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SARDAR PATEL UNIVERSITY
M. Sc. (IV Semester) Examination-2015
Subject: Biochemistry

SC

Title of the Paper: PS04EBIC05-Phytoresource Utilization & Conservation

Tuesday, April 28, 2015.

Time: 10:30 am to 01:30 pm

Total Marks: 70

Note: Figures on the right in bracket indicate maximum marks.

Q.1 Choose the correct options to the following:

(8)

1.1. Gymnosperm wood principally composed of:

- (i) tracheids (ii) parenchyma
(iii) fibers (iv) vessels

Ans: (a) i & ii (b) ii & iii (c) i, ii & iii (d) i, ii, iii & iv

1.2. Unripen mango is a rich source of

- (a) Riboflavin (b) Carotene
(c) Folic acid (d) Calcium

1.3. The term 'Ethnobotany' is coined by:

- (a) S.K. Jain (b) G.J. Martin
(c) John Harshberger (d) Janki Ammal

1.4. Which of the following plants has narcotic effects?

- (a) Sarpagandha (b) Poppy
(c) Ashwagandha (d) Anantmul

1.5. Habitat diversity over a large landscape or geographical area is referred as:

- (a) Alfa diversity (b) Beta diversity
(c) Gamma diversity (d) genetic diversity

1.6. Ethnopharmacognosy deals with the:

- (a) preparation and medicinal uses of ethnobotanical products
(b) source and composition of ethnobotanical materials
(c) effect of various plant drugs on human body
(d) traditional uses of plants

1.7. Which of the following is/are the rich source of botanical dyes?

- (a) tamarind (b) Clove
(c) turmeric (d) ginger

1.8. Which of the following is considered to be the best suited for urban avenue plantation?

- (a) *Azadirachta indica* (Neem) (b) *Moringa olifera* (Drumstick)
(c) *Acacia nilotica* (Babul) (d) *Phyllanthus emblica* (Indian goose berry)

Q.2 Write short answers for any seven of the following:

(14)

- 2.1. Highlight the need for conservation of wild relatives of crop plants
- 2.2. Compare and contrast between early wood and late wood.
- 2.2. What is NBPGR? What is the prime role of it?
- 2.3. Enlist the important points involved in post-care plantation of avenue trees.
- 2.4. What are the major causes and consequences of genetic erosion of phytoresources?
- 2.5. What is compression wood? What are its salient features?
- 2.6. Sketch an outline of oil extraction from aromatic plants
- 2.7. Give botanical names of any two rubber yielding plants. Where are they grown?
- 2.8. Enlisting any four plants best suited for indoors, give their pros and cons from the point of their maintenance.
- 2.9. Describe the morphological nature of different kinds of botanical fibres studied by you.

Q.3 A. "In spite of the vast diversity existing in the plant kingdom, from the point of its utility, major part of it is remained unexplored". Justify the statement with adequate examples. Taking any two suitable examples explain how such little known resources can be made popular (6)

B. Define the medicinal plant. Enlist the botanical names of any four medicinally important plants and describe their properties and uses. (6)

OR

B. Define Biodiversity. What are different levels of biodiversity? What are the major threats and suitable remedies for the loss of phytoresources? (6)

Q.4. A. What is voucher specimen? What is its role in ethnobotanical studies? Explain how voucher specimens are prepared and preserved? (6)

B. Define ethnobotany? In what way it differs from economic botany or pharmacognosy? Give a comprehensive account on ethnobotanical data collection.

OR

B. "Ethnobotany plays an important role in conservation of little known and wild phytoresources". Justify the statement with suitable examples. (6)

Q.5.A. What are oil yielding crops? Write a brief note on origin, cultivation and uses of any four oil yielding plants grown in Gujarat. (6)

B. "What do you understand by 'NTPF'? Enlisting various NTPFs studied by you, give the botanical source and uses of any four of them. (6)

OR

B. Write a note on the important source and uses of any four botanical dyes. (6)

Q.6 A. Write short notes on the following:

- (i) Principle, advantages and disadvantages of cryopreservation (3)
- (ii) Major objectives and contribution of IUCN (3)

B. Write notes on the following with adequate reasoning:

(i) "Role of gene banks in conservation of threatened phytoresources". (6)

OR

(ii) "Role of Botanical gardens in conservation of wild plant genetic resources.". (6)
