

Only for 2021
to 2023 AD
admitted
Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
June 2026

Full Marks: 60
Pass Marks: 30
Time: 3 Hrs.

BIM / Fifth Semester / IT 244: Information Security

Candidates are required to answer the questions in their own words as far as practicable

Group “A”

Brief Answer Questions:

[10×1=10]

1. Define security threats.
2. What is a block cipher?
3. Define message authentication.
4. List any two user authentication principles.
5. Define encryption.
6. What do you mean by masquerader?
7. Define intruders.
8. What is phishing?
9. List any two uses of firewall.
10. Define audit trail.

Group “B”

Short Answer Questions:(Attempt any FIVE Questions)

[5×3=15]

11. Define MD5.
12. Explain two factor authentication with example.
13. Perform encryption and decryption of plain text “Exam” using any one classical cryptosystem.
14. Explain lifecycle of a digital certificate.
15. Test whether 5 is primitive root of 7 or not.
16. Explain the benefit of using Honey pots.

Group “C”

Long answer questions: (Attempt any THREE Questions)

[3×5=15]

17. How does SSL client and SSL server establish connection? Explain.
18. Explain the steps of security risk assessment.
19. Find the shared secret ‘S’, if prime number (P) = 11, base / generator (g) = 2, Alice’s private key (a) = 3 and Bob’s private key (b) = 7.

20. Explain any three types of intrusion detection analysis approaches.

Group “D”

Comprehensive Answer / Case / Situation Analysis Questions:

[2×10=20]

21. Explain the security design principles considered while developing a secure system.
22. Explain the different types of malicious software and describe the counter measures used to protect system from malware attacks.

