and the second

2025

(FYUGP)

(6th Semester) for Write short mues on

BOTANY

if Deficiency symplectic after a fine conserva-

Paper: Bcc-M6/BCM-6T

(Plant Physiology)

Full Marks: 75 Pass Marks: 40%

nuodel la detail with Time: 3 hours

(PART : B—DESCRIPTIVE)

numerical with (Marks: 50) The strike

The figures in the margin indicate full marks for the questions

Define ascent of sap. Explain in detail 1. (a) cohesion-tension theory. 2+8=10

or Electrockaracial classical

rocke to ensure the Or analysis victorial to the

- (b) Write notes on any two of the following: $5 \times 2 = 10$
 - (i) Factors affecting transpiration
 - (ii) Mechanism of stomatal opening
 - (iii) Water absorption by root

2. (a) What are essential and beneficial elements? Explain the role of essential elements. 5+5=10

Write short notes on the following: (b)

5+5=10

- (i) Deficiency symptoms of two macronutrients
- (ii) Criteria of essentiality
- 3. (a) Define translocation. Explain the flow model in detail with diagrammatic representation. 2+8=10

Or.

Write notes on any two of the following:

 $5 \times 2 = 10$

- (i) Source-sink relationship
- (ii) Electrochemical gradient
- (iii) Proton ATPase pump
- 4. (a) Briefly discuss the discovery of auxin. Enumerate on the physiological role of auxin.

Or.

Write notes on the following: 5+5=10(b)

10

- (i) Brassinosteroid
- (ii) Ethylene

L25/497a

(Continued)

5. (a) What is vernalization? Explain the mechanism of vernalization. 2+8=10

Or

(b) Write notes on the following: 5+5=10

(i) Discovery phototropins

(ii) Photomorphogenesis

Bs/Bcc-M6/BCM-6T

		2025	ar ar c
		(FYUGP)	1111
		(6th Semester)	
		BOTANY The line	
		Paper: Bcc-M6/BCM-6T	
		(Plant Physiology)	(72)
	Y. 1.22.0	(PART: A—OBJECTIVE)	1 11 .6
		(<i>Marks</i> : 25)	ordi.
Th	e figi	ures in the margin indicate full marks for the qu	uestions
		SECTION—I	$\langle \vec{\sigma} \gamma_{\perp} \rangle$
		(Marks: 15) (St. 101.00 froi	(c)
		ck (✓) mark against the correct answer in provided:	the 1×15=15
1.	Wat	er potential values are always	istiM ale used
	(a)	positive ()	
	(b)	negative ()	(11)
	(c)	both positive and negative ()	a fait
	(d)		

2. In symplastic, water moves from cell to cell via
(a) plasmodesmata ()
(b) cell wall ()
(c) intercellular space ()
(d) None of the above
3. In higher plant, water is lost from aerial part main through
(a) stomatal transpiration
(b) cuticular transpiration ()
(c) lenticular transpiration ()
(d) guttation ()
4. Which of the following elements is considered as a beneficial element but not essential?
(a) Boron (B) ()
(b) Zinc (Zn) ()
(c) Nitrogen (N) ()
(d) Sodium (Na) ()
Bs/Bcc-M6/BCM-6T /497

5. Deficiency of which nutrient causes interveinal chlorosis in plants?						
(a) Phosphorus (P) () remarks small (a)						
(b) Nitrogen (N) () moreonic enauges (d)						
(c) Magnesium (Mg) ()						
(d) Calcium (Ca) () amoula and to amount the						
6. Phosphorus in plants forms an important constituent of	¥.					
(a) nucleic acid and ATP						
(b) chlorophyll ()						
(c) middle lamella in cell wall ()						
(d) alkaloids ()						
7. The main driving force for passive nutrients absorption in plants is						
(a) carrier proteins ()						
(b) ATP hydrolysis ()						
(c) electrochemical potential gradient ()						
(d) phloem pressure						
Bs/Bcc-M6/BCM-6T /497	E11					

8. In sympor solutes mo		roto	ns co	upled	with of	ther
(a) same	direction	() []	1111111	qaqdil	(9)
(b) oppos	ite direction	()	(M) st.	Mitrogo	(d)
(c) rando	m direction	(\mathbf{J}_{NN}	muia	Magne	
(d) None	of the above		()	alu m	Calchy	101
	fer of sugar fr ents in leaf is			hyll ce	ells to s	ieve
(a) phloe	m loading	() Proje	Dios c	arodonia Markara	Yai Y
(b) phloe	m unloading	1	()	Myste	panadelo	1827
(c) trans	location ()		lpirial.	Alaganda	(0)
(d) Both	(a) and (b)				(3) Mo (5) (13)	100
10. Gibberellin	ns were first o			in role		
(a) root e	elongation	()	layuriq.		
(b) leaf for	ormation	())	E gustal		villa Villa
(c) seed	dormancy	() in the			
(d) diseas	se in rice pla	nt 📖	i (a)) (11)	Parasaris (s)	
Bs/Bcc-M6/BCM-	-6T /497					

11.	The	plant hormone responsible for seed dormancy is
	(a)	auxin ()
	(b)	abscisic acid () magantated ()
	(c)	cytokinin ()
	(d)	gibberellin ()
12.	The plan	phenomenon of senescence and abscission in its is associated with plant hormone known as
	(a)	cytokinin (())
		gibberellin ()
	(c)	abscisic acid ()
	(d)	ethylene ()
13.	The expo	conversion of P_R to P_{fR} occurs when plants are osed to
	(a)	blue light ()
	(b)	red light ()
	(c)	green light ()
,	(d)	far-red light ()
Bs/B	scc-M	6/BCM-6T /497

14. Which of the following is a high irradiance res							ponse	
	(111)	R)?					1 (2015/2000)	in (1883).
	(a)	Phototrop	pism	1)		Daniam or so	(11)
							atvirávicty.	(4)
	(b)	Seed ger	mination		()	milesəriy iş	180
	(c)	Chlorople	ast, move	ment	ine itiin	(h vbo	e) creating an ist	
	(d)	Shade av	oidance	territ.	()))	grantification	
							Schaerellin	
				s syn	the	sized	l in which pa	rt of
	the	plant?					o moltovilse.	
			ter (1) soft					
	(a)	Roots					o karaja silakabak Kabasa karaja	
	(b)	Leaves	()				aris if value?	X a Disp
		El					The way of the second	AAN N
	(c)	Flowers					ANASYDV BOLS SET AC	
	(d)	Stems	()					
Bs/Bc	с-М	6/BCM-6T /4	97				New Astronomics	

SECTION—II

wastephyn at

(Marks: 10)

Write short notes on any five of the following: $2\times5=10$

1. Guttation

2. Apoplast

(Marks 10)

O - see a manufacture of the will was no count that sales

animatria (II

3. Macronutrient

R. Robert of ATP

Macronuturen

4. Role of ATP

(11)

5. Facilitated diffusion

6. Jasmonic acid

7. Photoperiodism

