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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

II SEMESTER M.TECH. (COMPUTER SCIENCE & INFORMATION SECURITY)
END SEMESTER EXAMINATION-APRIL 2018
SUBJECT: NETWORK SECURITY [CSE 5222]
REVISED CREDIT SYSTEM
(19/04/2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

- 1A. Consider a database management system used by a departmental store. Give examples of integrity, availability, and authenticity requirements associated with the system. In each case, indicate the degree of importance of the requirement. Are there any other security requirements that need to be considered for the system? 3M
- 1B. Explain the various Boot Infection Strategies. 5M
- 1C. What is a stealth virus? Mention the various stealth techniques. 2M
- 2A. Explain the following: 5M
 - i. Antigoat Virus.
 - ii. Inoculation.
 - iii. Phishing attack.
- 2B. Differentiate between application level and circuit level gateways. What is a next generation firewall? 5M
- 3A. What is statistical anomaly detection? Explain. 4M
- 3B. Who is a misfeasor? Explain how password file can be protected. 3M
- 3C. What are the security services provided by encapsulating security payload? Illustrate how packet format changes when ESP is applied to IPV4 packet in transport mode. 3M
- 4A. Draw neat diagrams and explain the different ways of combining security associations. 4M
- 4B. What is a reflection attack? Draw a neat diagram and explain IKE phase 2 operation. 4M

- 4C. Explain SSL record protocol operation. 2M
- 5A. What is SSL session resumption? Mention any two differences between SSL and TLS. 3M
- 5B. Draw a neat diagram and explain PGP trust model. 3M
- 5C. What are the technical deficiencies of Kerberos version 4 protocol? How are they resolved in version 5 protocol? 4M
