B.Sc. 1st Semester (FYUGP) Unit Test, 2025
Paper: BOT0100104
(Plant and Microbial Diversity)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. What is 'Kingdom' Concept? Briefly describe the five-kingdom system of classification.

Q2. Write few characteristics features of Bacteria.

Q3. Write the general characteristics features of Algae.

Q4. Describe the cell structure of prokaryotic Algae.

Q5. Write down the general characters of Gymnosperms.

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B.Sc. 1st Semester (FYUGP) Unit Test, 2025
Paper: BOT0100104
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B.Sc. 3rd Semester (FYUGP) Unit Test, 2025
Paper: BOT0300104
(Laboratory and Field Techniques in Plant Science)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. What do you mean by First Aid Practices? What will you do in case of acid spills and burns in laboratory? 2+3=5

Q2. Write about the management of biological waste in laboratory. 5

Q3. Write briefly about the working principle and uses of Autoclave. 5

Q4. Write about the working principle and types of spectrophotometer in brief. 5

Q5. What are the different types of balances used for weighing? Write the precautions of using weighing balance. 2+3=5

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B.Sc. 3rd Semester (FYUGP) Unit Test, 2025
Paper: BOT0300104
(Laboratory and Field Techniques in Plant Science)
Marks: 10
Time: 30 Minutes

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B.Sc. 3rd Semester (FYUGP) Unit Test, 2025
Paper: BOT0300204
(Plant Physiology)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. What do you mean by water potential? Describe its different components. 2+3=5

Q2. What are aquaporins? Discuss the Symplast and Apoplast movements of water in plants. 2+3=5

Q3. What is transpiration? Describe the mechanism of stomatal movement in transpiration. 2+3=5

Q4. What are PGRs? Describe the general characteristics features of PGR. 2+3=5

Q5. Give two examples of each of natural and synthetic auxin. Write few physiological roles of auxin. 2+3=5

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B.Sc. 3rd Semester (FYUGP) Unit Test, 2025
Paper: BOT0300204
(Plant Physiology)
Marks: 10
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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
Paper: BOT0500104
(Genetics)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. What is sex chromosome? Write down the differences between Autosomes and Sex chromosome. 1+4=5

Q2. What is Lethal allele? Describe the inheritance pattern of lethal allele. 1+4=5

Q3. What is gene linkage? Describe different types of gene linkage. 2+3=5

Q4. What is crossing over? Write about the significance of crossing over in evolution. 2+3=5

Q5. Explain the cytological basis of crossing over in Drosophila. 5

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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
Paper: BOT0500104
(Genetics)
Marks: 10
Time: 30 Minutes

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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
Paper: BOT0500204
(Molecular Biology)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. Discuss the differences between prokaryotic and eukaryotic transcription.

Q2. Write a note on general transcription factors required for RNA polymerase II activity.
Q3. Write a detailed note on the *Lac* operon in *E. coli* with suitable diagram.
Q4. Describe Harshey and Chase experiment to prove that DNA is the genetic material.

Q5. Write a short note on any one-

a) Mt DNA
b) Cot curve
c) DNA double helix
d) Nucleosome

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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
Paper: BOT0500304
(Plant Ecology, Phytogeography and Climate Change)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. Define ecosystem. Give an account of the structure and function of an ecosystem. 5

Q2. Explain- Ecological pyramid and food web of ecosystem. 5

Q3. What is food chain? Give an account of grazing and detritus food chain. 5

Q4. Describe in brief the common methods used for studying plant communities. 5

Q5. Define "Ecological Succession". Discuss briefly the stages of succession. 5

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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
Paper: BOT0500404
(Plant Systematics)
Marks: 10
Time: 30 Minutes

Answer any two (2) questions of the following **5x2=10**

Q1. Write a note on evidences from cytology in relation to plant systematics. 5

Q2. What are the roles and importance of herbarium? 5

Q3. Describe the brief history of Botanical code. 5

Q4. What is Numerical taxonomy? Write down the principles of Numerical taxonomy. 5

Q5. Write notes on the following- 2½ x 2=5

i) OTU's
ii) Dendrogram

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B.Sc. 5th Semester (FYUGP) Unit Test, 2025
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