

Botany & Microbiology	Final Exam- 1st semester 1437-1438-Course No. 102 Bot.
Date & Time	Time (3 hours)
Student No.	
Student Name	

Q. I: Circle the letter T if the statement is true or F if the statement is false. (10 marks).

1. The vessels are part of the phloem tissue.	T	F
2. Monocots have vascular bundles scattered throughout the plant stem.	T	F
3. Kingdom Fungi include autotrophic organisms.	T	F
4. The function of the tuber is food storage.	T	F
5. Ribosome contains grana.	T	F
6. "Rain forest" is poor in species number.	T	F
7. The photosynthetic cells in leaves are called chlorenchyma.	T	F
8. The membrane of vacuole is called "Tonoplast".	T	F
9. Archaeobacteria use light energy for their metabolism.	T	F
10. Recessive gene means gene expressed in heterozygous type.	T	F
11. The function of Plasmodesmata is connection between cells.	T	F
12. Chitin is the main component of plant cell wall.	T	F
13. Lichens are consisting of viruses and bacteria.	T	F
14. Tendrils are modified organs for climbing.	T	F
15. Genome includes genes and non-coding DNA organized in chromosomes.	T	F
16. Ecosystem is the interactions between abiotic factors only.	T	F
17. Crossing over occurs during meiosis two.	T	F
18. The haploid (n) phase is called the gametophyte or gamete producing plant	T	F
19. Spike is a simple raceme inflorescence with sessile flowers	T	F
20. Nucleosome is the basic unit of DNA	T	F

Q II. A- Read the first column and select a letter of the suitable term in the second column and put this letter in the answer table given below. (5 marks).

	Column I		Column II
1	The calyx consists of	A	Biomes
2	Vascular plants with naked seeds are called	B	Alleles
3	Epidermis tissues of leaves have	C	Ribosome
4	ATP is synthesized in the	D	Stomata
5	Oxygen is produced during	E	Gymnosperms
6	Alternate forms of genes are called	F	Photosynthesis
7	Regional ecosystem types with similar communities are called	G	Sepals
8	When alleles are similar (e.g. RR), it is called	H	Homozygous
9	Regions of stem between nodes are called	I	Internodes
10	Protein synthesized in	J	Mitochondria

The answer table:

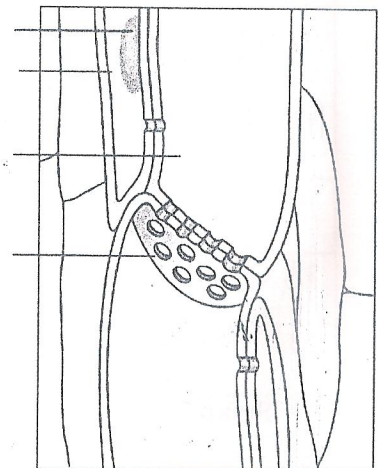
1 st Column	1	2	3	4	5	6	7	8	9	10
2 nd Column										

QII. B: Identify the longitudinal section of this tissue and put labels against lines marked (5 marks).

This istissue

Choose the suitable terms from this list:

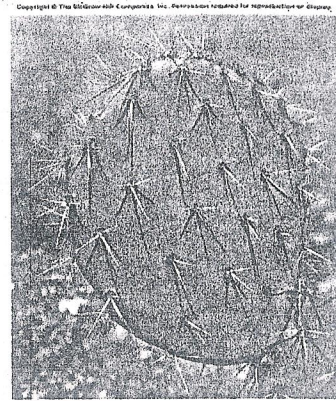
- 1- Xylem
- 2- Sieve plate
- 3- Plastid
- 4- Phloem
- 5- Tracheid
- 6- Vessel element
- 7- Sieve tube member
- 8- Nucleus
- 9- Companion cell
- 10- Chlorenchyma



Question III (10 Marks)
Select the correct labels on these drawings:

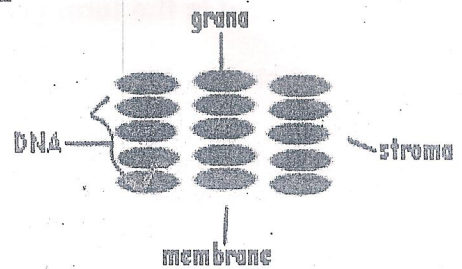
1. Stem modified into-----

- a. tendril b. tuber c. cladophyll



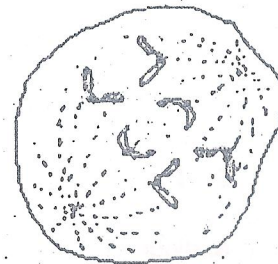
2. This organelle in plant cell is a -----

- a. mitochondria b. plastid c. nucleus



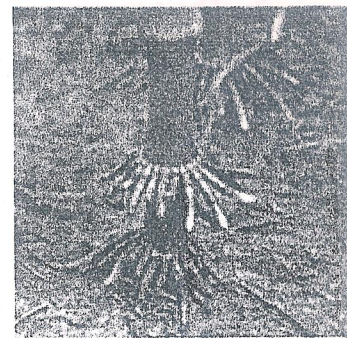
3. The phase is -----of mitosis

- a. anaphase b. metaphase c. telophase



4. The roots shown are roots

- a. adventitious b. tuber c. tap.



5. This leaf hasvenation.

- a. parallel b. Pinnate c. palmate



Q IV. Circle the right answer to the following from the options given (10 marks).

1. What function do the meristem tissue of shoot tip serve?

- a. sexual reproduction b. production of tissues c. nutrient uptake d. not a, b, c.

2. Which of these are transported by Xylem?

- a. sugar b. oxygen O₂ c. water and nutrients d. carbon dioxide CO₂

3. What is the term given to the underground stem?

- a. root b. rhizome c. leaf d. not a, b, c.

4. Where are seeds produced in the flower?

- a. petals b. sepals c. ovary d. not a, b, c.

5. Which one of these belongs to the kingdom Prokaryotes?

- a. Bacteria b. Moss c. Euglena d. Ferns

6. Parallel leaf venation is a common character of

- a. dicot. plants b. monocot. plants c. nonvascular plants d. not a, b, c.

7. The function of pericycle tissue is to form:

- a. lateral root b. lateral branch c. lateral bud d. flower

8. The photosynthetic process removes ___ from the environment

- a. Nitrogen b. sugar c. oxygen d. carbon dioxide

9. If a gene for red flower (R) is dominant over white flower (r). What is the genotype of the white flower?

- a. RR b. Rr c. rr d. not a, b, c.

10. Community consists of ___ living in a particular area.

- a. individual b. population c. populations d. not a, b, c.