Therefore, it's important for him to keep track of his calorie intake on a regular basis in order to prevent gaining weight.

Based on the information given below, answer the following questions:

1 kg	=	2.2046 pound
Gender	=	11 for male 10 for female
Activity	=	20% for light 30% for sedentary 40% for moderate 50% for active

**Table 1**

If Haziq's weight is 73 kilogram, assess his energy expenditure for:

- Basal metabolism. (3 marks)
- Physical activity. (2 marks)
- Absorption and digestion and total calorie need per day. (3 marks)

**QUESTION 2**

- a. Give another name for sugar. (1 mark)
- b. Distinguish between **two (2)** types of carbohydrates. (2 marks)
- c. How does constipation can be prevented or treated? (2 marks)

**QUESTION 3**

- a. Describe **one (1)** difference between two types of amino acids. (1 mark)
- b. Give **two (2)** differences between complete and incomplete protein. (2 marks)
- c. Classify **two (2)** types of diseases related with protein deficiencies. (2 marks)

**QUESTION 4**

- a. Clarifying the concept of fat rancidity. (1 mark)
- b. Distinguish **two (2)** advantages of good fats to human body. (2 marks)
- c. Discover the function of lipoprotein in human body. (2 marks)



**QUESTION 5**

- a. Describe the concept of energy balance. (2 marks)
- b. Discover **two (2)** types of sedentary activities that commonly done by people. (2 marks)
- c. Give **two (2)** examples of body activities that required 50% – 65% of energy expenditure. (2 marks)

**QUESTION 6**

- a. Find the factor that cause a person to be underweight. (1 mark)
- b. Clarify the similarity between Anorexia Nervosa and Bulimia Nervosa. (1 mark)
- c. Explain **two (2)** factors that cause a person's BMI to be higher than 30. (2 marks)
- d. People who are obese and are unable to achieve adequate weight loss with diet and exercise is able to go to other options such as taking drugs (medicine) and weight-loss surgery as prescribed by the doctor. However, for certain types of conditions, people also have the surgery for the aesthetic purposes.

Hence, compare **two (2)** types of surgery involved as mentioned above.

(4 marks)

**QUESTION 7**

- a. Use your experience of health to define fitness. (1 mark)
- b. Discover at least **one (1)** component in sport drinks. (1 mark)
- c. Predict **three (3)** benefits of being physically fit. (3 marks)

**QUESTION 8**

- a. Indicate at least **one (1)** nutrient that infant need the most. (1 mark)
- b. Explain the benefits of Iron and Calcium for adolescence. (2 marks)
- c. Compare the advantages of breast milk with formula milk. (2 marks)

**QUESTION 9**

- a. Classify **three (3)** commonly used age groups in human life cycle. (3 marks)
- b. Discover at least **four (4)** physiological changes happened to the elderly during aging process. (2 marks)
- c. What should an older adult do when they have special health issues such as deterioration of senses like taste and smell? (1 mark)

d. Choose **one (1)** breakfast food that is considered healthier for adults.

(1 mark)

#### QUESTION 10

a. What is the example of food that high in antioxidant?

(1 mark)

b. Discover the relationship between the free radical and antioxidant.

(2 marks)

c. Find out **two (2)** factors that cause the generation of free radicals.

(2 marks)

d. Choose **one (1)** side effect of free radicals to human body.

(1 mark)

**[60 MARKS]**

**PART C**

This part consists of **THREE (3)** questions.

Answer ALL questions in Answer Sheet.

**QUESTION 1**

Based on your understanding, illustrate a complete process of human eating behaviour.

(10 marks)

**QUESTION 2**

Overweight and obesity can cause problems like perception and prejudices from others. They might suffer embarrassment and eventually affect their psychological health. Things that make it worst when it's also affect their health. Hence, you must prepare a full set of weight-loss-friendly menus (breakfast, lunch and dinner). The menu you're given should be focused on your knowledge of weight-loss strategies.

(6 marks)

**QUESTION 3**

a. How can you stay healthy as you grow older?

(2 marks)

b. Present **two (2)** points that shows that calcium and vitamin D are really important for the elderly.

(2 marks)

**[20 MARKS]**

**END OF QUESTION PAPER**