Technological University (Hmawbi)
Department of Computer Engineering & Information Technology
No.
Date :

31.8.2026

MINISTRY OF SCIENCE AND TECHNOLOGY

TECHNOLOGICAL UNIVERSITY (HMAWBI)

DEPARTMENT OF COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY

Scope for M.E Entrance Examination

2026-2027 Academic Year

1. **Computer Organization and Design**

Reference Book: Computer Organization and Design (3rd Edition) by David A. Patterson, John L. Hennessy

Chapter 2: Language of the Computer

Chapter 3: Arithmetic for Computers

Chapter 4: Assessing and Understanding Performance

Chapter 5: The Processor: Datapath and Control

2. **Cryptography and Network Security**

Applied Cryptography, Second Edition: Protocols, Algorithms and Source Code in C (cloth) Author(s): Bruce Schneier

Chapter 1 Foundations

- 1.1 Terminology
- 1.2 Steganography
- 1.3 Substitution Ciphers and Transposition Ciphers

Chapter 2 Protocol Building Blocks

Chapter 3 Basic Protocols

- 3.1 Key Exchange
- 3.2 Authentication
- 3.3 Authentication and Key Exchange
- 3.4 Formal Analysis of Authentication and Key-Exchange Protocols

Cryptography and Network Security Principles and Practices, Fourth Edition by William Stallings

Chapter 16 IP Security

- 16.1 IP Security Overview
- 16.2 IP Security Architecture

Chapter 17 Web Security

17.1 Web Security Considerations

17.2 Secure Socket Layer and Transport Layer Security

3. Digital Image Processing

Rafael C. Gonzalez and Richard E. Woods, Digital Image Processing, Second Edition. Prentice Hall, Upper Saddle River, New Jersey 07458.

Chapter 6: Color Image Processing

6.2. Color Models

6.3. Pseudo Color Image Processing

6.5. Color Transformations

Chapter 8: Image Compression

8.1. Fundamentals

8.2. Image Compression Models

8.4. Error Free Compression

Chapter 9: Morphological Image Processing

9.2. Dilation and Erosion

9.3. Opening and Closing

9.5. Some Basic Morphological Algorithms

Chapter 10 Image Segmentation

10.1. Detection of Discontinuities, edge linking and boundry detection, region growing

Dr. May Cho Aye
Professor and Head
Department of Computer Engineering
and Information Technology
Technological University (Hmawbi)