Time: 3 Hrs.   Total Marks: 80

Instructions:
>   i) All questions are compulsory.
>   ii) Figures to right indicate full marks.

Q. 1) A) Multiple choice questions.   (10)

Q. 1) B) Fill in the blank   **(06)**

Q. 2) Solve any **Eight** of the following.   (16)
   a. What is asymmetric cryptography?
   b. What is digital signature?
   c. What is a message authentication code?
   d. What are two common techniques used to protect a password file?
   e. What is an access right?
   f. What is a protection domain?
   g. What is attack?
   h. Define the term Worms?
   i. What is mean by Attacks?
   j. Define the term Ransomware?

Q. 3) A) Attempt any **Two** of the following.   (10)
   a) What is Confidentiality? Explain Confidentiality with Symmetric Encryption?
   b) What is Authentication? Explain remote user Authentication?
   c) Explain the Need for Database Security?

Q. 3) B) **Short note on** i) Public-Key Encryption ii) Flood Attacks   (06)

Q. 4 A) Attempt any **Two** of the following.   (08)
   a) Explain the various worm technology.
   b) Explain various means of authentication.
   c) Explain the difference between a simple memory card and a smart card.
Q. 4) B) What is biometric authentication? Explain Physical Characteristics Used in Biometric
        Applications and Operation of a Biometric Authentication System.   (08)

Q. 5) Attempt any **Two** of the following.   (16)
   a) Explain DBMS Architecture with suitable diagram.
   b) Explain Reflector and Amplifier Attacks in details.
   c) What is Malicious Software? Explain Types of Malicious Software.

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Answer Key

Q. 1) A) Multiple choice questions.   (10)
  1) c) Malicious Software
  2) b) Inserting malware loaded USB to a system
  3) a) algorithm for performing encryption and decryption
  4) a) Keylogger
  5) d) Spywar

6) d) Virus
7) b) Denial of service
8) d) Password
9) d) All of the above
10) d) All of the above

Q. 1) B) Fill in the blank (06)
1) role-based access control
2) Data Encryption standard
3) Memory cards
4) rows and columns
5) Spyware
6) Trapdoor

Q. 2) Solve any **Eight** of the following. (16)
   a. For definition 2 mark.
   b. For definition 2 mark.
   c. For Correct answer 2 marks.
   d. For definition 2 mark
   e. For definition 2 mark
   f. For definition 2 mark
   g. For definition 2 mark
   h. For definition 2 mark
   i. For definition 2 mark
   j. For definition 2 mark

Q. 3) A) Attempt any **Two** of the following. (10)

   a) For definition 1 marks and for correct explanation 4 marks
   b) For definition 1 marks and for correct explanation 4 marks
   c) For Correct Explanation 5 marks

Q. 3) B) **Short note on:** i) For Correct answer 3 marks
                          ii) For Correct answer 3 marks.

Q. 4 A) Attempt any **Two** of the following. (08)
   a) For Correct answer of Subject 2 marks and Object 2 marks.
   b) For Correct answer 4 marks
   c) For Correct answer 4 marks.

Q. 4) B) For Correct definition 2 marks and for correct explanation 6 marks

Q. 5) Attempt any **Two** of the following. (16)
  a) For correct explanation 6 marks and for diagram 2 marks
  b) For Correct explanation Reflector Attack 4 marks and Amplifier Attack 4 marks.
  c) For Definition 2 marks for correct explanation 6 marks.