

King Saud University, College of Science
Botany & Microbiology Department
General Botany (Bot. 102
Final Exam (40 marks)

Student Name.....ID.....

Answer the following questions

Question 1: Write in brackets the letter (T) for true statement and (F) for false statement of the following: (15 Marks)

1. The organisms are composed of one or more cells ().
2. The nucleolus functions in the production of ribosomes ()
3. The mitochondria are the site of aerobic cellular respiration ()
4. Organs composed of groups of tissues functioning together ()
5. Sexual reproduction is type of cellular division required Mitosis ()
6. The phenotype ratio of the offspring's Dihybrid test cross is 9:3:3:1 ()
7. phospholipids and proteins of plasma membrane are in static state()
8. When the food web is more complex the ecosystem become more stable()
9. Seed plants are gymnosperms and Bryophytes. ()
10. Apical meristem is responsible for primary growth ()
11. The characteristic cell of the xylem is the sieve tube member. ()
12. Phenotype is a physical expression of a gene ()
13. The root system of a plant usually grows above the soil ()
14. Homozygous organisms are hybrid for a particular trait. ()
15. Ecosystems are Dynamic systems of organisms interacting with each other and their environment ()

Question2: Choose the right answer of the following: (15 Marks)

1 – Stomata open at night and close day time in

- a) C3 plants
- b) C4 plants
- c) CAM plant

2 – Monohybrid test cross ratio is

- a) 2:1
- b) 9:3:3:1
- c) 3:1

3- Which characteristic of dicots?

- a) Secondary growth usually absent
- b) Secondary growth usually present
- c) Parallel leaf veins

4- Which tissue gives rise to secondary growth?

- a) Apical meristem
- b) lateral buds
- c) Vascular cambium

5- Which is not found in a monocot stem internal structure?

- a) Vascular bundles arrange in rings
- b) Primary xylem
- c) Primary phloem

6 - Collenchyma cells with thickened walls adjacent to intercellular spaces are termed:

- a) Angular.
- b) Lacunar.
- c) Lamellar.

7- Dicot stem do not possess:

- a) Cortex
- b) Pith.
- c) Endodermis.

8 – Reproductive Leaves produce

- a) New leaflets
- b) New plants
- c) New Fruits

9 - The chlorophyll in the cells is packaged into tiny structures called

- a) Chloroplasts
- b) Leucoplasts
- c) Chromoplasts

10- Glucose is one example of a

- a) Proteins
- b) Carbohydrates
- c) Lipids

11 - The major light absorbing pigments on thylakoid membrane is

- a) Chlorophylls
- b) Water
- c) Glucose

12 - Closely related genera are classified as

- a) Genus

- b) Family
- c) Order

13 - The diploid (2n) phase is called the

- a) Sporophyte
- b) Gametophyte
- c) Zygote

14 - Stamens in a flower are

- a) Male reproduction
- b) Female reproduction
- c) Sporophyte reproduction

15 - Seeds are within a layer of protective tissue

- a) Angiosperms
- b) Pterophytes
- c) Gymnosperms

Question 3: Compare between the characteristics of the plant parts of Monocots and Dicots. in the table below, using listed botanical terms (1 – 10): (10 marks)

- | | |
|-----------------------------|--------------------------------|
| 1. Two cotyledons | 6. taproot |
| 2. Parallel veins | 7. Fibrous roots |
| 3. One cotyledon | 8. Floral parts 3 |
| 4. Floral parts 4 or 5 | 9. Net veins |
| 5. Vascular bundles in ring | 10. Vascular bundles scattered |

Plant parts	Monocots	Dicots
Roots		
Stems		
Leaves		
Flowers		
Seeds		

Good luck