Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CS2021** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INFORMATION SECURITY** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | Marks |
| 1. | a. | Explain the various information security goals. | CO2 | 12 |
| b. | Illustrate the possible security controls with suitable examples. | CO2 | 8 |
| (OR) | | | | |
| 2. | a. | Discuss the software and hardware vulnerabilities with real time examples. | CO1 | 12 |
| b. | Describe the types of security threats in information systems. | CO1 | 8 |
| 3. | a. | Encrypt the following plaintext using ceaser cipher with key=5.  “Something you might put on your head” | CO2 | 5 |
|  | b. | What is transposition? How do you encrypt the message given below using columnar transposition?  THIS IS A SECRET MESSAGE BREAK IT IF YOU CAN | CO2 | 5 |
|  | c. | Write a detailed note on Rijndael Algorithm. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Decrypt the following with detailed procedure, which was encrypted with Caesar ciphers  DREP TCLVJ YVCG UVTIPGK R TRVJRI TZGYVI | CO2 | 8 |
|  | b. | Encrypt the message “WHITE HOUSE ATTACK” using vernam cipher. | CO2 | 4 |
|  | c. | Discuss the various roles of cryptanalyst with suitable examples. | CO1 | 8 |
| 5. | a. | Explain the various applications of encryption. | CO1 | 10 |
|  | b. | Encrypt the message M = 8 using RSA algorithm by considering p=7, q=11, and e=17. | CO2 | 10 |
| (OR) | | | | |
| 6. | a. | Discuss the working principles of DES algorithm. | CO2 | 15 |
|  | b. | Describe the characteristics of Trapdoor. | CO1 | 5 |
| 7. | a. | Discuss the memory and address protection. | CO1 | 8 |
|  | b. | Illustrate the various access control mechanisms in operating system. | CO2 | 12 |
| (OR) | | | | |
| 8. | a. | How does reliability and integrity is achieved in databases. | CO2 | 12 |
|  | b. | List and describe the types of disclosures. | CO1 | 8 |
|  | | **Compulsory:** |  |  |
| 9. |  | Discuss the various kinds of threats and control mechanisms in computer networks. | CO2 | 20 |

ALL THE BEST