

KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2019

Marks scored:

Level : B. Sc.
Year : II

Course : ENVS 212
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date

FEB 21 2019

SECTION "A"

[17Q. × 0.5 = 8.5 marks]

Choose and mark (X) against the correct answer:

- The term biodiversity hotspot was coined by
 Mittermeier Myers Darwin Lamarck
- Removal of elephants can cause crash of savannah grassland. Therefore, it is considered as a/an
 invasive species endemic species
 keystone species indigenous species
- Availability of fishes in aquatic ecosystems for human consumption illustrates
 provisional services regulatory services
 supporting services cultural services
- Cichlids in Lake Tanganyika and Marsupials in Australia illustrate
 parallel evolution co-evolution
 convergent evolution divergent evolution
- Which of the following illustrates ex-situ conservation?
 National Parks Sacred groves
 Wildlife Sanctuaries Seed banks
- The altitudinal shift in the biotic assemblages due to climate change is known to have pronounced effect on
 coral reef biodiversity mountain biodiversity
 wetland biodiversity tropical forest diversity
- Which of the following statement is wrong about the megadiversity countries?
 These countries are usually large.
 These countries must have marine ecosystems within their borders.
 These countries are rich in biodiversity.
 These countries must show a high degree of endemism
- Which of the following statement is correct about biodiversity distribution?
 Biodiversity distribution increases with increase in altitude
 Biodiversity at higher taxic level enjoys larger spatial distribution
 Biodiversity distribution decreases at lower latitudes
 Lower rainfall areas tend to have more biodiversity

9. Plant Family Goetziaceae is endemic to
 the Karoo region the Carribean Islands
 the Western Ghats the Eastern Himalayan region
10. Anti-inflammatory compound found in garlic is
 allicin curcumin zingiberene thein
11. Highest degree of lemur diversity is seen in
 Amazonian rain forests Sundaland
 Philippines Madagascar
12. Amazon rainforests belong to
 Afrotropical region Neotropical region
 Oriental region Oceana region
13. The Red Data Book is published by the
 IUCN WWF UNESCO UNEP
14. Highest biomass in tropical rainforests is contributed by
 fungi large mammals vascular plants reptiles
15. The in-situ conservation in CBD is covered by
 Article 8 Article 9 Article 10 Article 11
16. The WWF Headquarters is located in
 Gland, Switzerland New York, the United States of America
 Nairobi, Kenya Toronto, Canada
17. Which of the following is incorrect?
 ICZN allows tautonyms.
 ICBN has 62 articles.
 ICBN and ICZN are independent of each other
 ICBN allows double citation

SECTION "B"

Q. 1 (1.5 mark)

Consider the following scientific name and mark (X) against the correct answer

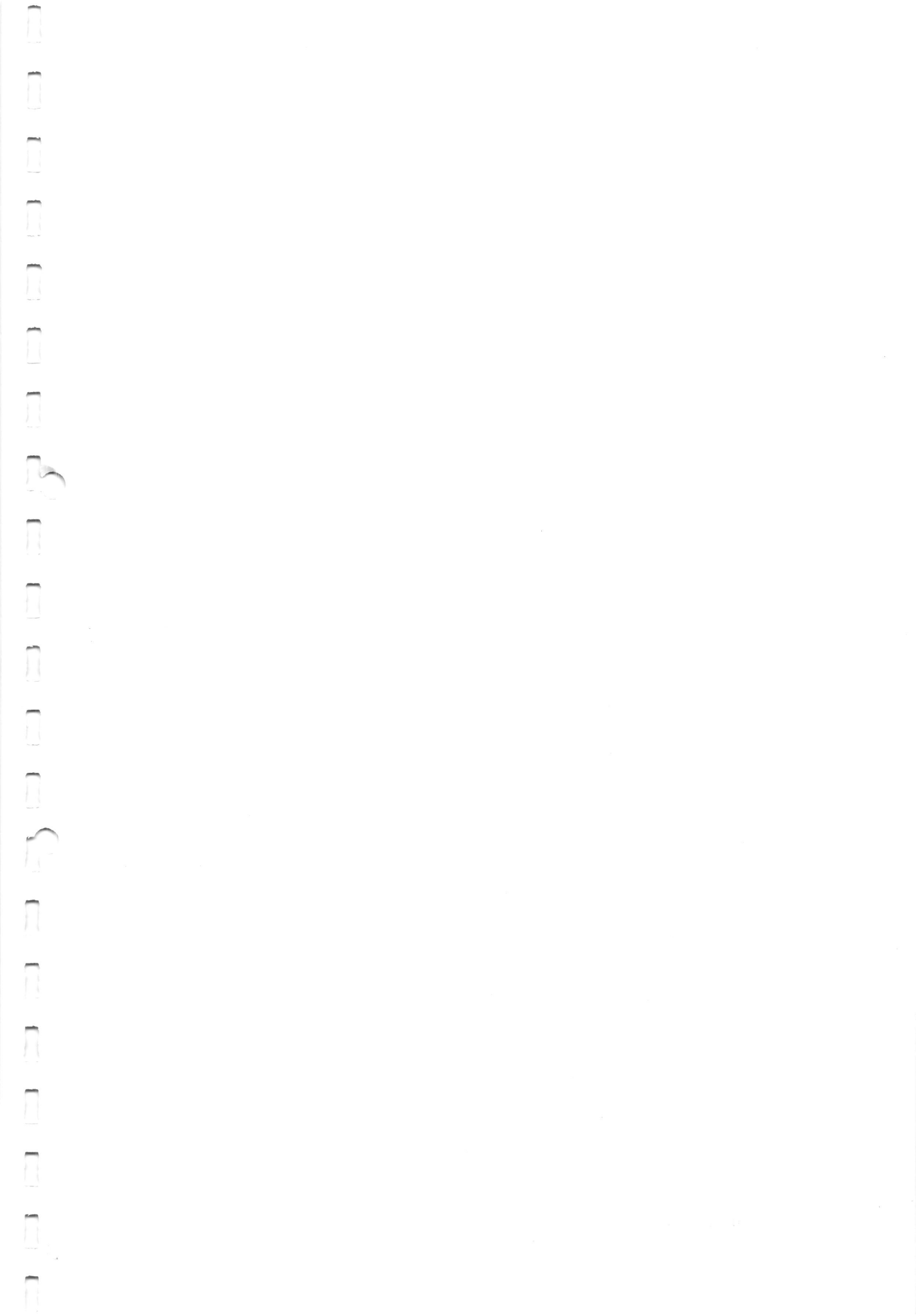
- Bison bison*
18. This scientific name illustrates a
 homonym *tautonym* *synonym*
19. The name belongs to a/an
 plant *animal* *virus*
20. The nomenclature illustrates a
 binomen *trinomen* *quatronomen*

