



**KOLEJ YAYASAN PELAJARAN JOHOR
FINAL EXAMINATION**

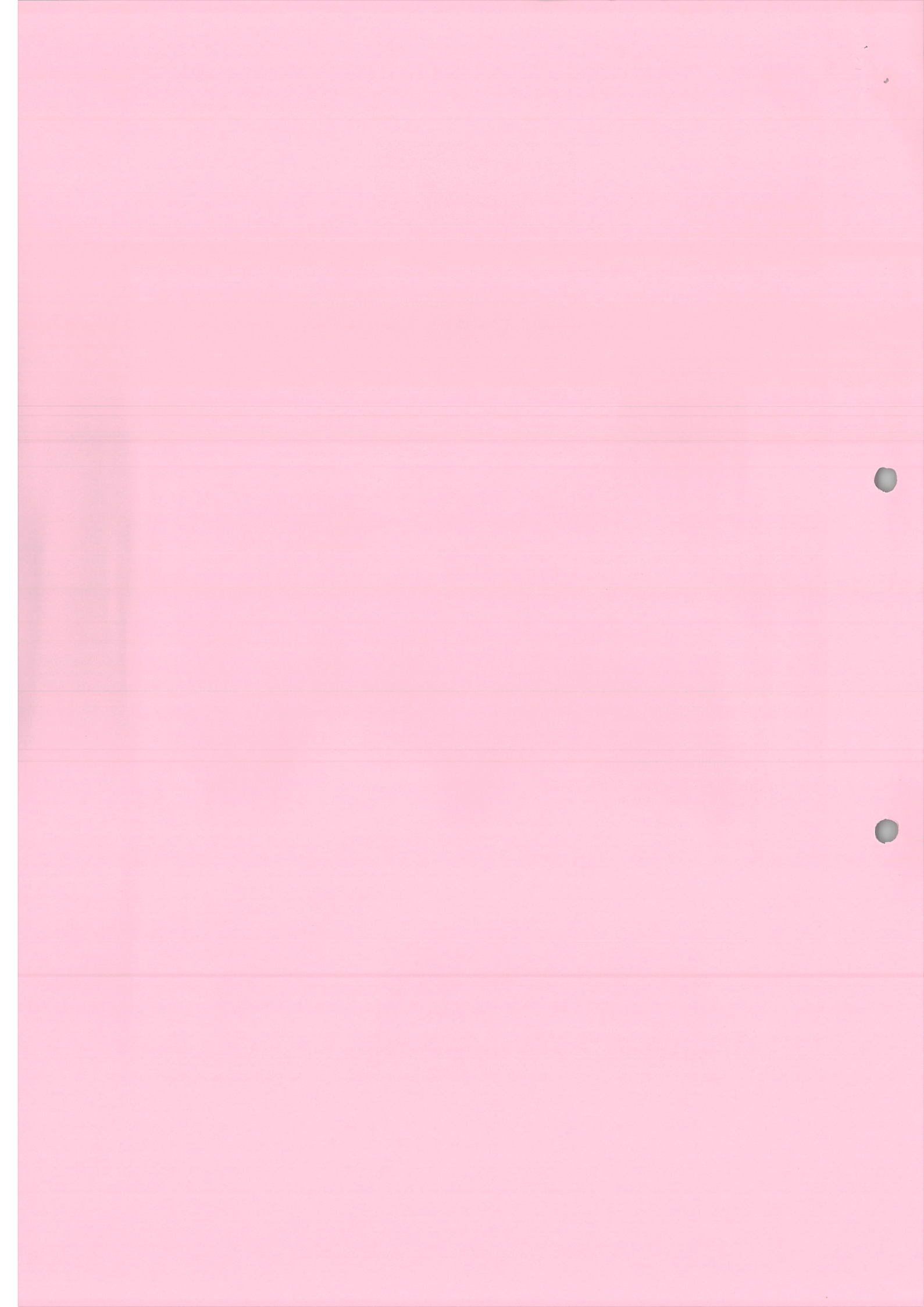
COURSE NAME : FOOD NUTRITION
COURSE CODE : DCA1073/DCA1083
EXAMINATION : JANUARY 2024
DURATION : 3 HOURS

INSTRUCTION TO CANDIDATES

1. This question paper consists of **THREE (3)** parts :
 - PART A (30 Marks)
 - PART B (40 Marks)
 - PART C (30 Marks)
2. Candidates are not allowed to bring any material to examination room except with the permission from the invigilator.
3. Please check to make sure that this examination pack consist of:
 - i. The Question Paper
 - ii. An Objective Answer Paper
 - iii. An Answering Booklet

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

This examination paper consists of 13 printed pages including front page.



