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[28/3c/43]

[ ] SARDAR PATEL UNIVERSITY
M.Sc. (IV & II Semester- CBCS) Examination
Subject: Biotechnology/Microbiology/Biochemistry
PS04EBIT01/PS02EMICO1/PS02EBIC01;
Phytoresource Utilization & Conservation
Monday, April 18, 2017; Time: 10.00 a.m. to 1.00 p.m.

Total Marks: 70

Note: Figures in brackets indicate marks
Answer all the questions in the given answer book

Q1. Choose the appropriate answer for the following multiple choice questions: (8x1=8)

i) Habitat diversity over a large landscape or geographical area is referred as:
(a) Alfa diversity (b) Beta diversity
(c) Gamma diversity (d) Bio diversity

ii) The credit of popularizing the concept of Biodiversity mainly goes to:
(a) G.J. Martin (b) Earnest Heckel
(c) John Harshberger (d) E.O. Wilson

iii) Conifer wood is mostly composed of:
(a) Vessel elements (b) Tracheids (c) parenchyma (d) Fiber

iv) Ethnobotany deals with our:
(a) Economic uses of Biodiveristy (b) Ethnic uses of biodiversity
(c) Ethnic uses of phytoresources (d) Ethnic relations with phytoresources

v) Cultivation of traditional crop varieties in local agricultural lands is:
(a) Ex-situ conservation (b) In situ conservation
(c) Combination of ex-situ and in-situ conservation
(d) Neither ex-situ nor in-situ conservation

vi) Dicotyledon wood is known as:
(a) Porus wood (b) Hard wood
(c) Both (a) and (b) (d) Neither (a) nor (b)

vii) Which of the following trees is known for calcium rich fruits?
(a) *Moringa olifera* (Drumstick)
(b) *Phyllanthus emblica* (Indian goose berry)
(c) Both A and B
(d) Neither A nor B

viii) Growth rings are distinctly seen in the trees of:
(a) Monocots (b) Dicots (c) Conifers (d) None of these

Q2. Answer <u>any SEVEN</u> of the following in brief: (7x2=14)

(A) What are wild relatives? How are they important?
(B) What is reaction wood? What are its salient features? What is it significance?
(C) Giving any two suitable examples to justify how ethnobotany differs from economic botany.
(D) How does heart wood differs from sapwood? Which of these two more economically important? Why?
(E) Name any two Indian Ethnobotanists? What is their major contribution?
(F) What are bordered pits? What is their significance?
(G) List any two plant conservation centres of national importance. Where are they located?
(H) Give botanical names of any four gum yielding plants.
(I) What are botanical pesticides? What are their advantages? Give botanical names of two sources of such pesticides.

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Q3. **(A)** "Define Ethnobotany. Why is that it is said to be multidisciplinary subject? Justify your answer with reasons. (6)

(B) Give a comprehensive account on ethnomedicobotanical data collection. (6)

OR

(B) (i) The concept of Sacred Groves is a proved lesson on phytorsource conservation. Justify the statement. (3)

(ii) What is the botanical source of Indian saffron? What are its uses? (3)

Q4 **(A)** Listing botanical names, recommend any six avenue trees of your choice for an urban area. Give a brief note on each of their salient features. (6)

(B) "We obtain around 95% of our daily requirement of energy from a wide diversity of phytoresoures available to us. Do you agree with the statement? Justify your answer in either the case giving suitable examples. (6)

OR

(B) Name any four little known phytoresources, having scope for wider usage for their merits. Offer your innovative ideas for making them popular. (6)

Q5 **(A)** "Describe the origin, cultivation, useful products and uses of any two oil yielding crops studied by you. (6)

(B) What are the important criteria used for determination of the botanical source and quality of wood? (6)

OR

(B) Write notes on:

(i) Fiber yielding plants (3)

(ii) Gene banks (3)

Q6 **(A)** Write short notes on:

(i) Role of Botanical gardens in conservation of threatened phytoresources. (3)

(ii) Major threats to agribiodiversity (3)

(B) Justify **<u>any two</u>** of the following statements with suitable examples:

(i) "Many of the phytoresources can be potential alternatives for conservation of fossil fuels. (3)

(ii) "Palms and Fruit yielding trees are not good choice for plantations along highways" (3)

(iii) "Traditional knowledge on phytoresources is more threatened than the phytoresources." (3)

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