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

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**End Semester Examination – Nov/Dec – 2018**

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| **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. | Illustrate the various levels of vulnerabilities and threats in the computing system. | CO2 | 18 |
| b. | Classify different types of hackers. | CO2 | 2 |
| (OR) | | | | |
| 2. |  | How will you prevent the computing systems from vulnerabilities and attacks? Illustrate the control mechanisms to defense against computer attacks. | CO2 | 20 |
|  |  |  |  |  |
| 3. | a. | With neat sketch, elaborate the general structure of AES and each component in detail. | CO1 | 15 |
| b. | Encrypt the given input message “Safe Computing in the information” using the Caesar cipher with the key 5. | CO1 | 5 |
| (OR) | | | | |
| 4. | a. | Discuss Shannon’s characteristics of good ciphers to make good encryption algorithms. | CO3 | 6 |
| b. | Describe the working procedure of RSA algorithm with encryption and decryption. | CO1 | 10 |
| c. | List out the possible attacks of RSA. | CO2 | 4 |
|  |  |  |  |  |
| 5. | a. | Discuss about viruses and its spreading strategy in detail. | CO1 | 10 |
| b. | Describe how viruses attach and gain control over the computing systems. | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | Explain various approaches to protect files in operating systems. | CO1 | 14 |
| b. | Discuss about relocation of memory and address protection. | CO1 | 6 |
|  |  |  |  |  |
| 7. | a. | Narrate the list of security requirements for database systems. | CO2 | 10 |
| b. | List the factors that makes the data sensitive. | CO3 | 5 |
| c. | Elaborate the factors that enables database administrator to make “Access Decisions”. | CO2 | 5 |
| (OR) | | | | |
| 8. |  | Elaborate the implementation of various types of firewall. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Illustrate the types of intrusion detection system. | CO3 | 20 |