2018

BOTANY

BOT 306

PLANT DIVERSITY, PHARMACOGNOSY AND ETHNOBOTANY

Full Marks: 80

Time: 3 hours.

The figures in the margin indicates full marks for the questions:

Q1). Answer the following Multiple Choice Questions 1×9)= 9
(i) Golden rice is a genetically modified crop plant where incorporated genes are meant for biosynthesis of———.	e the

(a) VitaminA

(b) Vitamin B

(c) Vitamin C

(d) Beta carotene

(ii) Match List-I with List-II and select the correct answer using the codes given below:

List-I (Drugs)		List-II (Activity)	
A.	Taxol	1. Anticancer	
B.	Nux-vomica	2. Hypotensive	
C.	Rauwolfia	3. Oxytocic	
D.	Vinca	4. CNS stimulant	

Codes:

	Α	В	C	D
(a)	4	3	2	1
(b)	3	4	2	1
(c)	4	2	· 3	1
(d)	4	2	1	3

(iii)	Ethnobotany is a branch of botany dealing with					
	(a) Economically important plants					
	(b) Relationship with aboriginal people and plants					
	(c) Culture					
	(d) Tradition					
(iv)	iv) Grassland in India includes:					
	(a) 12% of total land area (b) 14% of total land area					
	(c) 1	8% of total land area	(d) 20% of total land area			
(v)	y) Hot spots are region of					
	(a)]	Rarity	(b) Critically endangered population			
	(c) Endemism (d) Diversity					
(vi)	i) Which is the active chemical constituent obtained from Nothapodytes					
	nim	noniana?				
		Campothecin	(b) Codeine			
	` '	Narcotine	(d) Heroine			
(vii	(vii) Which dicot family is considered dominant in India?					
	(a)	Asteraceae	(b) Rubiaceae			
	(c)	Papilionaceae	(d) Euphorbiaceae			
(viii	(viii) Which is not true about the genetically modified 'Bt crops'?					
			en applied to several species of crops			
	(b) The source organism for the gene is a soil bacterium					
	(c) The transferred gene exists in several allelic form					
	(d) Bt brinjal has been commercially exploited					
(ix)	Alkaloids aretype of substances.					
	(a)	Acid	(b) Neutral			
	(c)	Chemical	(d) Basic nitrogenous			
Ans	Answer the following questions $(any Seven)$ $2 \times 7 = 14$					
a.	What is monotypic species? Give specific examples.					
b.	What is genetic diversity? Give an example.					

- c. Name any two potential anticancer plants found in Assam.
- d. What do mean by white revolution? Who is the pioneer of white revolution in India?
- e. Differentiate between Pharmacognosy and Pharmacology.
- f. Write a brief note on different scope of Pharmacognosy.
- g. Define Traditional Knowledge. Differentiate between modern vs. traditional knowledge.
- h. Define Ethnobotany. Who first coin the term Ethnobotany?
- Q3) Write an explanatory notes on <u>any Five</u> of the following $5 \times 5 = 25$
 - a. Plants based drugs
 - b. Levels of biodiversity
 - c. Hot spot diversity
 - d. Biosafety regulation on GMO's
 - e. Histochemical Test
 - f. Methods of Ethnobotany
- Answer the following questions (any Two) $2 \times 10 = 20$
 - a. Define Phamacognosy. Briefly describe the history of pharmacognosy. 2+8=10
 - b. What is Green revolution? Write an account on benefits and adverse consequences of Green revolution. Mention the impact of Green revolution in India. 2+5+3=10
 - c. Briefly describe an overview of plant diversity in India citing examples.

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Q5) Answer the following questions (any One)

- 1×12=12
- a. What is Sustainable Development? Write an account on sustainable development. Comment on its importance. 2+6+4=12
- b. What is Crude Drug? Briefly explain the classifications of crude drug? Write the different parameter used for quality control of crude drugs.

Q2)