



Uva Wellassa University
End Semester Examination 2006/2007
BIO 101- 2 Introductory Biology

Answer four(4) questions only.

Index No.:

Time Allowed: 2hrs

- 1) A large scale sand mining project has proposed to start in the Badulu oya (Badulla river) under a private company from 1st of January 2008 . If you are appointed as the Environmental Officer of this company, how would you advice project proponent to start the project with least damage to environment.
 (25 marks)
- 2) If you were an agricultural adviser in a village closer to a wetland, how would you conduct awareness program for local farmers about the invasive species in this area.
 (25 marks)
- 3) Write short notes
 - a. Human Blood Groups b. CITIES
 - c. Red list in Sri Lanka
 (25 marks)
- 4) In orchids, a free breeding *Cattleya* (an Orchid species) with large purple flower is crossed to another true breeding orchid with small yellow flowers. Yellow flower colour (Y) is dominant to purple colour (y). Flower size, however shows incomplete dominance. Thus LL produces large flowers, LL' intermediate flower and L'L' a small flower. All of the F₁ hybrid orchids are YyLL', and have yellow intermediate size flowers. The orchid grower wants to get a true breeding large yellow flowered orchid.
 - i) What type of gametes does the F₁ hybrid produce?
 - ii) In a Punnett square show the genotype and phenotypes that results from a cross of the F₁ hybrid orchids.
 - iii) What function of the F₂ generation will be true breeding for large yellow flower?
 (25 marks)
- 5) DNA and RNA are both nucleic acids though they differ in several fundamental ways. Discuss the properties they share and ways that they differ.
 (25 marks)
- 6) What is sustainability? Define ecosystem services with examples.
 (25 marks)

