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(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2023-24 ONLY)

SUBJECT CODE 23 UCT 516

REG.NO.

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER – 2025

B.Sc. – Computer Technology **MAXIMUM MARKS: 75**

V SEMESTER **TIME : 3 HOURS**

PART – III
INFORMATION AND CYBER SECURITY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)

1. What is Cyber Security?
   a) Cyber Security provides security against malware
   b) Cyber Security provides security against cyber-terrorists
   c) Cyber Security protects a system from cyber attacks
   d) All of the mentioned
2. DES follows
   a) Hash Algorithm b) Caesars Cipher
   c) Feistel Cipher Structure d) SP Networks
3. Public key encryption/decryption is not preferred because
   a) it is slow b) it is hardware/software intensive
   c) it has a high computational load d) all of the mentioned
4. Pretty good privacy (PGP) security system uses _____
   a) Public key cryptosystem b) Private key cryptosystem
   c) Public & Private key cryptosystem d) None of the mentioned
5. Which firewall feature allows secure remote access to a private network over the internet?
   a) Intrusion Detection System (IDS) b) Virtual Private Network (VPN) support
   c) Deep Packet Inspection (DPI) d) Stateful Inspection

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)

6. What does cyber security protect?
7. How many rounds in DES Algorithm Cipher System?
8. Expand: SHTTP
9. What is the recommended minimum length for passwords in a secure password policy?
10. What is the primary purpose of a firewall?

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SECTION – B (5 x 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Why do we need security?

(OR)

b) What are the different types of security attacks?

12. a) What are the types of symmetric key cryptographic algorithms?

(OR)

b) Describe Electronic Code Book (ECB) Mode.

13. a) Write short notes on digital certificates.

(OR)

b) Describe the SHTTP protocol.

14. a) Write short notes on security in GSM.

(OR)

b) Describe the S/MIME.

15. a) Describe the Java cryptographic framework.

(OR)

b) Write short notes on intrusion.

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4/K5)

16. a) Discuss the substitution techniques in detail.

(OR)

b) Explain the Transposition techniques in detail.

17. a) How does DES works?

(OR)

b) Elucidate the RSA security algorithm.

18. a) Explain PKIX architectural model in detail.

(OR)

b) Discuss the working principles of SSL protocol in detail.

19. a) How does PGP works?

(OR)

b) Discuss the passwords in detail.

20. a) Explain the types of Firewalls in detail.

(OR)

b) Discuss VPN architecture in detail.