# INSTITUTE OF AERONAUTICAL ENGINEERING

**(Autonomous)**

Dundigal, Hyderabad - 500 043

## COMPUTER SCIENCE AND ENGINEERING

### TUTORIAL QUESTION BANK

| Course Name | Cyber Security |
|---|---|
| Course Code | BCS006 |
| Class | I M. Tech II Semester |
| Branch | Computer Science Engineering |
| Year | 2018 - 2019 |
| Team of Instructors | Ms.CH.Srividya, Assistant Professor, CSE |

**OBJECTIVES**

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.

In line with this, faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

## PART – A (SHORT ANSWER QUESTIONS)

| S. No | QUESTIONS | Blooms taxonomy level | Course outcome |
|---|---|---|---|
| | **UNIT – I**<br>**INTRODUCTION** | | |
| 1. | List various web languages. | Remember | 1 |
| 2. | What are the different types of web attacks. | Remember | 2 |
| 3. | Define computer forensics. | Understand | 3 |
| 4. | List various types of cyber crime. | Understand | 2 |
| 5. | What are the properties of cyber crime | Remember | 2 |
| 6. | Define web security. | Understand | 2 |
| 7. | What is meant by security attack. | Remember | 3 |
| 8. | Give the categories of cyber crime | Remember | 4 |
| 9. | List out different types of web servers. | Understand | 3 |
| 10 | Define web server. | Remember | 3 |

## PART – B (LONG ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – I**<br>**INTRODUCTION** | | |
| 1. | Explain different types of web attacks. | Understand | 3 |
| 2. | Describe the architecture of Apache and IIS web servers. | Remember | 4 |
| 3. | Write a short notes on a)web languages b)web security | Understand | 3 |
| 4. | Describe the overview of cyber crime, its nature and scope. | Apply | 3 |
| 5. | Explain about various types of cyber crime. | Apply | 4 |
| 6. | Briefly explain the categories of cyber crime. | Understand | 3 |
| 7. | Draw the architecture of database server and discuss briefly. | Apply | 4 |
| 8. | What are the properties of cyber crime. Explain. | Understand | 3 |
| 9. | Explain various types of web attacks. | Understand | 5 |
| 10. | Write a short notes on n-tier web applications. | Understand | 3 |

## PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – I**<br>**INTRODUCTION** | | |
| 1. | Explain about various types and categories of cyber crime. | Apply | 8 |
| 2. | Describe the architecture of Apache and IIS web servers, Database server and explain its functionality. | Apply | 9 |
| 3. | Write a short notes on a)web languages b)web security c) n-tier web applications | Apply | 8 |
| 4. | Explain various types of web attacks and web languages. | Apply | 9 |
| 5. | Describe the overview of cyber crime, nature and scope of cyber crime. | Apply | 8 |

## PART – A (SHORT ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – II**<br>**REVIEW OF COMPUTER SECURITY AND CYBER CRIME ISSUES** | | |
| 1. | Define cryptography. | Remember | 3 |
| 2. | Expand RSA. | Understand | 3 |
| 3. | State various intrusion detection systems. | Understand | 3 |
| 4. | Define virus. | Remember | 3 |
| 5. | What are different types of virus attacks. | Understand | 3 |
| 6. | Define intellectual property. | Remember | 3 |
| 7. | List various digital laws. | Understand | 3 |
| 8. | What do you mean by hacking and cracking. | Understand | 3 |
| 9. | Give the law enforcement roles. | Remember | 3 |
| 10. | Define gateway. | Remember | 3 |

