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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : HERBS, VITAMINS AND MINERALS
COURSE CODE : DAU 33202
PROGRAMME : DAU
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020
DURATION : 2 HOURS
INSTRUCTION : **SECTION A: ANSWER ALL QUESTIONS.**

SECTION B: ANSWER TWO (2) QUESTIONS ONLY.

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THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

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CONFIDENTIAL**SECTION A**

- Q1** (a) Vitamins are organic compounds found in plants and animals.
- (i) Name **two (2)** types of vitamin. (2 marks)
 - (ii) Suggest **two (2)** examples of vitamin for each type of vitamin. (4 marks)
- (b) Vitamin D is essential for human health.
- (i) State functions of this vitamin D. (2 marks)
 - (ii) Suggest source of vitamin D. (2 marks)
 - (iii) Explain cause of vitamin D deficiency and its consequences. (4 marks)
- (c) Riboflavin (vitamin B₂) is a vitamin B complex that is needed for growth and overall good health. It helps the body break down carbohydrates, proteins and fats to produce energy, and it allows oxygen to be used by the body.
- (i) Name **three (3)** sources of Riboflavin (3 marks)
 - (ii) State absorption and transport of Riboflavin in human body. (3 marks)

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- Q2** (a) Name **two (2)** major minerals and state their functions and sources. (6 marks)
- (b) Sodium helps maintain fluid balance and transmit nerve impulses. Describe the effect of excess sodium in human diet. (4 marks)
- (c) State **four (4)** trace minerals that are needed by human body. (4 marks)
- (d) (i) State the adequate water intake amount per day for men and women. (2 marks)
- (ii) Explain the importance of water in human daily life. (4 marks)
- Q3** (a) Define a natural healing therapy. (4 marks)
- (b) According to natural healing therapy, the food must be taken in natural form. Fresh seasonal fruits, fresh green leafy vegetables and sprouts are excellent.
- (i) Identify **three (3)** diet therapies in natural healing. (3 marks)
- (ii) Name **one (1)** diet therapy and discuss its procedure. (3 marks)
- (c) Massage is an excellent form of passive exercise. Explain **two (2)** benefits of massage. (2 marks)
- (d) Cleansing herbs are the roots, barks, mushrooms, seeds and berries of various plants that help to "cleanse" and purify the body of internal toxicity accumulated from environmental pollutants as well as toxins absorbed from substances we ingest.
- (i) Identify **two (2)** types of cleansing herbs (2 marks)
- (ii) Name **one (1)** of type of cleansing herbs and explain how it works. (6 marks)


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- Q4** (a) Natural products are often divided into two major classes. Define these **two (2)** major classes and give **one (1)** example. (4 marks)
- (b) Fungi are heterotrophic, eukaryotic organisms that are primarily decomposers within the environment. Discuss **one (1)** example of fungi that can be used in medicine. (4 marks)
- (c) Taxonomy is the practice and science of classification. Name **four (4)** taxonomy procedures. (4 marks)
- (d) Extraction is separation of solute from one phase to the other using two immiscible phases whether liquid-liquid or solid-liquid phases.
- (i) Give **three (3)** methods of hot extraction. (3 marks)
- (ii) List steps of extraction. (5 marks)
- Q5** (a) Herbs and plants can be processed and used in different ways and formulations from an extract.
- (i) Name **three (3)** types of herbal formulation (3 marks)
- (ii) Tincture is one of the herbal formulations. Explain in simple words how to make this herbal formulation. (4 marks)
- (b) Phytochemicals are bioactive compounds extracted from herbal plant. Show in a table **three (3)** examples of phytochemicals with their functions and role for health. (9 marks)
- (c) Functional food is defined as a category of food that has health-enhancing properties. They are not drugs, chemicals or vitamins and not prescribed by doctors or other formally qualified medical practitioners. Name **four (4)** examples of functional foods in the market recently. (4 marks)

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- Q6** (a) Identify **three (3)** herbal remedies for gastrointestinal disease and state its benefits. (6 marks)
- (b) Studies have attempted to track the benefits of herbs for treating depression. Suggest **four (4)** herbs that may help lift your mood when you experience mild to moderate depression. (4 marks)
- (c) (i) State **three (3)** differences between diabetes type-1 and diabetes type-2. (6 marks)
- (ii) Name **four (4)** herbal remedies for diabetes type-2. (4 marks)
- Q7** (a) Define. (8 marks)
- (i) Traditional medicine.
(ii) Complementary medicine.
(iii) Herbal medicine.
(iv) Active ingredient.
- (b) More than 60–70 % of modern medicines in the world market are directly or indirectly derived from plant products. In the last few years, research has uncovered interesting and beneficial chemicals in herbs. However, herbs are not non-toxic just because they are natural.
- (i) Explain **three (3)** ways in which herbal preparations cause toxicity. (6 marks)
- (ii) From your point of view, give **three (3)** suggestions how we as consumers can avoid toxicity in herbal medicine. (6 marks)

- END OF QUESTIONS -

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