

UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

THIRD BPHARM PART I EXAMINATION – APRIL/MAY 2021

PH 3125 PHARMACOGNOSY II – SEQ

TIME: THREE HOURS

INSTRUCTIONS

- There are **six** questions in parts **A, B, C, D, E** and **F** in this SEQ paper.
- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

PART A

- 01.**
- 1.1 Define the term “biological products”. (10 marks)
 - 1.2 Indicate **five** differences between biological products and small molecular drugs. (20 marks)
 - 1.3 Venoms are poisonous substances secreted by animals.
 - 1.3.1 Define each antivenom type given below.
 - 1.3.1.1 Monovalent antivenom (10 marks)
 - 1.3.1.2 Polyvalent antivenom (10 marks)
 - 1.3.2 List **two** types of snake venoms. (10 marks)
 - 1.4 What are immunomodulators? (10 marks)
 - 1.5 “Plants have been used as immunomodulators since ancient times”. Justify this statement. (30 marks)

PART B

- 02.**
- 2.1 List **two** medicinal uses of each plant named below. (10 marks)
 - 2.1.1 *Azadirachta indica*
 - 2.1.2 *Asparagus racemosus*
 - 2.1.3 *Phyllanthus emblica*
 - 2.1.4 *Centella asiatica*
 - 2.1.5 *Piper nigrum*
 - 2.2 Write short notes on following. (20 marks)
 - 2.2.1 Importance of clinical pharmacognosy. (20 marks)
 - 2.2.2 Phase II clinical trials in herbal drug development. (20 marks)

PART C

- 2.3 Explain the following in brief. (20 marks)
- 2.3.1 Constraints in Sri Lankan medicinal plants sector. (20 marks)
 - 2.3.2 Methods for conservation of medicinal plants. (20 marks)
 - 2.3.3 Documents required for exporting medicinal herbs and herbal products. (10 marks)

PART D

03.

- 3.1 Write the main problems of setting up standards for Ayurvedic product. (10 marks)
- 3.2 State the factors affecting the variations of chemical constituents in Ayurveda/traditional medicinal preparations. (10 marks)
- 3.3 What are the main methods used for the standardization of herbal drugs in the drug manufacturing industry. (20 marks)
- 3.4 Briefly explain the significant features of polyherbal formulations in Ayurveda Medical system. (30 marks)
- 3.5 Briefly explain the most important contents in the preparation of herbal monograph. (30 marks)

PART E

04.

- 4.1 Write **one** example each for the following classes of pesticides. (20 marks)
- 4.1.1 Insecticides
 - 4.1.2 Herbicides
 - 4.1.3 Fungicides
 - 4.1.4 Rodenticides
 - 4.1.5 Fumigants
- 4.2 Briefly discuss the methods which could be followed in controlling insect infestation. (30 marks)
- 4.3 A number of medicines in the market are derived from marine organisms. List the drugs which were either isolated or derived from the following marine organisms. (20 marks)
- 4.3.1 *Tethya crypta*
 - 4.3.2 *Conus magus*
 - 4.3.3 *Ecteinascidia turbinata*
 - 4.3.4 *Bugula neritina*
 - 4.3.5 *Dolabella auricularia*
- 4.4 Write a short note on the challenges associated with marine drug discovery process. (30 marks)

05.

5.1 Enzymes play an important role in the treatment of human diseases. List the source and one medicinal uses of each of the following enzymes. (30 marks)

- 5.1.1 Bromelain
- 5.1.2 Chymotrypsin
- 5.1.3 Fibrinolysin
- 5.1.4 Streptokinase
- 5.1.5 Muramidase

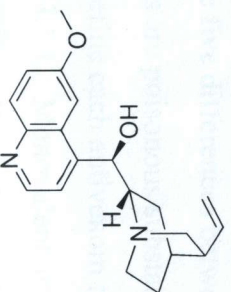
5.2 Allergenic substances occur in the nature.

- 5.2.1 List **five** types of allergens which cause allergic reactions in your body. (10 marks)
- 5.2.2 Name **two** compounds released by the body in response to a contact with an allergen. (10 marks)

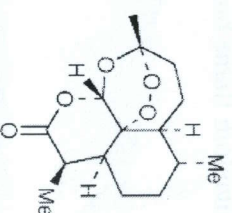
5.3 Briefly discuss about the involvement of plants in the development of cardiovascular agents. (30 marks)

5.4 Identify the following drug molecules isolated from plants and state the activity of each molecule. (20 marks)

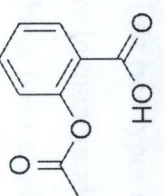
5.4.1



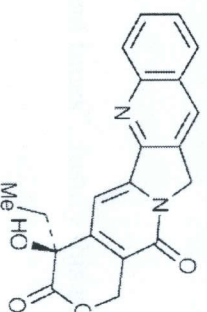
5.4.2



5.4.3



5.4.4



PART F

06.

6.1 Explain the role of cryopreservation in conservation of endangered medicinal plant species. (40 marks)

6.2 Briefly explain the applicability of secondary metabolite production under in vitro conditions in drug manufacture industry. (30 marks)

6.3 Write a short note on “the use of plant bioreactors in plant tissue culture”. (30 marks)

@@@@@@@@@@@@@@@@