



PhD Comprehensive Examination

Faculty of Engineering and Applied Sciences

Successful completion of PhD Comprehensive Examination (Doctorate Qualifying Examination, DQE) is one of the requirements for the PhD degree. The examination will consist of one paper, which contains different areas and each area have two subjects, each subject have one question of 50 marks.

The students have to attempt total 6 complete questions (300 marks) within 4 hours (40 minutes for each question).

The passing marks will be at least 60% in total, i.e., 180 marks in total. Following is the department-wise syllabus.

Department of Computer Science

1. Algorithms and Computational Theory

- i. CS 5113 Theory of Computation
- ii. CS 5223 Advanced Analysis of Algorithm

2. Computer Architecture

- i. CS5413 Advanced Computer Architecture
- ii. CS5433 Advanced Operating Systems

3. Computer Communication and Networks.

- i. CS6713 Advanced Computer Networks
- ii. CS6723 Mobile & Wireless Networks

4. Semantic Computing

- i. CS6133 Semantic Computing
- ii. CS6143 Ontology Engineering

5. Software Engineering

- i. CS 5213 Software Architecture
- ii. CS6233 Software Quality Assurance & Testing

6. Databases, Data Warehousing and Mining

- i. CS6313 Distributed Databases
- ii. CS5343 Data mining

7. Web Based Knowledge Discovery & Digital Library

- i. CS5163 Web Based Knowledge Discovery
- ii. CS5153 Digital Library

Department of Electronic Engineering

1. General

- I. EE 5413 Stochastic Processes
- II. EE5813 Linear Systems Theory

2. Communication

- i. EE5713 Advanced Digital Communication
- ii. EE6733 Cellular & Mobile Communication

3. Networking

- i. EE6783 Advanced Computer Networks
- ii. EE6763 Mobile & Wireless Networks

4. Signal Processing

- i. EE6633 Adaptive Signal Processing
- ii. EE5623 Advanced Digital Signal Processing

5. Control System

- i. EE5843 Control System Design
- ii. EE5823 Non Linear Control System

6. Microwave Engineering

- I. EE5513 Advanced Electromagnetic Theory

II. EE 6523 Advanced Antenna Theory & Design

7. Image Processing

I. EE5613 Digital Image Processing

II. EE6643 Pattern Recognition

8. Micro Electronic and FPGA

I. EE6333 Advanced ASIC Design and FPGA

II. EE 6343 Embedded System Design

Department of Bioinformatics

1. Computer Sciences

- i. CS5113 Theory of Computation
- ii. CS5123 Advance Analysis of Algorithms

2. Biotechnology

- i. BI 5713 Applied Bio-Technology
- ii. BI5713 Plant and Animal Cell Biotechnology

3. Bioinformatics

- i. BI5413 Advanced Bioinformatics
- ii. BI5113 Advanced Molecular Biology

4. Cancer Cytogenetic

- i. BI5643 Cancer Cytogenetic
- ii. BI5xx3 Cancer Biology