PART A

This part consist of **THIRTY (30)** questions.

Answer ALL in Objective Answer Paper.

1. How many calories in 1 gram of carbohydrate?
 - A. 3 calories
 - B. 4 calories
 - C. 5 calories
 - D. 9 calories

2. The four characteristics of a nutritious diet are varied, moderate, balanced and _____.
 - A. diet
 - B. calorie
 - C. adequate
 - D. energy out

3. If the Body Mass Index (BMI) is between 20-24, it means the person is
 - A. normal
 - B. obesity
 - C. overweight
 - D. underweight

4. Below are the factors that influence people to choose the food they eat **EXCEPT**
 - A. hobby
 - B. flavour
 - C. culture and religion
 - D. environmental concerns

5. 1 gram of protein supplies _____ calories.
 - A. 3
 - B. 4
 - C. 5
 - D. 9

6. Monosaccharides mean single sugar that consists of _____.
- A. glucose
 - B. fructose
 - C. sucrose
 - D. galactose
7. Double sugar is also known as
- A. disaccharides
 - B. polysaccharides
 - C. oligosaccharides
 - D. monosaccharides
8. Sucrose is a combination of _____.
- A. glucose + glucose
 - B. glucose + fructose
 - C. glucose + galactose
 - D. galactose + fructose
9. Lactose is a combination of _____.
- A. glucose + glucose
 - B. glucose + fructose
 - C. glucose + galactose
 - D. galactose + fructose
10. Below is the problems with high sugar diet **EXCEPT**
- A. obesity
 - B. diabetes
 - C. headache
 - D. dental carries

11. Protein contains _____ blocks of Amino Acids.

- A. 9
- B. 10
- C. 11
- D. 20

12. Protein are made from _____ .

- A. carbon and oxygen
- B. carbon and hydrogen
- C. carbon, hydrogen and oxygen
- D. carbon, hydrogen, oxygen and nitrogen

13. Too little of protein intake will cause problem such as Kwashiorkor. Symptom of kwashiorkor is like below **EXCEPT**

- A. underweight
- B. retarded growth
- C. edema (swelling)
- D. skin rash and loss of hair color

14. Non essential amino acid contain _____ blocks of non essential amino acid that can be made in the body

- A. 9
- B. 10
- C. 11
- D. 12

15. Complete protein is a protein that provides all the essential amino acids that are needed by the body. Examples of complete proteins are

- i. fish
- ii. milk
- iii. poultry
- iv. dried beans and peas

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

16. Below is the functions of lipid **EXCEPT**

- A. store energy.
- B. needed for growth.
- C. provide insulation for the body.
- D. used for building and maintaining body tissues.

17. To prevent rancidity of fat, keep them in a _____.

- i. freezer
- ii. refrigerator
- iii. room temperature
- iv. tightly sealed in cool dark place.

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

18. Lipoprotein has a few component **EXCEPT**

- A. Lecithin
- B. Cholesterol
- C. Triglycerides
- D. Phospholipids

19. Hydrogenation is a process of adding hydrogen atoms to carbon atoms in oil.

What is the product that applied the hydrogenation practice in the food industry?

- A. Butter
- B. Cheese
- C. Margarine
- D. Mayonnaise

20. Too much-saturated fat is the primary contributor to high blood cholesterol levels.

Another effect of having too much saturated fat is

- A. heart disease
- B. digestive problem
- C. unbalanced hormonal
- D. weakness in immune system

21. The following vitamins are water-soluble vitamins except

- A. Folate
- B. Retinol
- C. Thiamin
- D. Riboflavin

22. Deficiency symptoms of vitamin A or Retinol is

- A. pellagra
- B. rickets in children
- C. weight loss and weakness
- D. night blindness and blindness

23. Below is the dietary sources of Vitamin D **EXCEPT**

- A. sunshine
- B. fatty fish
- C. vegetable oil
- D. fortified milk and cereal

- Beri-beri
- Weight loss
- Weakness

24. The statement above is the symptoms deficiency of vitamin _____.

- A. Folate
- B. Retinol
- C. Thiamin
- D. Riboflavin

25. Vitamin A, D, E, K is in the group of _____.

- A. water
- B. trace mineral
- C. fat soluble vitamins
- D. water soluble vitamins