## PART – B (LONG ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – II** **REVIEW OF COMPUTER SECURITY AND CYBER CRIME ISSUES** | | |
| 1. | Explain about public key cryptography. | Understand | 3 |
| 2. | Discuss about RSA algorithm | Apply | 3 |
| 3. | Write a short notes on i)virus and malicious code ii)virus attacks. | Understand | 3 |
| 4. | Explain intrusion detection systems. | Apply | 3 |
| 5. | Explain briefly about payment gateways. | Apply | 3 |
| 6. | Write a short notes on internet hacking and cracking. | Remember | 4 |
| 7. | Define intellectual property. Explain IPR. | Apply | 4 |
| 8. | Describe briefly about mail bombs and exploitation. | Remember | 4 |
| 9. | What are digital laws and legislation. Discuss. | Apply | 3 |
| 10. | What are the roles and responses of law enforcement. Explain. | Apply | 3 |

## PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – II** **REVIEW OF COMPUTER SECURITY AND CYBER CRIME ISSUES** | | |
| 1. | Explain about public key cryptography. Discuss about RSA algorithm | Apply | 9 |
| 2 | Explain intrusion detection systems and concept of virus. | Apply | 8 |
| 3. | Explain briefly about payment gateways and online shopping. | Understand | 9 |
| 4. | Describe briefly about mail bombs and exploitation. | Apply | 8 |
| 5. | What are digital laws and legislation. What are the roles and responses of law enforcement. Explain. | Apply | 9 |

## PART – A (SHORT ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – III** **WEB HACKING BASICS AND INVESTIGATION** | | |
| 1. | Define applet. | Remember | 3, 4 |
| 2. | What are the tools for crime investigation. | Understand | 4 |
| 3. | Define Servlet. | Understand | 3 |
| 4. | List the encryption and decryption methods. | Remember | 3 |
| 5. | How an e-mail is recovered. | Remember | 3 |
| 6. | What do mean by password cracking. | Remember | 4 |
| 7. | Define firewall. | Remember | 4 |
| 8. | Differentiate symmetric and asymmetric encryption. | Remember | 4 |
| 9. | How security is provided in applets. | Remember | 3 |
| 10. | State how an email can be tracked. | Understand | 3 |

## PART – B (LONG ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – III** **WEB HACKING BASICS AND INVESTIGATION** | | |
| 1. | Explain how security is provided in applets. | Apply | 3 |
| 2. | Describe symmetric and asymmetric encryption | Apply | 3 |
| 3. | Define firewall. And explain its implementation. | Apply | 3 |
| 4. | Explain briefly about cyber crime investigation tools. | Apply | 4 |
| 5. | What are different encryption and decryption methods .Explain. | Apply | 4 |
| 6. | Describe how e-mail can be recovered. | Apply | 3 |
| 7. | Explain the concept of e-mail preservation and investigation. | Apply | 4 |
| 8. | What is e-mail tracking and digital evidence collection. | Apply | 3 |
| 9. | Explain the basic concepts of network security. | Apply | 4 |
| 10. | Describe how java provides security using HTML code. | Apply | 3 |

## PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – III** **WEB HACKING BASICS AND INVESTIGATION** | | |
| 1. | Describe symmetric and asymmetric encryption with examples | Apply | 3 |
| 2. | Explain briefly about cyber crime investigation tools and their implementation. | Apply | 4 |
| 3. | Explain how security is provided in applets and servlets using Java. | Apply | 3 |
| 4. | Describe how e-mail can be recovered. Explain the concept of e-mail preservation and investigation. | Apply | 3 |
| 5. | What is e-mail tracking , IP tracking and digital evidence collection. | Apply | 4 |

## PART – A (SHORT ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – IV** **DIGITAL CERTIFICATES AND DIGITAL FORENSICS** | | |
| 1. | Define hashing. | Remember | 3, 4 |
| 2. | What do you mean by digital certificate. | Understand | 4 |
| 3. | State digital forensics. | Understand | 3 |
| 4. | What are the tools used in digital forensics. | Remember | 3 |
| 5. | Define digital certificate. | Remember | 3 |
| 6. | What are the applications of digital forensics | Remember | 4 |
| 7. | Define network forensics. | Remember | 4 |
| 8. | What do you mean by forensic software and hardware. | Remember | 4 |
| 9. | Write briefly about message digest. | Remember | 3 |
| 10. | Give the difference between digital certificate and digital certificate. | Understand | 3 |

