

UNIVERSITY OF COLOMBO – SRI LANKA
FACULTY OF ARTS
EXAMINATION IN ARTS- STUDY STREAM – PART I
SECOND SEMESTER END EXAMINATION – 2018/2019
GYG 2220 – Biodiversity and Conservation
Two hours

Answer **three (03)** questions only.

01. (i). Define the term “species”. (02 Marks)
- (ii). Briefly explain the organization of ecological levels using a diagram. (03 Marks)
- (iii). Explain species richness and abundance using examples. (05 Marks)
- (iv). “Biodiversity is important because of its economical values”. Do you agree with the above statement? Discuss the reasons for your answers using appropriate examples. (10 Marks)
02. (i). Explain the process of storing solar energy in an ecosystem. (02 Marks)
- (ii). Briefly describe the flow of energy in an ecosystem using a diagram. (03 Marks)
- (iii). “Energy flow of an ecosystem is unidirectional”. Justify this statement with appropriate examples. (05 Marks)
- (iv). Discuss the importance of “nutrient cycling” for a proper function of an ecosystem. (10 Marks)
03. (i). Briefly explain how the organisms are scientifically named. (02 Marks)
- (ii). Briefly explain the R.H Whittaker’s classification of organisms (1920-1980) using a diagram. (03 Marks)
- (iii). Explain the factors used for the R.H Whittaker’s five kingdom classification. (05 Marks)
- (iv). Discuss how species interact with different physical geographical backgrounds using examples from kingdom animalia. (10 Marks)

04. (i). What do you mean by “biodiversity hotspots” ?
(02 Marks)
- (ii). Mark and name five (05) biodiversity hotspots selecting from the five different continents on the given world map.
(03 Marks)
- (iii). Select a biodiversity hotspot mentioned in 4 (ii) and explain the salient characteristics of the hotspot with examples.
(05 Marks)
- (iv). Discuss the suitability of the concept of “biodiversity hotspots” in explaining the spatial differences of world biodiversity with examples.
(10 Marks)
05. (i). What do you mean by “ ecosystem services”.
(02 Marks)
- (ii). Briefly explain the goods and services of biodiversity using a diagram
(03 Marks)
- (iii). Explain the major threats exerted on the ecosystem services related to biodiversity with examples.
(05 Marks)
- (iv). Select a wetland ecosystem from Sri Lanka and discuss about the degradation and loss in wetland ecosystems using examples.
(10 Marks)
06. (i). Provide four reasons to highlight the importance of conserving biodiversity.
(02 Marks)
- (ii). Briefly explain the advantages of *in situ* and *ex situ* conservation methods using a table.
(03 Marks)
- (iii). Explain the requirement of considering “habitats” of species in conservation of biodiversity using appropriate examples.
(05 Marks)
- (iv). Discuss the factors that affect success of biodiversity conservation policies of lagoonal ecosystems in Sri Lanka using appropriate examples.
(10 Marks)
