23. What are national parks ? Name three national parks in India, one each from a state. Mention the state and the major wildlife protected there.

24. What is acid rain ? What harm does it cause to the environment ?

25. Explain the major adaptations seen in mangrove plants.

26. Describe the cycling of nitrogen in the biosphere. Diagrammatically represent the cycle. **(6×2=12)**

SECTION – E

Answer **any one**. (**Essay** type questions. **Each** question carries a weightage of **4**.)

27. Explain biodiversity. List the threats faced by it. What are the measures adopted to conserve global biodiversity ?

28. Compare the morphological adaptations in hydrophytes and xerophytes citing suitable examples in each case.

29. Explain plant succession and the different seral communities in xerosere. Give examples of plants occupying each seral stage. **(1×4=4)**

M 8285

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CCSS – Reg./Supple./Improv.) Examination, May 2015
CORE COURSE IN BOTANY/PLANT SCIENCE
6B14 BOT/PLS : Environmental Science and Phytogeography
(2012 Admn.)

Time : 3 Hours Total Weightage : 30

***Instruction**: Draw diagrams **wherever** necessary.*

SECTION – A

Answer **all**. (Questions in bunches of **four**. **Each** bunch carries a weightage of **1**.)

1. Choose the correct answer.
   i) Aquatic plants with floating leaves will have
      a) No stomata
      b) Stomata on the upper epidermis
      c) Stomata on the lower epidermis
      d) Stomata all over the leaf epidermis
   ii) Which among the following is a feature of mangrove plants ?
      a) Vivipary b) Pneumatophore
      c) Knee roots d) All these
   iii) Who among the following coined the word ecosystem ?
      a) Lindeman b) Haeckel
      c) Tansley d) Odum
   iv) Which among the following is a non conventional energy source ?
      a) Tidal energy
      b) Geothermal energy
      c) Wind energy
      d) All these

2. State **true** or **false**.
   i) Herbivores are also called secondary producers.
   ii) Escherichia coli is an indicator organism of unpolluted water.
   iii) The amount of solar energy converted to chemical energy in a plant is 1% of that actually falls on its leaves.
   iv) Natural gas is a renewable source of energy.

3. Fill in the blanks.
   i) An ecosystem operating in running water is called a _____ ecosystem.
   ii) _____ is the enrichment of a water body with nutrients.
   iii) _____ is the sea that surrounded the ancient land mass Pangaea.
   iv) The theme of World Environment Day 2014 was _____

4. Rearrange column B and C to match column A.

A	B	C
i) Viviparous germination	Vanda	Hydrophyte
ii) Heterophyllous leaves	Aloe	Epiphyte
iii) Scotoactive stomata	Avicennia	Xerophyte
iv) Velamen root	Salvinia	Halophyte

5. Answer in **one** word or **one** sentence.
   i) What is a detritivore ?
   ii) What is biosphere ?
   iii) Name the ecosystem component with the highest energy content.
   iv) Expand IUCN. **(5×1=5)**

SECTION – B

Answer **any four**. (**Each** question carries a weightage of **1**.)

Differentiate the following :

6. Stomata in mesophytes and xerophytes.

7. Red data book and green book.

8. Primary consumers and secondary consumers.

9. Autecology and synecology.

10. Flagship species and Keystone species.

11. Lithosere and psammosere. **(4×1=4)**

SECTION – C

Answer **any five**. (**Short answer** questions. **Each** question carries a weightage of **1**.)

12. What do you mean by a plant community ?

13. Diagram the pyramid of numbers in a grassland ecosystem and label.

14. Explain law of ten percent.

15. What is meant by plant succession ? Write about the different types of plant succession.

16. What do you know about Chipko movement ?

17. Explain the role played by the decomposers in maintaining an ecosystem.

18. Draw a food web involving grass, grasshopper, deer, tiger, hawk, rabbit, frog, snake, fox, wolf and sparrow. **(5×1=5)**

SECTION – D

Answer **any six**. (**Short essay** type questions. **Each** question carries a weightage of **2**.)

19. "Certain xerophytes experience drought only in the external environment". Explain with the help of an example.

20. Explain biomagnification giving an example.

21. Give an account of continental drift hypothesis.

22. Define biodiversity hotspot. What are the criteria for declaring a region as a biodiversity hotspot ?