## PART – B (LONG ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – IV**<br>**DIGITAL CERTIFICATES AND DIGITAL FORENSICS** | | |
| 1. | Explain briefly the concept of digital certificate with examples. | Apply | 3 |
| 2. | Discuss the technique of hashing with an example. | Apply | 3 |
| 3. | Define message digest. Explain. | Apply | 3 |
| 4. | What is the difference between digital certificate and digital signatures. | Apply | 4 |
| 5. | Explain briefly the concept of digital forensics with example. | Apply | 4 |
| 6. | What are the applications of digital forensics ,Discuss . | Apply | 3 |
| 7. | Explain how forensics helps in face ,iris, fingerprint recognition. | Apply | 4 |
| 8. | What are the tools used for forensics software and hardware analysis**.** | Apply | 4 |
| 9. | Write a short notes on a) linux system forensics b)network forensics. | Apply | 3 |
| 10. | Explain briefly the concept of digital signatures. Give examples. | Apply | 3 |

## PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – IV**<br>**DIGITAL CERTIFICATES AND DIGITAL FORENSICS** | | |
| 1. | Explain briefly the concept of digital signatures and digital certificate. | Apply | 3 |
| 2. | Explain how forensics helps in face ,iris, fingerprint recognition, audio video analysis. | Apply | 4 |
| 3. | Explain briefly the concept of digital forensics with examples and give their applications. | Apply | 3 |
| 4. | Write a short notes on a) linux system forensics b)network forensics c)windows system forensics | Apply | 4 |
| 5. | What are the advanced tools used for forensics software and hardware analysis explain. | Apply | 3 |

## PART – A (SHORT ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|---|---|---|---|
| | **UNIT – V**<br>**SECURING DATABASES , LAWS AND ACTS** | | |
| 1. | Define cyber graffiti. | Remember | 3, 4 |
| 2. | Expand JDBC. | Understand | 4 |
| 3. | What are the applications of JDBC. | Understand | 3 |
| 4. | List the databases used for security. | Remember | 3 |
| 5. | Define law. | Remember | 3 |
| 6. | Differentiate law and act. | Remember | 4 |
| 7. | What is a legal policy. | Remember | 4 |
| 8. | State the laws in Indian evidence act. | Remember | 4 |
| 9. | Define electronic communication privacy act. | Remember | 3 |
| 10. | What are the various evidence handling procedures. | Understand | 3 |

## PART – B (LONG ANSWER QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|-------|----------|-----------------------|----------------|
| | UNIT – V<br>SECURING DATABASES , LAWS AND ACTS | | |
| 1. | Explain JDBC connectivity. | Apply | 3 |
| 2. | Discuss the concepts of cyber graffiti. | Apply | 3 |
| 3. | State the different laws and ethics. and explain in brief. | Apply | 3 |
| 4. | Explain the various evidence handling procedures in databases. | Apply | 4 |
| 5. | What are the basics of Indian Evidence Act IPC. Explain. | Apply | 4 |
| 6. | Discuss briefly the legal policies. | Apply | 4 |
| 7. | Explain in detail about CrPC. | Apply | 3 |
| 8. | Explain electronic communication privacy act. | Apply | 4 |
| 9. | How large scale applications are protected from unauthorized users. | Apply | 3 |

## PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)

| S. No | Question | Blooms Taxonomy Level | Course Outcome |
|-------|----------|-----------------------|----------------|
| | UNIT – V<br>SECURING DATABASES , LAWS AND ACTS | | |
| 1. | Explain JDBC connectivity in real time application. | Apply | 3 |
| 2. | Explain in detail how large scale applications are protected from unauthorized users. | Apply | 4 |
| 3. | What are the basics of Indian Evidence Act IPC and CrPC .explain in detail. | Apply | 2 |
| 4. | State the different laws and ethics used in cyber crime. Explain. | Apply | 4 |
| 5. | Explain the various evidence handling procedures in databases and their applications in real world. | Apply | 3 |

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