

**Total number of printed pages = 5**

**63/2(SEM-3) BOT-306 E**

**2022**

**(Held in 2023)**

**BOTANY**

**(Theory Paper)**

**Paper Code : BOT-306 E**

**(Plant Diversity, Pharmacognosy  
and Ethnobotany)**

**Full Marks - 80**

**Pass Marks - 32**

**Time - Three hours**

**The figures in the margin indicate full marks  
for the questions.**

**1. Choose the correct answers from the following :**

**1×6=6**

**(a) Which one of the following GM crops was  
first approved in India for commercial use ?**

**(i) Bt Cotton      (ii) GM Rice**

**(iii) Bt Brinjal      (iv) GM Maize**

**[Turn over**

(b) The active chemical drug vinblastine is obtained from \_\_\_\_\_.

(i) *Catharanthus roseus*

(ii) *Atropa belladonna*

(iii) *Papaver somniferum*

(iv) *Rauvolfia serpentina*

(c) Biological diversity includes hierarchical levels of

(i) Species diversity

(ii) Genetic diversity

(iii) Community and ecosystem diversity

(iv) All of the above

(d) Taxol is an example of unorganized drugs which belongs to the class of

(i) Dried extracts (ii) Dried juices

(iii) Oleoresins (iv) Dried latex

(e) How much Forest cover is to be maintained as per the National Forest Policy of 1988 ?

(i) 11% for Plains and 37% for Hills

(ii) 33% for Plains and 67% for Hills

(iii) 23% for Plains and 17% for Hills

(iv) 34% for Plains and 68% for Hills

(f) The father of Indian Ethnobotany is \_\_\_\_\_.

(i) S K Jain

(ii) JD Hooker

(iii) Janaki Amal

(iv) C B Clarke.

2. Answer the following short questions :  $2 \times 5 = 10$

(a) Who is the father of Pharmacognosy ? State the significant contribution made by him.

(b) What is CBD ? State its significance.

(c) What is Aflatoxin ? Mention the source of aflatoxin.

(d) Differentiate between Pharmacognosy and Pharmacology.

(e) Write any two exotic plants found in Assam.

3. Write short notes on any six of the following :  $5 \times 6 = 30$

(a) Importance of agrobiodiversity

(b) Camptothecin

- (c) Endemic plant
- (d) Hot spot
- (e) Importance of pharmacognosy
- (f) Relevance of traditional knowledge system
- (g) Multi-disciplinary approaches of ethnobotany
- (h) Branches of pharmacognosy
- (i) Indian pharmacopea.

4. Answer any *two* of the following questions :  
10×2=20

- (a) What is threatened plant? What could be the possible reasons categorizing a species as threatened? Mention any four threatened plants found in India.  
2+4+4+10
- (b) Define Sustainable Development. What are the pillars of sustainable development? Write a comprehensive note on Sustainable Development.  
2+2+6=10
- (c) What are GMO's? Briefly discuss on the techniques of GM crops production. Write on the safety measurement procedures of GM crops.  
2+5+3=10

5. Answer any *one* of the following long answer type questions :  
14×1=14

- (a) What is plant diversity? Briefly discuss on the concept and types of plant diversity. Write the status of plant diversity in India giving an appropriate example.  
2+5+7=14
- (c) What is adulteration? State the reasons of adulteration in crude drugs. Briefly discuss on the mechanisms that are used for quality control and monitoring of crude drugs in pharmacognosy.  
2+5+7=14