

[24/26/38/40]

SARDAR PATEL UNIVERSITY**M. Sc. (II /IV Semester) Examination - April 2018****Subject: Biochemistry/Biotechnology/Microbiology****Course Code: PS04EBIT01/PS04EMIC08/PS04EBIC05 /PS02EMIC01****Course Title: (Phytoresource Utilization & Conservation)****Date: 17/04/2018****Time: 10.00 am to 01:00 pm****Total marks: 70****Q.1 Choose the most appropriate answers to the following: (08)****(i) The Word 'Biodiversity' has become popularized due to the contributions of:**

- (a) E.O. Heckel (b) J. H. Strashberger
(c) D.C. Wickson (d) E.O. Wilson

(ii) The term Ethnobotany is coined by:

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

(iii) Which of the following plants has narcotic effects?

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

(iv) Which of the following is the rich source of botanical dyes?

- (a) *Curcuma* (b) *Withania* (c) *Eugenia* (d) Both A and B

(v) Which of the following is over exploited wild plants of Gujarat?

- (a) Sarpagandha (b) Aswagandha (c) Guggal (d) All the three

(vi) Edible fatty oil, popularly known as "bran oil" is obtained from:

- (a) *Oryza* (b) *Triticum* (c) *Zea* (d) All the three

(vii) Angiosperm wood is composed of:

- (a) only xylem vessels
(b) Xylem vessels and tracheids
(c) Xylem vessels, tracheids and fibres
(d) xylem vessels, tracheids, fibres and parenchyma

(viii) Long distance transport of water in gymnosperms is carried out by:

- (a) Vessels (b) Parenchyma cells
(c) Fibers (d) Tracheids

C.P.T.O.)

Q.2 Attempt any seven of the following:

(14)

- 2.1. What is non-porous wood? Where does it found? What is its importance?
- 2.2. Write the main function of each of the xylem components.
- 2.3. Describe the functions of heart wood.
- 2.4. Briefly mention about the herbarium label and the information it contains
- 2.5. Define germplasm. What are different types of it?
- 2.6. Enlist the precautions to be taken for longtime preservation of voucher specimens?
- 2.7. What is Ethnomedicobotany? How does it differ from Economic botany?
- 2.8. What is indigenous knowledge? What is its scope in phytoresource utilization and conservation?
- 2.9. List any four national institutes which are involved in phytoresource conservation? Where are they located?

- Q.3. (a)** Give a detailed account on little known food plants and their potential uses. **(6)**
(b) Give description of important fodder plants and their importance. **(6)**

OR

- (b)** Describe the different types of medicinal plants and their uses. **(6)**
Q.4. (a) With adequate examples, justify "Ethnobotany as an interdisciplinary and multidisciplinary science". **(6)**
(b) Describe various collection methods of ethnobotanical data. **(6)**

OR

- (b)** What is ethnobotanical voucher specimen? Highlighting its significance, give an account of preparation of such specimens? **(6)**
Q.5. (a) Write a detail notes on important timber yielding plants. **(6)**
(b) Enlist the botanical names of any four gum yielding plants. Describe different uses of gums, resins, tannins. **(6)**

OR

- (b)** Taking suitable examples, describe the importance of avenue trees from ecological, economical and aesthetic points of view. **(6)**
Q.6. (a) What are sacred plants and groves? What is their relevance in phytoresource conservation? Is the mode of sacred groves be considered insitu or exsitu type? Justify your answer. **(6)**
(b) Explain the strategies and Indian initiatives for *in situ* conservation. **(6)**

OR

- (b)** Describe briefly about gene banks and botanical gardens in phytoresource conservation. **(6)**

—————X—————