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

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

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| **Code :** | **17CA2050** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SECURITY OF WEB APPLICATIONS** | **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. | Define Web Application. | CO1 | 1 |
| b. | \_\_\_\_\_\_\_\_\_\_\_ makes eavesdropping difficult.   1. HTML b. HTTP c. SSL d. SSI | CO2 | 1 |
| c. | Draw diagram of Web application architecture. | CO1 | 2 |
| d. | Write a short note on DoS. | CO3 | 2 |
| e. | Explain n-Tier web application with a neat diagram. | CO1 | 14 |
| (OR) | | | | |
| 2. | a. | Define web server. | CO1 | 1 |
| b. | is accessed by spoofing tokens within a cookie   1. Aunthentication strength c. Authorization strength 2. Data connectivity strength d. Input validation | CO4 | 1 |
| c. | Write a short note on cookies. | CO1 | 2 |
| d. | Write a short note on TLS. | CO1 | 2 |
| e.  f.  g. | HTTP is Hackers dream. Justify  Give a brief note on the different types of authentication protocols.  Give a brief overview of HTML | CO2  CO4  CO1 | 4  4  6 |
|  |  |  |  |  |
| 3. | a. | Define URL scan. | CO1 | 1 |
| b. | Define ingress filter. | CO1 | 1 |
| c. | Write a short note on IIS. | CO1 | 2 |
| d. | Write a short note on Buffer overflow vulnerability. | CO2 | 2 |
| e. | Explain in detail the recent DoS attacks | CO3 | 14 |
| (OR) | | | | |
| 4. | a. | Define SQL injection. | CO1 | 1 |
| b. | List down files of UrlScan. | CO1 | 1 |
| c. | Write a short note on IIS Directory-Traversal. | CO2 | 2 |
| d. | Explain briefly how Code-Red infect servers. | CO5 | 2 |
| e. | Explain in detail the web vulnerability scanner WebInspect. | CO2 | 14 |
|  |  |  |  |  |
| 5. | a. | Define Authentication. | CO4 | 1 |
| b. | Give the role of nonce in Digest authentication. | CO4 | 1 |
| c. | Write a short note on NTLMAuthorization Proxy Server. | CO1 | 2 |
| d. | Explain briefly the password sniffing technique. | CO4 | 2 |
| e. | Explain in detail the authentications methods Basic, Certificate based, and Microsoft Passport | CO4 | 14 |
| (OR) | | | | |
| 6. | a. | Define hashing algorithm. | CO4 | 1 |
| b. | State the difference between Basic and Digest authentications. | CO4 | 1 |
| c. | Write a short note on Negotiate. | CO1 | 2 |
| d. | Explain briefly the countermeasures against password guessing. | CO4 | 2 |
| e. | Explain the working of Brute Force attack in cracking password. Write short note on any five recent Brute Force attack. | CO6 | 14 |
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| 7. | a. | Define Authorization. | CO4 | 1 |
| b. | State the difference Authentication and Authorization. | CO4 | 1 |
| c. | Write a short note on URI. | CO1 | 2 |
| d. | Give a brief note on hidden tags. | CO4 | 2 |
| e. | Discuss HTTP cookies in detail. | CO4 | 14 |
| (OR) | | | | |
| 8. | a. | Define Query String. | CO4 | 1 |
| b. | Define Role Matrix. | CO4 | 1 |
| c. | Write a short note on No forced session timeout. | CO5 | 2 |
| d. | Write a short note on HTTP method POST. | CO1 | 2 |
| e. | List down the conditions that could indicate the occurrence of brute-force attack. | CO6 | 14 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Define input validation attack. | CO5 | 1 |
| b. | List down the counter measures against impersonation. | CO5 | 1 |
| c. | Write short note on canonicalization. | CO5 | 2 |
| d. | Explain briefly security misconfiguration vulnerability. | CO2 | 2 |
| e. | Define Buffer overflow. Describe how a buffer overflow works. Explain the impact of buffer overflow. Explain how to stop Buffer overflow from attacking web applications. | CO2 | 2+3+5+4 |