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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2016/2017**

COURSE NAME : HERBS, VITAMINS AND MINERALS
COURSE CODE : DAU 33202
PROGRAMME CODE : DAU
EXAMINATION DATE : DECEMBER 2016 / JANUARY 2017
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWERS **FIVE (5)** QUESTIONS ONLY

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

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Q1 (a) “Natural healing was practised in ancient Egypt, Greece and Rome. It was much further advanced in older days in natural healing system in India than other countries of the world.” Answer the following questions.

(i) Explain the meaning of natural healing. (3 marks)

(ii) Discuss the three basic principles of natural healing. (7 marks)

(b) Fasting is nature’s oldest, most effective and yet least expensive method of treating disease. It is recognized as the cornerstone of natural healing.

(i) Explain the methods of fasting according to natural healing concept. (6 marks)

(ii) Discuss the benefits of fasting. (4 marks)

Q2 (a) The human body requires vitamin and minerals to maintain growth and health.

(i) Differentiate between vitamins and minerals. (2 marks)

(ii) State the classes of vitamins and give two examples of each class. (4 marks)

(iii) Discuss the functions and food sources of Vitamin A and Vitamin B-complex. (4 marks)

(b) It is claimed that plant-based vitamins and minerals are superior to animal-based and synthetic supplement vitamins and minerals. Give your opinion on this statement.

(10 marks)

Q3 (a) Define the following terms.

(i) Natural products

(ii) Metabolites

(iii) Phytochemistry

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(3 marks)

- (b) Differentiate between
- (i) Natural products and synthetic chemicals.
 - (ii) Primary metabolites and secondary metabolites. (4 marks)
- (c) Secondary metabolites largely fall into three classes of compounds, alkaloids, terpenoids, and phenolics.
- (i) Discuss about the three classes of compounds. (10 marks)
 - (ii) Give example of a chemical compound for each class. (3 marks)
- Q4** (a) “There are a huge number of medicinal plants and classified in many ways. It has been estimated that about 13,000 species of plants have been employed for at least a century as traditional medicines by various cultures around the world”. According to this statement, answer the following questions.
- (i) Define the term medicinal plants and traditional medicines. (2 marks)
 - (ii) Explain the classification of medicinal plants according to their usage. (5 marks)
- (b) It is known that the active constituents of medicinal plants are affected by many factors and may vary during the course of plant growth. Proper time of collection or harvesting is very important to obtain a natural product of a good quality.
- (i) Discuss the factors that affecting the collection of plants. (6 marks)
 - (ii) Explain the medicinal plants harvesting procedure according to WHO guidelines. (7 marks)
- Q5** (a) Herbs produce small quantities of specific secondary chemical compounds which are useful for medicinal purposes. There are many finished herbal products that can be derived from them.
- (i) Explain the term herbal products as per World Health Organization (WHO) guidelines. (5 marks)

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- (ii) Explain the difference between dosage, dosage form and dosage regime. You may give example to differentiate the terms.

(5 marks)

- (b) “There is increasing awareness and general acceptability of the use of herbal drugs in today’s medical practice. This rise in the use of herbal product has also given rise to various forms of abuse and adulteration of the products leading to consumers’ and manufacturers’ disappointment and in some instances fatal consequences. The challenge is enormous, making the global herbal market unsafe as compared to modern drugs”. Give your opinion on this issue.

(10 marks)

- Q6** (a) Diabetes is a disease known to medical world since time immemorial. Its incidence is however much higher at present than ever in the past. Diabetes has been described by most biological doctors as a “prosperity” disease.

- (i) Explain the causes of diabetes.

(5 marks)

- (ii) Describe the symptoms of diabetes and herbal remedies for this disease.

(5 marks)

- (b) Arthritis is a chronic disease. In the early stages, the whole body is usually involved and one or two joints may become completely deformed, leaving the patient handicapped and somewhat weakened.

- (i) Describe the two most frequent types of arthritis.

(5 marks)

- (ii) Discuss any home remedies for rheumatoid arthritis. You may include herbal remedies in your answer.

(5 marks)

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– END OF QUESTIONS –