

**SEMESTER EXAMINATION-2021**  
**CLASS – MCA 5<sup>TH</sup> SEMESTER, SUBJECT: COMPUTER APPLICATIONS**  
**MCA-E503: INFORMATION SECURITY**

**Time: 3 hour**

**Max. Marks: 70**

**Min. Pass: 40%**

**Note:** Question Paper is divided into two sections: **A and B**. Attempt both the sections as per given instructions.

**SECTION-A**

**(Short Answer Type Questions)**

**Instructions:** Answer any five questions in about 150 words each. Each question carries four marks. (5 x 6=30Marks)

1. Explain the various components of an information system.
2. What are the objectives of ethical hacking? Point out role of different types of hackers.
3. Describe threat to information security due to the following : (a) Act of human error (b) shoulder surfing (c) power irregularities
4. Categorize different types of cybercrime citing suitable example of each.
5. State the focus areas and pillars of IT-Governance.
6. What do you mean by asset? What are the actual risks associated with each asset?
7. List and explain the different types of input and output controls.
8. Differentiate between white-box and black box penetration methodologies.
9. Describe how an organization institutionalizes its policies, standard and practices using education training and awareness programs.
10. What do you understand by malware? Describe different type of malware attacks.

## SECTION-B

### (Long Answer Type Questions)

**Instructions:** Answer any four questions in detail. Each question carries ten marks. (4 x 10 = 40 Marks)

11. What are the four phases of life cycle of a security policy? Explain the functions of each phase in detail.
12. Discuss any ten principles of security design for implementing information security in any organization.
13. What are the key concepts of ITIL? Explain the service life cycle prescribed by ITIL.
14. Discuss the evolution of ISO 27001 and point out various features and domain of it.
15. Describe the conceptual framework for the development of Information Security Management System.
16. List and discuss the five principles of COBIT 5 framework that helps enterprises to achieve their goals.
17. What is risk management? Why is identification of risks, by listing their assets and vulnerabilities, so important to risk management process?
18. Write short note on the following :  
(a) DRP Strategies (b) PGP (c) Digital Signature (d) Symmetric Cryptography

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