COMPUTER ENGINEERING DEPARTMENT

PhD Comprehensive Examination Syllabus

October 2020

Research area specific topics

The following is the syllabus for PhD comprehensive examination to be held in the month of January 2021.

Sr. No.	Research area specific topics	Content
1	Information Security	Security Attributes, Mechanisms, Attacks. Types of Encryption Mechanisms, Authentication Mechanisms, Access Control Techniques, Designing a Security Protocol, Security Protocols in TCP/IP Protocol Stack. Design of AES, Galois fields and the related mathematics. Types of Privacy and Mechanisms.
2	Image Processing	Image Enhancement, Histogram, Image Filters, Image Transforms: DCT and Fourier Transform, Frequency and Time domain processing, Image Morphological operators
3	Distributed Computing	Scheduling algorithms, Synchronization techniques, Distributed shared memory, Agreement protocols, Deadlock handling mechanisms, Fault tolerance mechanisms