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RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (Special) Degree in Applied Biology
Fourth Year – Semester I Examination – October /November 2017

ZOO 4201 – INSECT DIVERSITY AND CONSERVATION

Time: Two (02) hours

Answer four (04) questions only.

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1. a) Southwood and others have proposed that the combination of small size, flight, and metamorphosis has permitted insects to diversify in their way of life. Discuss how these attributes and other features of insects are responsible for their diversity.

(19 marks)

b) State the challenges for insect conservation.

(06 marks)

2. a) Discuss the association between habitat diversity and food habits in insects.

(17 marks)

b) Any attempt to protect global biodiversity requires the cooperation between countries. Two examples of such cooperation are the Convention on International Trade in Endangered Species (CITES) and Rio Convention on Biological Diversity. Other than the conservation of biodiversity, state two aims of each of these conventions.

(08 marks)

3. a) Explain briefly the morphological diversity of the suborder Homoptera.

(15 marks)

b) Discuss different breathing adaptations of aquatic insects in freshwater habitats.

(10 marks)

4. a) Discuss the evolution of the insect wing from its original form to the folding mechanism that has allowed them to occupy a wide range of habitats.

(15 marks)

b) State the main objectives of the Butterfly Conservation Plan in Sri Lanka.

(10 marks)

5. Write short notes on the following;

i. accelerated reduction of insect populations
ii. species richness
iii. sonification
iv. diversity of Lepidoptera in the world
v. main characteristics of social insects.

(25 marks)

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