

Roll No: -----



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2018

Program: Int. B.Tech Cyber law
Subject (Course): IT for Forensic Science
Course Code : CSEG 424
No. of page/s: 02

Semester – VIII
Max. Marks : 100
Duration : 3 Hrs

Section A

[5*4 =20]

1. “A biometric match proves that I am who I say I am”. Is it right or wrong? Justify your answer with the help of example. [4]
2. What is Steganography? How it is different from cryptography, explain with the help of suitable example. [4]
3. Draw the outline of a JPEG image compression algorithm used in transform domain techniques. [4]
4. What is Digital Watermarking? How it is different from Steganography. [4]
5. What is Fourier Transformation? [4]

Section B

[4*10=40]

6. Explain LSB Embedding Digital Watermarking technique with the help of an example. Also explain how LSB Embedding is not a robust technique. [8+2]
7. What are the applications of Biometric System? Also explain the limitations pertaining to biometric system. [5+5]
8. What is Information Hiding? Differentiate between Technical and Linguistic Steganography. Also mention their subtypes. [2+8]
9. Explain in detail about cover generation and distortion techniques. [10]

Or

Compare and contrast between Spread Spectrum and Statistical Steganography in detail. [10]

Section C

[2*20=40]

10. a) What is Biometric System? Explain the working of biometric process with the help of a block diagram [2+8]

b) 100 individuals try to use a biometric system. There are 36 genuine individuals are accepted, 8 genuine individuals rejected, 46 imposter rejected and 10 imposter accepted. Evaluate the biometric system by giving the FAR and FRR. If FTE=0.06, then how about ATV? Formula for $ATV = (1 - FTE)(1 - FRR)$? [10]

11. What are Substitution Systems? Explain the embedding and extraction process of Least Significant Bit Substitution [5+15]

Or

What is Steganalysis, how it is done? Name some tools to hide secret information in a cover. Also explain type of attacks used by Steganalyst. Write down about two tools used for detecting hidden information. [7+3+7+3]

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