26. Calcium and chloride is the example of _____.

- A. soluble fat
- B. insoluble fat
- C. major minerals
- D. trace minerals

- Needed for digestion and absorption
- Helps maintain a normal temperature
- An important part of body lubricants

27. The statement above is the function of _____.

- A. lipid
- B. water
- C. vitamins
- D. minerals

28. Which of these are types of bottled water?

- i. Well water
 - ii. Spring water
 - iii. Mineral water
 - iv. Artesian water
- A. i, iii
 - B. ii, iv
 - C. i, ii, iii
 - D. All of the above

29. Osteoporosis is a major public health threat for society today, mostly the elderly and women. To prevent osteoporosis, we need to get an adequate supply of _____ and _____.

- A. iron and zinc
- B. copper and fluoride
- C. iodine and selenium
- D. calcium and vitamin d

30. Fluoride and Manganese is the example of _____.

- A. soluble fat
- B. insoluble fat
- C. major minerals
- D. trace minerals

[30 MARKS]

PART B

This part consist of **FIVE (5)** questions.

Answer ALL questions in Answering Booklet.

QUESTION 1

- a. Human eating behavior is influenced by many factors. Give **two (2)** physiological influences and **two (2)** cognitive influences to human-related to their eating behavior.

Physiological influences	Cognitive influences

(4 marks)

- b. People expend energy when they are physically active. **Four (4)** main categories reflect the total energy a body expends is

(4 marks)

QUESTION 2

- a. List down **four (4)** strategies for weight gain.

(4 marks)

- b. Explain **two (2)** problems related to underweight.

(2 marks)

- c. Aggressive treatment such as drugs and surgery can be done for people who are obese with high risk of medical problems. Give **two (2)** conditions of people who need a surgery to lose weight.

(2 marks)

QUESTION 3

- a. Anabolic steroid is a dangerous way to stimulate muscle bulking. Explain thoroughly **four (4)** side effects and adverse reactions of anabolic steroids.

(4 marks)

- b. Hyperthermia and hypothermia are a condition in the human body when they react to a certain temperature. Briefly explain each condition and its symptoms.

(4 marks)

QUESTION 4

- a. Breast milk is recommended for all infants from birth to 12 months.
State **four (4)** advantages of breast-feeding, compared to formula feeding.

(4 marks)

- b. Briefly explain **two (2)** menus planning for adolescence.

(4 marks)

QUESTION 5

- a. Nutrition may play a greater role in preventing many changes that are inevitable when growing old such as Arthritis. Discover **four (4)** strategies for growing old healthfully.

(4 marks)

- b. Physiological changes are one of the aging processes that happen to older adults. Classify **two (2)** of the physiological changes.

(4 marks)

[40 MARKS]

PART C

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

Answer ALL questions in Answering Booklet.

QUESTION 1

- a. Give definition of Body Mass Index (BMI)

(1 mark)

- b. By using the formula given below, calculate Aiman's BMI if his weight is 60kg and his height is 167cm. Then identify his BMI belongs to which categories.

Formula to calculate BMI is:

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

(4 marks)

- c. By using the calorie needs calculation method, we will know how much the total calories we need to consume per day.

Orkid is an active athlete woman. Every morning, she does exercises to make her body fit. Calculate the calories needed for her if her weight is 57kg.

Formula to calculate calorie needs is given below:

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

(5 marks)

(10 MARKS)

QUESTION 2

Beyond the emotional and physical satisfaction of eating, we are always concerned about how food choices give impact on our health. A person can make healthier food choices when eating and shopping. There are many factors influence our food selection. Describe **five (5)** factors influencing food selection with examples.

(10 marks)

(10 MARKS)**QUESTION 3**

- a. Our body uses antioxidants that can help minimize free radicals damage to the body. Briefly explain any **two (2)** antioxidants in food and their example that can battle against infections and disease.

(4marks)

- b. Free radicals alter DNA, RNA and proteins that eventually contributing to cell damage, disease progression and aging. Meanwhile, antioxidants neutralize free radicals by donating one of their own electrons, thus ending in the chain electrons.

Using your own words, distinguish **three (3)** ways that could help manage or reduce the factors that increase the production of free radicals in the body

(6 marks)

(10 MARKS)**[30 MARKS]****END OF QUESTION PAPER**

1.

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