c. Green

## M.Sc. BOTANY FOURTH SEMESTER PLANT ECOLOGY MSB-403 D

(Use separate answer scripts for Objective & Descriptive)

Duration: 3 hrs. Full Marks: 70 [ PART-A: Objective ] Time: 20 min. Marks: 20 1x20 = 20Choose the correct answer from the following: 1. A stratosphere is a region of atmosphere between the altitude: a. 20-90 km b. 10 to 50 km c. 20-40 km d. 10-70 km 2. Global Warming Potentials of Greenhouse Gases in increasing order: a. C02<CH4<CF4<SF6 b. C0<sub>2</sub> < SF<sub>6</sub> < CF<sub>4</sub> < CH<sub>4</sub> c. C02<CH4< SF6< CF4 d. C02 < CF4 < CH4 < SF6 3. How many biogeographic zones are there at present? a. 10 b. 15 c. 5 d. 13 4. The Kyoto Protocol is an international agreement on: a. Forest cover loss b. Biodiversity c. Wetlands d. Climate change 5. Acid Rain is caused by emissions of: a. Sulphur dioxide b. Nitrogen oxide d. Carbon dioxide c. Both (A) and (B) 6. Typically the pH value of acid rain is: a. 5.5 b. 4.0 c. 5.0 d. 5.6 7. Geographic Information System (GIS) deals with which kind of data? a. Numeric data b. Binary data c. Spatial data d. Complex data 8. Remote sensing techniques makes use of the properties of: a. Electromagnetic waves b. Electric waves c. Wind waves d. Sound waves 9. Global warming potential of nitrous oxide after 20 Years is: a. 320 b. 289 c. 210 d. 350 10. Which color is having the largest wavelength in the visible spectrum? a. Red b. Blue

d. Yellow

11. Layer of atmosphere in which Ozone layer lies is: b. Mesosphere a. Exosphere d. Stratosphere c. Troposphere 12. Montreal protocol to reduce production of chlorofluorocarbons was assigned in: a. 1977 b. 1987 c. 1992 d. 1984 13. The gas that is most abundant in the atmosphere is: b. Nitrogen a. Oxygen c. Carbon dioxide d. Argon 14. Percentage contribution of methane to the greenhouse effect on Earth is about: a. 4-9% b. 21-36% d. 3-7% c. 36-70% 15. Sacred groves are especially useful in: a. Year-round flow of water in rivers b. Generating environmental awareness c. Conserving rare and threatened species d. Wetland management 16. Which one of the following is not observed in biodiversity hotspots? b. Endemism a. Species richness d. Lesser inter-specific competition c. Accelerated species loss 17. Endemic species are: b. species localized in a specific region a. rare species d. critically endangered species c. cosmopolitan in distribution 18. The most potent greenhouse gas among the following is\_ b. Methane c. Water vapor d. Ozone 19. Which of the following Environmentalists first gave the concept of Biodiversity 'hotspots'? a. Norman Myers b. Gaylord Nelson c. Julia "Butterfly" Hill d. John Muir 20. Which among the following is the World's largest Wetland System? b. Okavango (Botswana) a. Camargue (France) d. Pantanal (South America) c. Everglades (USA)

## PART-B: Descriptive

Time: 2 hrs. 40 min. Marks: 50

## [Answer question no.1 & any four (4) from the rest]

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1.	What is global warming potential? Discuss briefly about the different greenhouse gases and its warming potential.	2+8=10
2.	What is acid rain? Discuss briefly the formation of acid rain.	2+8=10
3.	What is Remote sensing? Discuss briefly the basic principle used in remote sensing with suitable diagram.	2+8=10
4.	What is Geographic Information System? Discuss the various components of GIS.	2+8=10
5.	What is shifting cultivation? Discuss the ecological implication of shifting cultivation with special reference to North-east India.	2+8=10
6.	What is phytogeography? Describe briefly about the various phytogeographic regions of India.	2+8=10
7.	What are natural resources? Discuss the various factors responsible for the degradation of natural resources in North-east India.	2+8=10
8.	Write short notes: (any two) a) Sustainable development. b) Shifting cultivation. c) Ozone depletion.	5+5=10

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