

Time: 2 Hours

Total Marks: 60

- N. B.: (1) **All** questions are **compulsory**.
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
 (3) Answers to the **same question** must be **written together**.
 (4) Numbers to the **right** indicate **marks**.
 (5) Draw **neat labelled diagrams** wherever **necessary**.
 (6) Use of **Non-programmable** calculators is **allowed**.

- Q. 1 Attempt two of the following. 12**
 a. What are Different levels of fault tolerance in Cloud computing?
 b. What are the best practices to mitigate vulnerabilities?
 c. What are Security Vulnerabilities in Wireless Sensor Networks?
 d. Write a short note on Security Requirements in Wireless Sensor Networks.
- Q. 2 Attempt two of the following. 12**
 a. Explain different types of Social Engineering.
 b. What are the types of disaster recovery?
 c. Differentiate between vulnerability assessment & penetration testing.
 d. Define Metasploit with the use.
- Q. 3 Attempt two of the following. 12**
 a. Explain Kali Linux & virtual machine.
 b. Explain the structure of Metasploit.
 c. What is Variables in Metasploit?
 d. List down the steps for Installing Metasploit on Linux .
- Q. 4 Attempt two of the following. 12**
 a. What are client-side attacks? Explain in detail the need of client- side attacks.
 b. Discuss the NMAP and Nessus scanning approach in detail.
 c. Explain Meterpreter in brief.
 d. What is Shellcode? Explain reverse sheel and blind shell in detail.
- Q. 5 Attempt two of the following. 12**
 a. Explain the process to write exploits for DEP bypass.
 b. Describe working with variable and data types in ruby.
 c. Explain the term 1.Vulnerability 2. Exploit 3. Payload 4. Meterpreter 5. Encoders
 d. What is the process to clear all logs after penetration testing?