

Dr. Hemraj Saini

Roll No.: \_\_\_\_\_

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST -3 EXAMINATION- December 2018

M.Tech. I Semester

COURSE CODE: 10M1WCI131

MAX. MARKS: 35

COURSE NAME: System and Network Security Techniques

COURSE CREDITS: 3

MAX. TIME: 2 Hrs

*Note: All questions are compulsory.*

Que.1 [3 Marks + 3 Marks; CO2]

- (a) How APIs can be misused? Explain with an appropriate example.
- (b) What is routing Security? Explain the following routing protocols-
  - a. ARP
  - b. OSPF
  - c. BGP

Que.2 [3 Marks + 3 Marks; CO7]

- (a) What are the different stages of malware analysis? Explain each one.
- (b) What are various dynamic malware analysis techniques? Explain each one.

Que. 3 [3 Marks + 3 Marks; CO7]

- (a) Describe the multi-level approach for taint tracking on smart phones.
- (b) Discuss the issues of dynamic taint analysis. Write down the limitations of Taindroid.

Que. 4 [3 Marks + 3 Marks; CO8]

- (a) What is the purpose of Domain Name System (DNS)? Also explain DNS spoofing or Poisoning.
- (b) What are the different assumptions that constrained the design of backtrack algorithm?

Que. 5 [3 Marks + 2 Marks; CO9]

- (a) Explain various possible routing protocol-based malicious attacks.
- (b) Write short notes on the following-
  - i. Vulnerability of local network
  - ii. Authentication server

Que. 6 [3 Marks + 3 Marks; CO9]

- (a) Explain different approaches used to reduce the anonymity afforded by IP spoofing. Also characterize these approaches in terms of management cost, network overload, router overload, distributed capability, post-mortem capability and preventive reactive.
- (b) Write the short note on the following-
  - i. Node Sampling
  - ii. Edge Sampling
  - iii. Compressed edge fragment sampling