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# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal-500043, Hyderabad

**B.Tech VII SEMESTER END EXAMINATIONS (REGULAR) - DECEMBER 2023**

**Regulation: UG-20**

**CYBER SECURITY**

**Time: 3 Hours**

**(COMMON TO CSE | IT)**

**Max Marks: 70**

**Answer ALL questions in Module I and II**

**Answer ONE out of two questions in Modules III, IV and V**

**All Questions Carry Equal Marks**

**All parts of the question must be answered in one place only**

## MODULE – I

- (a) Write about biometrics. Criticize on the problems faced by using biometrics for authentication purpose. [BL: Understand| CO: 1|Marks: 7]
- (b) Discuss how to implement access control to protect the data from threats? Elaborate on any three major access control techniques used. [BL: Understand| CO: 1|Marks: 7]

## MODULE – II

- (a) Demonstrate the process of segmentation and paging. Combine paging with segmentation. [BL: Understand| CO: 2|Marks: 7]
- (b) Show the typical division of TCB and non-TCB sections in trusted system functions. Detail on TCB function, design and implementation. [BL: Understand| CO: 2|Marks: 7]

## MODULE – III

- (a) List and explain the components of database with roles of database administrator and data manager. [BL: Understand| CO: 3|Marks: 7]
- (b) Discuss how does intrusion prevention happens? Give all the possible intrusion responses available to implement intrusion prevention. [BL: Understand| CO: 3|Marks: 7]
- (a) What is firewall? Elaborate on the following firewall types – packet filter, stateful inspection and application proxy gateway. [BL: Understand| CO: 4|Marks: 7]
- (b) How people and computer analyse the databases for data connections that lead to unacceptable data disclosure? Explain any two types in detail. [BL: Understand| CO: 4|Marks: 7]

## MODULE – IV

- (a) Elaborate on the various aspects of information privacy that applies to the technological situations. [BL: Understand| CO: 5|Marks: 7]
- (b) Where does email go and who can access it? What is the mechanics of transmitting email with attention to privacy impacts? [BL: Understand| CO: 5|Marks: 7]
- (a) Illustrate the privacy implications on one of the recent technologies called radio frequency identification (RFID). [BL: Understand| CO: 5|Marks: 7]

- (b) Describe the understanding of online environment and the payment methods on web as a part of privacy on web. [BL: Understand| CO: 5|Marks: 7]

### MODULE – V

7. (a) Identify the seven issues that must be addressed by every security plan. Elaborate on the same. [BL: Understand| CO: 6|Marks: 7]  
(b) Brief the process of risk analysis in a step-by-step manner. Analyse the possible example of cyber warfare. [BL: Understand| CO: 6|Marks: 7]
8. (a) Who performs the security analysis, recommends a security program and writes the security plan? Elucidate. [BL: Understand| CO: 6|Marks: 7]  
(b) What is internet of things? Illustrate IoT enabled products with the security threats you detect as the negative side of each. [BL: Understand| CO: 6|Marks: 7]

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