

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

- 1 ✓ Define the terms Information hiding, Steganography & Watermarking. (3)
- 2 ✓ Write down the importance of steganography. (3)
- 3 ✓ How will be the model of watermarking be made using notations like vectors & arrays? (3)
- 4 ✓ Explain the working of random scalar variables mathematically for obtaining a model of watermarking process? (3)
- 5 ✓ The purpose of watermarking can be robust or fragile, private or public. why? (3)
- 6 ✓ Cite the importance of the tool Stirmark. (3)
- 7 ✓ Explain the steps in erasable watermarks. (3)
- 8 ✓ What is watermarking security? (3)
- 9 ✓ What is the goal of steganography? (3)
- 10 ✓ Define the term steganalysis. (3)

PART B

Answer any one full question from each module, each carries 14 marks.

Module I

- 11 a) Compare and contrast Steganography & Watermarking (6)
- b) Explain the properties of watermarking. (8)

OR

- 12 a) Explain the classification of digital watermarking based on characteristics. (8)
- b) How Data Authentication is done using digital steganography? (6)

Module II

- 13 a) Explain Watermarking as Multiplexed Communications with suitable figures. (6)
- b) How a secure transmission will takes place in a communication system of watermarking?

OR

- 14 a) Classify the techniques used in Spatial Domain Watermarking. (6)
 b) Illustrate the basic communication model of watermarking diagrammatically. (8)

Module III ✓

- 15 a) Compare Cryptographic & Protocol Attacks. (6)
 b) Explain the process of image scaling, rotation and clipping in geometric attacks. (8)

OR

- 16 a) Explain the process of collaging & templating in geometric attacks. (6)
 b) Explain the process of linear transformation, bending, warping, perspective projection in geometric attacks. (8)

Module IV ✓

- 17 a) What is Selective Authentication? Explain its categories. (6)
 b) How can we restrict watermarking operations? Explain in detail with example. (8)

OR

- 18 a) What is Restoration? Explain its categories. (6)
 b) How can we prevent unauthorized detection? Explain with a diagram. (8)

Module V

- 19 a) Briefly explain the types of steganography. (6)
 b) Explain the applications of steganography with examples. (8)

OR

- 20 a) Compare s-tools & Ez-stego in steganography. (6)
 b) Illustrate LSB Embedding Algorithm with example. (8)
