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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016**

COURSE NAME : HERBS, VITAMINS AND MINERALS
COURSE CODE : DAU 33202
PROGRAMME : 3 DAU
EXAMINATION DATE : DECEMBER 2015/JANUARY 2016
DURATION : 2 HOURS 30 MINUTES
INSTRUCTIONS : SECTION A)
ANSWER ALL QUESTIONS

SECTION B)
ANSWER TWO (2) QUESTIONS ONLY

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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SECTION A

- Q1** (a) The human body requires 13 vitamins and 22 minerals to maintain growth and health.
- (i) Differentiate between vitamins and minerals. (4 marks)
 - (ii) Discuss the functions of the fat-soluble vitamins. (8 marks)
 - (iii) Minerals can be further categorized into macro and micro nutrients. Define macro and micro nutrients. (2 marks)
 - (iv) Discuss the purposes of **three (3)** macronutrients and **three (3)** micronutrients. (6 marks)
- (b) It is claimed that plant-based vitamins and minerals are superior compared to the synthetic man-made version. Give your opinion on this statement. (5 marks)
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- Q2** (a) Natural Healing stresses and relies on the body's ability to heal itself.
- (i) Define natural healing. (2 marks)
 - (ii) Discuss the basic principles of natural healing. (6 marks)
 - (iii) Give details on the advantages of natural healing. (4 marks)
- (b) Herbal cleansing is related to natural healing. Discuss herbal cleansing with suitable examples. (5 marks)
- (c) Differentiate between infectious and non-infectious disease. Include suitable examples in your discussion. (8 marks)

SECTION B

- Q3** (a) (i) Define natural products. (2 marks)
- (ii) Describe the classes of natural products (3 marks)
- (b) (i) Discuss the classification of medicinal plants. (5 marks)
- (ii) Time of the year, time of the day and stage of maturity are among the important factors to consider in harvesting an herbal plant to produce good quality herbal products. Give a detailed description of these factors. (9 marks)
- (c) Discuss the process of extraction, separation and identification of the active components present in a medicinal plant. (6 marks)
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- Q4** (a) Give the basis for the classification of traditional herbs. (3 marks)
- (b) To assure the consumer that the herbal products on the market are of acceptable quality standards, the products must be standardized.
- (i) Define the term standardized extract. (2 marks)
- (ii) Give your opinion on the importance of standardizing an herbal formulation. (4 marks)
- (c) Herbal products are available in various formulations. Describe in detail the various types of formulations. Include in your discussion the preparation as well the advantages and disadvantages of each one. (16 marks)

- Q5** (a) Over the years there have been increases in the use of herbal medicines. Give reasons why people are now using herbal or alternative medicines in preference to conventional medicine. (5 marks)
- (b) Differentiate between dosage and formulation of traditional herbs versus modern medication. (10 marks)
- (c) Discuss and give suitable examples for the following:
- (i) Adverse effects of drug-herb interactions. (5 marks)
 - (ii) Drug-herb contraindications. (5 marks)

- END OF QUESTION -