

RAMANRAIN RUIA AUTONOMOUS COLLEGE

DEPARTMENT OF MICROBIOLOGY

Internal Test Syllabus for SEM V Applied Component Biotechnology

2020-21

RUSACBT501			Importance of Biotechnology and Tools in Genetic Engineering
		1.1	Introduction to Biotechnology
			a) History of Biotechnology – Traditional and Modern Biotechnology. b) Biotechnology as an interdisciplinary area c) Global impact and current excitements of Biotechnology- (Health care, Agriculture, human genome project, environment), Biodiversity and its preservation.
		1.2	Tools in Genetic Engineering
			a) Basic requirements: Electrophoresis, agarose gel electrophoresis, Pulse field gel electrophoresis (PFGE), SDS-PAGE, 2D gel electrophoresis b) Mass Spectrometry – Introduction to new terminologies (MALDI, ESI), Spectrophotometry - UV and Visible, PCR and types of PCR c) Blotting Techniques: Southern, Northern and Western blotting, DNA sequencing, Probes, ELISA, RIA, Nick translation and in situ Hybridization.