FEB 21 2019

SECTION "C"
[20 Q × 0.5 = 10 marks]

Fill in the blanks:

21. The total number of biodiversity hotspots is _____.
22. CBD has _____ articles.
23. The full form of MAB is _____.
24. Wetlands are also referred to as the _____.
25. The different vegetation layers in rain forests are _____, _____, _____, _____ and _____.
26. The original name (plants) on which the new name is based is referred to as _____.
27. Wetlands of international importance are called _____.
28. CITES has _____ appendices.
29. Wild variety of rice found in Nepalese lowlands is _____.
30. _____ states that tropical species have smaller geographical range as compared to temperate species.
31. The Himalayan range is an example of _____.
32. The Cartagena Protocol deals with _____.
33. *Mikania micrantha* in CNP is a/an _____.
34. RFLPs illustrate biodiversity at _____.
35. The Bt cotton contain Bt toxin derived from _____.
36. _____ deals with the distribution of biodiversity on the earth.



KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2019

FEB 21 2019

Level : B. Sc.
Year : II
Time : 2 hrs. 30 mins.

Course : ENVS 212
Semester : I
F. M. : 55

SECTION "D"

[3 Q. × 7 = 21 marks]

Answer *ANY THREE* of the following:

1. Define extinction. Give an account of geological mass extinctions the earth has suffered.
2. Define hotspots. Give an account of biodiversity richness, threats and conservation efforts in any one of the hotspots you have studied.
3. What are the factors that account for diverse mountain biota. Add a note on the significance of mountains.
4. Define species. Give an account of at least four species concept you have studied.

SECTION "E"

[34 Marks]

5. Differentiate between (*ANY FOUR*) [4Q × 2.5=10]
 - a. Alpha and gamma diversity
 - b. Holotype and neotype
 - c. Balanced and Imbalanced theory of biodiversity
 - d. Biopiracy and bioprospecting
 - e. Option value and bequest value
6. Assign the scientific name and Family of any one of the [8 Q × 0.5=4]
 - a. *Oil producing plant*
 - b. *fruit*
 - c. *cereal*
 - d. *pulse*
 - e. *condiment*
 - f. *medicinal plant*
 - g. *timber yielding plant*
 - h. *fodder plant*
7. Give reasons why (*ANY FOUR*) [4Q × 2.5 =10]
 - a. The Karoo region has poor representation of reptilian diversity.
 - b. Hybrids are not assigned any species category.
 - c. Scientific names are in Latin.
 - d. Fungi are considered as one of the unchartered realms of biodiversity.
 - e. Wetlands are rich in biodiversity.
8. Write short notes on (any TWO) [2Q × 3 = 6]
 - a. Tropical rainforest biodiversity
 - b. Role of biodiversity in innovation
 - c. IUCN
9. Give a short account of non-use value of biodiversity [4]

