

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, APRIL 2023
BSC SEMESTER II
Subject Name: Plant Physiology
Subject Code: 11102154

Date: 03/04/2023

Time: 08:00 am to 09:30 pm

Maximum Marks: 40

Instructions:

1. All questions are compulsory and options are given in first and second question only.
2. Numbers to the right of question indicate the marks of respective question.

Q.1	Attempt <u>any one</u> question of the following.	(08)	CO	PO	PSO	Blooms Taxonomy
1.	Enumerate : Mechanism of Transpiration in Plants	04	CO2	PO1		Remembering
2.	Write about mechanism of Water Absorption in Plants	04	CO3	PO3		Analyzing
Q.2	Attempt <u>any three</u> questions of the following.	(12)	CO	PO	PSO	Blooms Taxonomy
1.	Write about mechanism of Water Absorption in Plants	04	CO4	PO3		Evaluating
2.	Write about Factors affecting diffusion in plant.	04	CO3	PO2		Evaluating
3.	Define a term plasmolysis and enumerate its importance	04	CO1	PO2		Evaluating
4.	How the Turgor pressure is very important for plants	04	CO1	PO1		Applying
5.	Difference between Transpiration and Guttation.	04	CO2	PO4		Evaluating
Q.3	Do as directed. Attempt <u>all five</u> questions.	(05)	CO	PO	PSO	Blooms Taxonomy
1.	When the weather is hot, water evaporates lesser which is due to opening of stomata. True / False	01	CO1	PO4		Remembering
2.	Water flows into root cells by osmosis. True / False	01	CO3	PO4		Remembering
3.	Nutrients diffuse into pericycle cells through plasmodesmata. True / False	01	CO3	PO2		Understanding
4.	The cuticle serves to protect and reduce water loss from the plant. True / False	01	CO4	PO1		Evaluating
5.	The epidermis is made up of specialized waterproof cork cells. True / False	01	CO2	PO3		Applying

Q.4	Write correct option in your answer sheet for following fifteen multiple choice Questions.		(15)	CO	PO	PSO	Blooms Taxonomy
1.	Type strain is used for referring to?		01	CO2	PO3		Creating
	(A)	species	(B)	genus			
	(C)	family	(D)	division			
2.	Two organisms which are very closely related to each other have which of the following property?		01	CO1	PO1		Remembering
	(A)	similar mol% G+C values	(B)	different mol% G+C values			
	(C)	similar mol% G+C values and heteroduplexes are formed	(D)	different mol% G+C values and heteroduplexes are not formed			
3.	What are ribosomes composed of?		01	CO1	PO1		Evaluating
	(A)	Proteins	(B)	DNA			
	(C)	RNA	(D)	Proteins and RNA			
4.	Which among the following kingdoms were proposed by Whittaker?		01	CO3	PO4		Remembering
	(A)	Protista, Fungi	(B)	Plantae, Animalia			
	(C)	Monera, Protista, Fungi, Plantae, Animalia	(D)	None of the above			
5.	Which of the following gene deduced the evolutionary relationship between the taxonomic groups?		01	CO4	PO2		Remembering
	(A)	16S rRNA	(B)	5S rRNA			
	(C)	23S rRNA	(D)	18S rRNA			
6.	Name the scientist who proposed the phylogenetic tree for living things.		01	CO4	PO4		Analyzing
	(A)	Carlo Urbani	(B)	Louis Pasteur			
	(C)	Robert Koch	(D)	Carl Woese			
7.	Which of the following organisms have thick peptidoglycan in their cell wall?		01	CO2	PO1		Applying
	(A)	Gram-negative bacteria	(B)	Gram-positive bacteria			
	(C)	Yeast	(D)	Molds			
8.	Which technique separates charged particles using electric field?		01	CO3	PO2		Applying
	(A)	Hydrolysis	(B)	Electrophoresis			
	(C)	Protein synthesis	(D)	Protein denaturing			
9.	Migration of biomolecules in agarose gel electrophoresis based on__.		01	CO1	PO3		Understanding
	(A)	Direct proportional to the resistance of medium	(B)	Low voltage for separation of high mass molecules			
	(C)	Direct proportional to current	(D)	Inversely proportion to current			
10.	What is used as a Tracking Dye in PAGE of protein?		01	CO3	PO1		Analyzing
	(A)	Bromophenol blue	(B)	Xylene cyanol			
	(C)	Orange G	(D)	All of the above.			
11.	Electrophoresis is not used for the separation of ____.		01	CO2	PO4		Remembering
	(A)	Nucleic Acids	(B)	Proteins			
	(C)	Amino Acids	(D)	Lipids			
12.	Which one of the following rRNA undergoes least post-transcriptional processing?		01	CO1	PO3		Remembering
	(A)	28S	(B)	18S			
	(C)	5.8S	(D)	5S			

13.	RFLP is used to ____.			01	CO4	PO2	Understanding
	(A)	Construct high resolution linkage maps	(B)	Identify single gene diseases			
	(C)	Construct QTL maps	(D)	All of the above.			
14.	RFLP involves ____.			01	CO1	PO1	Applying
	(A)	Used to identify a specific protein	(B)	Used to identify a specific DNA			
	(C)	Used to identify a specific RNA	(D)	Used to identify both DNA & RNA			
15.	Molecular markers are used to construct ____.			01	CO3	PO2	Remembering
	(A)	Chromosome maps	(B)	Cytogenetic maps			
	(C)	Physical maps	(D)	All of the above.			