

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Mid Semester Exam

Semester: 6th
 Subject Code: (203144351)
 Subject Name: Plant Biotechnology

Date: (30/01/24)
 Time: (1hr 30min)
 Total Marks: 40

Sr. No.		Marks
Q.1	(A) One-line Questions.	05
	(a) What is photoperiodism?	
	(b) Define photosynthesis.	
	(c) What is the site of synthesis of auxin & cytokinin in plants?	
	(d) Define totipotency.	
	(e) What is plasticity.	
	(B) Fill in the blanks	05
	(a) The pair of hormones required for a callus to differentiate are -----	
	(b) An unorganized mass of undivided cells is known as -----	
	(c) The first acceptor of CO ₂ in C ₄ plants is ----	
	(d) The process where an embryo is derived from a single somatic cell is known as-----	
	(e) The most commonly used auxin in plant tissue culture media is-----	
Q.2	Attempt any four(Short Questions)	12
	(1) Define tissue culture and highlight the role of nutrients in media.	
	(2) Differentiate between C ₃ & C ₄ plants.	
	(3) Mention the role of any two transcription factors in eukaryotes.	
	(4) What is the role of ethylene in plants?	
	(5) Differentiate between light & dark reaction.	
Q.3	Attempt any two questions	08
	(1) With the help of diagram explain the mitochondrial genome structure.	
	(2) Explain somatic embryogenesis.	
	(3) Explain organogenesis	
Q.4	(A) Enlist the applications of plant tissue culture.	05
	(B) Explain embryo culture.	05
	OR	
	(B) What is the role of auxin plant signaling?	05