Code No.: CS731PE | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B. TECH–I–Semester End Examinations (Regular) - November- 2024
INFORMATION SECURITY & RISK MANAGEMENT
(CSE)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1. a) What are the types of Threat's? [2M]
   b) Compare substitution ciphers with transposition ciphers [2M]
   c) List the features of Authentication headers. [2M]
   d) Define HMAC. [2M]
   e) Discuss the various Digital Signature's. [2M]
   f) What is Database Security? [2M]
   g) Explain IP Security. [2M]
   h) What are the limitations of firewalls? [2M]
   i) Define web security. [2M]
   j) Define Risk analysis. [2M]

PART-B **(50 Marks)**

2. a) Discuss in detail about various types of Security attacks with neat diagrams [5M]
   b) Explain in detail about the Common Vulnerabilities and Exposure? [5M]

OR

3. With a neat diagram explain how encryption and decryption are done using Blowfish algorithm? [10M]

4. Explain the RSA algorithm? With suitable examples. [10M]

OR

5. a) Explain about Elliptic Curve Cryptography with neat diagram. [5M]
   b) Discuss about Message Authentication and Hash Functions. [5M]

6. Client Machine C wants to communicate with Server S Explain how it can be achieved through Kerberos protocol? [10M]

OR

7. a) Discuss the steps involved in Key performance indicators [5M]
   b) Elaborate the Data leakage threats? [5M]

8. a) Briefly discuss about IP Security Architecture. [5M]
   b) Explain the Encapsulating Security Payload. [5M]

OR

9. a) Explain the Secure Electronic Transaction. [5M]
   b) Discuss the types of Firewalls With examples? [5M]

10. a) Describe the principles of Risk analysis process? [5M]
    b) What are the Security Roles in Accountability? [5M]

OR

11. Demonstrate the key elements of information security policies with examples? [10M]

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