

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE
[A GOVERNMENT AUTONOMOUS COLLEGE]
JGEC/B.TECH/CSE/PEC-CS702E/2023-24
2023
CYBER SECURITY

Full Marks: 70

Times: 3 Hours

The figures in the margin indicate full marks.
Candidates are instructed to write the answers in their own words as far as practicable.

GROUP-A [OBJECTIVE TYPE QUESTIONS]			5x2=10
Answer <i>all</i> questions			
1.	Define cyber stalking.	✓	
2.	What is sexting?	✓	
3.	What is dark web?	✓	
4.	Define hacking and cracking.	✓	
5.	Define identity theft.	✓	
GROUP-B [LONG ANSWER TYPE QUESTIONS]			4x15=60
Answer any <i>four</i> questions			
6.	i) State the importance of digital certificate in cyber security.	✓	5
	ii) Write the differences between digital certificate and digital signature?	✓	5
	iii) Write a short note on Cyber Crime scenario in West Bengal.	✓	5
7.	i) What is the role of hash function in cyber security?	✓	2
	ii) Explain the features and properties of hash function?	✓	5
	iii) What is the function of Computer Emergency Response Team-India (CERT-In)?	✓	4
	iv) Describe the activities of Spyware.	✓	4
8.	i) What is malware? Explain any three malwares with their harmful impacts in digital world.	✓	1+5
	ii) How does a malicious android app spread malwares? What are the best practices to protect our system from malwares?	✓	2+4
	iii) Write a short note on data privacy measures in WhatsApp.	✓	3
9.	i) Explain the cybercrime activities of "Bharatpur Gang" and "Jamtara Gang".	✓	5
	ii) "Multi-factor authentication systems are more secured than single factor authentication systems"-Explain with example.	✓	5
	iii) What is online grooming? What are the best practices to prevent children from cyber grooming attacks?	✓	5
10.	i) Define different types of modern authentication systems with suitable examples.	✓	5
	ii) Write short notes on (i) dictionary attacks and (ii) social engineering?	✓	5
	iii) According to Microsoft, password-less authentication system is more secured- Justify it.	✓	5
11.	i) Explain the activities of black hat, white hat and grey hat attackers.	✓	8
	ii) Write a short note on bug bounty program.	✓	3
	iii) Write the differences between virus and worms in cyber world.	✓	4
12.	i) State the applicability of the following section/subsection under IT Acts 2000. a) Section 65, b) Section 67B, c) Section 66C	✓	6
	ii) Define the following cybercrimes and state the cyber law and punishment for them. a) cyber terrorism b) publishing or transmitting obscene material in electronic form c) punishment for violation of privacy	✓	9

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Candidates are instructed to write the answers in their own words as far as practicable.*

GROUP-A
[OBJECTIVE TYPE QUESTIONS]

5x2=10

Answer *all* questions

1. "Trust nothing, verify everything" – justify it in the context of cyber security.
2. "Think before click!" – explain it for cyber-attacks.
3. "Every user should have a mobile number for better cyber security" – Justify it.
4. Define hacking and cracking.
5. What is netiquette?

GROUP-B
[LONG ANSWER TYPE QUESTIONS]

4x15=60

Answer any *four* questions

- i) Define the following cybercrimes. a) cyber terrorism, b) child pornography, c) publishing or sharing obscene content in electronic form and d) violation of privacy. 8
- ii) Mention the IT Act 2000's section and sentencing guidelines for the aforementioned cybercrimes. 7
- i) "Privacy of data communicated between two parties (i.e. sender and receiver) in WhatsApp is preserved." – Explain. 5
- ii) What are the differences between active and passive attacks? 5
- iii) "Only password is not sufficient for secure authentication." – Explain it with necessary measures. 5
8. i) What are the differences between law and ethics? 3
- ii) State the ten commandments of computer ethics and explain them. 12
9. i) Comment on Digital Personal Data Protection Act, 2023. 5
- ii) Write a short note on Cyber Stalking. How does it violate human rights in cyber space? 3+2
- iii) Explain the social impact of cyber crimes in India. 5
10. i) What are the security vulnerabilities of mobile devices? How does biometrics-based authentication prevent mobile phone from device stolen attacks? 5
- ii) Why should user download/install apps from reliable sources only? State the impact of spyware on mobile phone. 5
- iii) Write the name of any three android mobile apps which were recently removed from Google play store. Also specify their vulnerability reported by the different security analysts. 5
11. i) What are the different methods of online identity verification? State the benefits and challenges of using online identity verification. What are the necessary measures we should follow to protect our online identity from attackers? 8
- ii) Write short notes on any two: a) ID theft, b) Public Key certificate, c) Phishing attacks, and d) Password checking. 7

12. i) Compare the followings (any two) a) Trojan horse and backdoors, b) DoS and DDoS, c) SQL Injection and buffer overflow. 8
- ii) Explain the multi-steps verification in social media. 3
- iii) Write a short note on proxy server. 4
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 [A GOVERNMENT AUTONOMOUS COLLEGE]
JGEC/B.TECH/CSE/OEC-CS802A/2023-24
2024
E-COMMERCE AND ERP

Full Marks: 70

Times: 3 Hours

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GROUP-A
[OBJECTIVE TYPE QUESTIONS]

Answer **all** questions

5x2=10

1. Define Supply Chain. ✓
2. What is Electronic Market? ✓
3. What is SCM (Supply Chain Management)? ✓
4. Name three areas of e-commerce with a Venn diagram. ✓
5. Define e-commerce according to European Union website. ✓

GROUP-B
[LONG ANSWER TYPE QUESTIONS]

Answer any **four** questions

4x15=60

6. Briefly explain five primary activities of a product process according to Porter's model. ✓ 5
7. Define EDI and explain its essential four elements. ✓ 5
8. Explain EDI with Trade cycle diagram. ✓ 5
9. Explain phases of three generic trade cycles with suitable diagram. ✓ 6
10. With suitable diagram explain how a digital signature works. ✓ 9
8. i) What identifiable information does a digital certificate contain? 3
- ii) How are digital certificates used? 5
- iii) Discuss different types of digital certificates. 7
9. i) Mention different features of a standard ERP Finance Module. 4
- ii) What are Accounts Receivable and Accounts Payable? Give suitable examples. 5
- iii) Briefly describe different types of accounts in the General Ledger. 6
10. With diagram describe the steps through which an E-Cash transaction takes place. ✓ 7
11. Briefly describe following e-payment threats a) spoofing b) Sniffing c) Content Alteration d) Denial of Service. ✓ 8
11. i) How does a Supply Chain Portal (SCP) Work? 5
- ii) Briefly Describe Tradecloud's Supply Chain Portal. 5
- iii) How does SCP benefit buyers and suppliers? 5
12. What is E-Logistics and how is it implemented in business houses? ✓ 6
13. With a diagram discuss the various functions of each of the three groups of SCP (Supply Chain Planning) tools namely a) Strategic Planning Tools b) Tactical Planning Tools and c) Execution Planning Tools. ✓ 9