

UNIVERSITY OF COLOMBO – SRI LANKA

FACULTY OF ARTS

EXAMINATION IN ARTS- STUDY STREAM – PART I

SECOND SEMESTER END EXAMINATION – 2017/2018

GYG 2220 – Biodiversity Conservation

Two hours

Answer three (03) questions only.

01. (i). Explain the difference between species and endemic species. (04 Marks)
- (ii). Explain the species' richness of an ecological community using arbitrary data. (06 Marks)
- (iii). "Biodiversity is dependent only on the species' richness". Do you agree with the above statement? Discuss the reasons for your answers using appropriate examples. (10 Marks)
02. (i). What are the criteria used to classify organisms in the life kingdom? (04 Marks)
- (ii). Briefly describe the characteristics of five kingdoms. (06 Marks)
- (iii). Select an ecosystem and discuss how biodiversity helps the proper function of the selected ecosystem. (10 Marks)
03. (i). What are the micro and macro nutrients? Explain. (04 Marks)
- (ii). Explain briefly how organisms help to decompose organic matters. (06 Marks)
- (iii). Select a biogeochemical cycle and explain with diagrams how chemical elements or molecules move through both biotic and abiotic components of an ecosystem. (10 Marks)

04. (i). What do you mean by “biodiversity hotspots” ?
(04 Marks)

(ii). Using examples, explain briefly the strengths and weaknesses of the selection criteria for biodiversity hotspots.
(06 Marks)

(iii). Select a biodiversity hotspot and discuss direct and indirect values of its biodiversity.
(10 Marks)

05. (i). Draw a diagram to depict the biotic and abiotic components and processes of an aquatic ecosystem.
(04 Marks)

(ii). Explain the impact of the different types of drivers on the changes of ecosystems, with examples
(06 Marks)

(iii). Discuss with examples how anthropogenic causes encourage biodiversity degradation and loss in aquatic ecosystems.
(10 Marks)

06. (i). What are *in-situ* and *ex-situ* conservations? Briefly explain.
(04 Marks)

(ii). Explain the advantages of *ex-situ* conservation methods using appropriate examples.
(06 Marks)

(iii). Discuss the importance of encouraging *in-situ* conservation methods in protecting the habitat of plants and animals, while allowing simultaneously some human activities to take place.
(10 Marks)
