

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD
SEMESTER END THEORY EXAMINATION

B.Tech. (Biotechnology) /B.Tech. (Food Tech.) /B.Sc. (Hons.) Agri-Business Management

Semester	: I(New)	[ICAR - Sixth Deans' Committee Syllabus]	Acad. Year	: 2025-26
Course No.	: BOT-111			
Credit Hrs.	: 2(2+0)	Title	: Basic Botany	
Day, Date	: Tuesday, 10.02.2026	Time	: 10:00 to 12:30 hrs.	Total Marks : 50

Note: Draw neat diagram wherever necessary

SECTION 'A' : Questions with Descriptive Long Answers (Any 5) **Marks**

Q.1	Define and discuss Chromosome morphology in detail with a neat labelled diagram.	6
Q.2	Describe major contributions that led to the discovery of DNA. Draw a neat labelled diagram of the Watson-Crick model with brief description.	6
Q.3	Discuss the distinguishing characteristics of Bryophytes and Pteridophytes with example.	6
Q.4	Describe the structure of a typical plant cell and explain the functions of different organelles with labelled diagram.	6
Q.5	a) Describe different agents of pollination.	3
	b) Explain the significance of fertilization.	3
Q.6	a) Explain the structure of a gene with diagram.	3
	b) Elaborate in short the concept of Allele.	1.5
	c) Write down the characteristics of Brassicaceae.	1.5
Q.7	a) Describe the morphology of root.	3
	b) Write short notes on:	
	i) Rutaceae	1.5
	ii) Solanaceae	1.5

SECTION 'B' : Questions with Descriptive Short Answers (Any 5)

Q.8	Differentiate between Dicot seed and Monocot seed.	2
Q.9	Define Binomial nomenclature and write any four rules of Binomial nomenclature.	2
Q.10	Explain the types of seed germination in brief.	2
Q.11	Write the economic importance of Poaceae Family.	2
Q.12	Explain the morphology of leaf.	2
Q.13	Write the uses of fruits with examples.	2

(P.T.O.)

SECTION 'C' : Objective-type Compulsory Questions

Q.14 Do as directed:

5

- 1) Define: Inflorescence.
- 2) Explain the characteristics of Rosaceae Family.
- 3) Write the functions of stem.
- 4) Write two examples of Fabaceae Family.
- 5) What is a Codon?

Q.15 Fill in the blanks:

5

- 1) Malvaceae Family belongs to the Kingdom _____.
- 2) The male reproductive part of a flower is _____.
- 3) The basic unit of life is _____.
- 4) _____ helps climber plants to provide mechanical support and attachment, while growing upwards.
- 5) _____ is known as the 'Father of Taxonomy'.
- 6) _____ are specialized root-like structures in parasitic plants and fungi that penetrate a host's tissues to absorb water and nutrients.
- 7) The tissue responsible for providing support and mechanical strength to plants, is called _____.
- 8) Gynoecium represents the _____ reproductive organ of flower.
- 9) The _____ bases of DNA are Adenine (A) and Guanine (G).
- 10) Development of fruits without fertilization, is called _____.

