**Birla Institute of Technology & Science, Pilani**

**Work Integrated Learning Programmes Division**

**Second Semester 2020-2021**

**Mid-Semester Test**

**(EC-2 Regular)**

Course No. : SE ZG566

Course Title : Secure Software Engineering

Nature of Exam : Open Book

Weightage : 30%

No. of Pages = 1

# No. of Questions = 5

Duration : 2 Hours

Date of Exam : 11/03/2022 (FN)

Note to Students:

1. Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively. Each answer should start from a fresh page.
3. Assumptions made if any, should be stated clearly at the beginning of your answer.
4. Provide brief response (in 50 words) [2X6 = 12 Marks]
   1. How does CIA triad apply to a telecom service provider?
   2. How does taint analysis help uncover vulnerabilities?
   3. What is a malware? What is meant by zombie in context of malware?
   4. Why is software security considered an asymmetric problem?
   5. Differentiate interpretation of non-repudiation in contexts of security and privacy.
   6. Differentiate an entry in CVE from CWE.
5. What are Secure Implementation Patterns? How do they enhance software quality? Explain with examples (in 100 words). [4 Marks]
6. How does CMU SQUARE process differ from OWASP SAMM and Microsoft SDL w.r.t. Requirements Engineering? Explain (in 100 words). [4 Marks]
7. You are security consultant for a courier company. They like to automate their operations. Perform Threat Modelling and Build necessary artifacts, and propose recommendations for their development team. [5 Marks]

1. You are a Security Professional. Your client, who is building an Information System, needs to choose between penetration and fuzz testing (choose only one). Prepare a questionnaire (with at least 5 questions) to the client to enable you to make recommendation. Justify the questionnaire. [5 Marks]

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