Printed Pages : 03 CS/IT-273

(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID : MF1

Roll No. | | | | | | | | | | |

M. TECH. (Sem.II)

THEORY EXAMINATION 2015-16

DIGITAL FORENSIC

Time : **3** Hours Total Marks : **100**

1. Attempt any two parts : [2×10=20]

   (a) How applications of transformation in steganography plays an important role in digital forensic?

   (b) Explain image compression with the help of suitable block diagrams and examples.

   (c) (i) Define the term biometric? Explain biometric verification and biometric enrollment.

   (ii) Explain Haar Wavelet transformation with the help of suitable examples.

2. Attempt any two parts : [2×10=20]

   (a) What are the different authentication methods? Explain Secure Authentication Protocol for digital forensic.

   (b) Write short notes on the following:

   (i) Speaker Recognition

   (ii) Signature verification

(c) Write short notes on the following:

(i) Face Recognition

(ii) Finger Print Recognition

3. Attempt any two parts : [2×10=20]

(a) Consider the Table. 2 which gives the genuine and the imposter score obtained from face recognition.

Genuine	Imposter
95	85
92	74
90	89
89	76
95	81
91	72
94	71
81	64
99	87
88	84

Table 2: Genuine and Imposter Scores

Using threshold 80, 82, 84, and 86

Determine:

(i) Estimate equal error rate.

(ii) Estimated threshold for maximum accuracy

(b) What is an error? Explain various kinds of errors. Explain any one method of error estimation in data.

(c) What do you understand by error rate of match engine? Also Define FAR and FRR with the help of suitable examples.

4. Attempt any two parts : [2×10=20]

(a) Differentiate between the followings:

(i) Adaptive and non-Adaptive Algorithms

(ii) Active and Malicious attackers.

(b) How cryptography is used in watermarking? Explain the transform domain techniques in steganography.

(c) Discuss the classification of different information hiding techniques. With a suitable diagram explain the framework for secret communication.

5. Explain the following terms (any four) : [4×5=20]

(a) Watermarking

(b) Copyright Protection

(c) Steganalysis.

(d) Least Significant Bit Substitution

(e) Fourier Transformation

(f) Statistical Steganography

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