

6E7193

Roll No.

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B.Tech. VI - Sem. (Main/Back) Examination, April/May - 2026
Computer Sc. & Engg. (Cyber Security)
6CCS4-06 Block Chain and Cyber Security

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates:**

Attempt all Ten questions from Part A. Five questions out of Seven questions from Part B and Three questions out of Five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205).

PART - A

(Answer should be given up to 25 words only)

All questions are compulsory.

(10×2=20)

1. Explain the concept of mining in blockchain?
2. What is a fork in blockchain? Name its types?
3. What is cybercrime? Also mention example?
4. What is keylogger and how does it work?
5. What are main types of blockchain?
6. Mention two techniques used for Identity theft?
7. What is hash function and why it is important in blockchain?
8. Compare between stateful and stateless firewalls?
9. Define the concept of Zero-Sum games in blockchain?
10. Explain role of an Intrusion Detection System (IDS) in cybersecurity?

PART - B

(Analytical/Problem solving questions)

Attempt any Five questions.

(5×4=20)

- ✓1. What are different types of phishing? Give examples.
- ✓2. Compare Network Address Translation (NAT) and Virtual Private Networks (VPN) in terms of security.
3. How does blockchain architecture help in preventing fraud?
- ✓4. Which is more dangerous : a keylogger or a worm? Justify your answer.
5. What are the different types of phishing? Provide examples.
- ✓6. How does SQL injection work? Suggest one prevention technique.
- ✓7. How does a firewall protect a network from cyber threats?

PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any Three questions.

(3×10=30)

- ✓1. Compare and contrast windows Firewall, Linux Firewall, and smart IDS. Which one is the most effective for enterprise security? Justify your answer.
 2. Propose a security framework that can effectively detect and prevent phishing attacks in an organisations.
 - ✓3. How does a digital signature ensure security in blockchain transactions? Explain with an example.
 4. Assume you are cybersecurity expert. How would you secure a network against malware and hacking techniques. <https://www.pyqonline.com>
 5. Discuss the impact of blockchain on traditional security mechanisms. Compare its advantages and disadvantages.
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