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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2022

Fourth Semester

Core Course—NETWORKS AND INFORMATION SECURITY

(For B.Sc. Cyber Forensic)

(2014-2018 Admissions)

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What are discretionary access controls ?
2. Define active attack.
3. What do you mean by Cipher text ?
4. Which is the most widely used public-key cryptosystem ?
5. What is VPN ?
6. What is digital signature ?
7. What is intrusion ?
8. What are the services provided by PGP ?
9. Define S/MIME.
10. What is the main function of proxy application gateway firewall ?

(10 × 1 = 10)

Part B

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11. What do you mean by non-repudiation ?
12. Write a short note on E-mail security.
13. What are the characteristics of IPsec ?
14. What is meant by packet sniffing ?
15. Write a short note on Block Cipher.

Turn over

16. What are the characteristics of good encryption systems ?

17. What is the purpose of Internet standards ?

18. Define public key cryptography.

19. What is meant by hardware firewall ?

20. Write a short note on smart card security.

21. Write any four access control models.

22. Explain in brief about password management.

(8 × 2 = 16)

Part C

Answer any **six** *questions.*
Each question carries 4 *marks.*

23. Discuss the various kinds of security breaches.

24. Write a note on the model for internetwork security.

25. Differentiate between secret key and public key cryptosystems.

26. Explain in detail about Clarke Wilson Security model.

27. Discuss the SSL protocol stack.

28. Explain X.509 Authentication service.

29. Explain Kerberos.

30. Explain in detail about SET for E-Commerce Transaction.

31. Discuss about the Firewall setting in Proxy server.

(6 × 4 = 24)

Part D

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. Explain in detail types and countermeasures related to viruses.

33. Explain the Key Generation, Encryption and Decryption of DES algorithm in detail.

34. Explain in detail about firewalls.

35. Explain in detail about architecture of IP Security.

(2 × 15 = 30)