

SET A

**B.Sc. Life Science IIIrd year VI Semester
Economic Botany and Biotechnology
Paper code: 42167901**

Time: 2 Hours

Maximum Marks: 75

(Write your University Roll Number and Paper Title & Code on top of the Answer Sheet)

Attempt any four questions in all. All questions carry equal marks.

1. Discuss the importance of centers of origin of cultivated crop with reference to Vavilov's work. Write the scientific name of wheat and trace the origin of hexaploidy wheat.
2. Why are legumes used as a complimentary food with the cereals? Elaborate on the morphological structure and economic importance of soybean. Name two diseases with their symptoms that are caused by legumes.
3. Write the scientific name and family of clove and black pepper. Compare their morphological and anatomical structures with well labelled diagrams. Describe the economic important of spices.
4. Define Biotechnology. Distinguish between old and new biotechnology. Explain the tissue culture methodology of endosperm culture and its application.
5. Define probe. Differentiate between Southern and Northern blotting. Explain the technique of DNA fingerprinting. Mention the applications and limitations of the technique.
6. What is SNPs. Describe in detail Sanger's method of DNA sequencing and its advancement in recent times. Write the comparative study of PCR and RT-PCR.