QP Code: UV25C001

Reg No: ………………

Name: ……………………

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20
III SEMESTER (CBCSS-VUG) DEGREE EXAMINATIONS, OCTOBER 2025
B.Voc Applied Biotechnology
A11 : BIODIVERSITY – SCOPE AND RELEVANCE
2024 Admission Onwards

Time: 2.5 Hours **Maximum Marks: 80**

Section A

*Short answer type carries **2** Marks each **(Ceiling 25)***

1. Explain the term hotspot of biodiversity.
2. Define species diversity and ecosystem diversity.
3. List any two major causes for species extinction.
4. Recall aesthetic value of biodiversity.
5. List out any 5 indirect values of biodiversity.
6. Define *in situ* conservation of biodiversity with a suitable example.
7. Define biodiversity.
8. Explain how biodiversity contributes to food security through crop genetic diversity.
9. Describe the role of forests in carbon sequestration and mitigating climate change.
10. Compare alpha, beta, and gamma diversity with examples.
11. Analyze the role of industrialization in accelerating biodiversity loss.
12. Identify the IUCN Red list category in which the Asiatic Lion is placed and explain why it does not fall under "Extinct in the Wild".
13. Suggest two practical measure a farmer can adopt to conserve agrobiodiversity.
14. Outline the different facets of bioprospecting.
15. Define bioprospecting and biopiracy.

Section B

*Paragraph types carries **5** Marks each **(Ceiling 35)***

16. Illustrate how loss of species diversity impacts food security and ecosystem services.
17. Analyze the IUCN Red list categories in relation to biodiversity loss.

Turn Over

18.Assess the statement: “Hotspots of biodiversity are global priorities for conservation”.

19. Infer what happens if ecosystem diversity is lost?

20. Recall the social values and economic values of biodiversity.

21. Examine the need for inventorying and monitoring of biodiversity.

22. Interpret the consequences of biodiversity loss on human wellbeing.

23.Apply your knowledge to set up an *ex situ* conservation of an endangered species.

Section C

*Essay-type carries **10** Marks : Answer **any two** questions.*

24. Illustrate how biodiversity classification helps in conservation planning.

25. Categorize *in situ* and *ex situ* conservation strategies based on the survival status of a species.

26. Demonstrate with suitable example the bioprospecting of potent antibiotic.

27. Evaluate the significance of wild relatives of cultivated plants and domestic animals in addressing biodiversity loss.

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