Part A

1. Define networking.
2. Define standards.
3. Mention advantages of networking.
4. Mention disadvantages of networking.
5. Define Proprietary standards.
6. Define De-Facto Standards.
7. Define Open Standards.
8. Give full form of ISO and ANSI.
9. Explain the function of ISO/IEC 27033 standard.
10. Define ISO 8877 implementation scope.
11. Define scope of ISO 11801.
12. What are design objectives of ISO 11801.
13. What are environmental consideration in TIA-942.
14. Give Full form of ITIC and IEEE.
15. Give Full form of ITU-T and TIA.
16. Explain purpose of TIA-598B.
17. Define Cyber security.
18. What are different elements consisted in NIST CSF?
19. Define aim of IT Act.
20. What is copyright act?
21. Explain Patent Law.
22. Elaborate and define IPR.
23. Define Reverse Hijacking
24. Give goals of cyber security standards.
25. What is a consortium ?
26. What is industry alliance and associations?
27. What does ISO 27001 standard covers ?
28. What function monitor and review of ISMS include ?
29. Define Cyber Squatting.
30. Define computer program/software in terms of copyright
31. Define latency in terms of VOIP.
32. What is H.323?
33. What are firewalls ?
34. What is Stateful firewalls ?
35. What is NAT ?
36. Explain port restricted cone.
37. Describe Symmetric NAT
38. State difference between bandwidth and effective bandwidth.
39. Describe MICKEY.
40. What is SIP ?
41. Give two security feature within the SIP protocol.
42. What if full cone NAT ?
43. Define restricted cone NAT.
44. What is UPnP ?
45. What is IPsec?
46. What are Local VPN tunnels?
47. Define confidentiality, integrity and availability.
48. What is ARP cache poisoning and ARP floods.
49. Define IP Phone Netmask Vulnerability.
50. Define intrusion.
51. Describe insecure state.
52. Describe effects on 8kbps CODEC.
53. Define classical wiretap vulnerability.
54. Explain web server interface for IPsec.
55. Define Extension to IP Address Mapping Vulnerability.
56. Define availability and DOS.
57. Can small organizations or home users use VOIP systems?
58. Does VOIP require additional phone lines or new phone numbers.
59. Define internet.
60. Define telecommunication.
61. Define computer networks.
62. Mention the category in which network infrastructure is divided.
63. What are access networks ?
64. Define router.
65. What are different types of system used in internet?
66. Define search engines.
67. Define protocol.
68. Define Internetworking Technologies.
69. Mention the attributes on which classification of computer network is done.
70. Define ISP.
71. Define Repeater.
72. What are gateways ?
73. What is FTP ?
74. Mention category based on the types of transmission modes.
75. Mention category of types for time in transmission.
76. Mention category based on authentication
77. Mention categories based on geographical location.
78. Mention category based on reliability.
79. Mention two services included in ATM.
80. What are ACL policies?

Part B

1. Define networking. Mention its advantages and disadvantages.
2. Define network standards. Mention commonly used standard for different layer of OSI model.
3. State importance of standards.
4. Define different types of standards. Give examples for each.
5. Define scope of TIA-598C. Explain fiber, unit and group color coding.
6. Explain structure of ISO 27033.
7. Elaborate on different frame fields for IEEE 802.3.
8. Differentiate between Open and proprietary standards.
9. Explain Structure of generic cabling system as per ISO 11801.
10. Give design considerations of TIA-598B
11. Elaborate site space and layout as per TIA-942.
12. Explain significance of cooling in TIA-942 along with a neat diagram.
13. What are three principle categories of IEEE 802.3? Explain.
14. Mention advantages of cyber security standards.
15. State problems that occur due to non-compliance of cyber security standards.
16. Mention benefits of getting involved in standards development.
17. What are Security benefits of adopting the NIST CSF ?
18. Explain about ISO 27001 PCDA model with a neat diagram.
19. Explain about establishing the ISMS.
20. Elaborate about TRIPS agreement.
21. Mention characteristics of cyber security standards.
22. Define role of International standards development organization.
23. Mention situation when patent can be granted.
24. Define role of Regional standards development organization.
25. Define role of National standards development organization.
26. Explain about WIPO Copyright Treaty, 1996
27. Mention key aspects related to Indian Copyright act.
28. Explain Bern Convention.
29. What are different VOIP equipment? Explain in detail.
30. What are privacy and legal issues related to VOIP?
31. Explain security issues with VOIP.
32. Explain the need for speed in VOIP for QoS.
33. Describe SIP architecture with a neat diagram.
34. Mention key points of collision between voice and data trafiic where firewalls are necessary.
35. Explain middlebox communication scenario with a neat diagram.
36. Explain the Process of Voice Data Processing in a VOIP System.
37. How VOIP helps in cost reduction ?
38. Explain about jitter.
39. How packet loss affects VOIP ?
40. Explain H.323 architecture with a neat diagram.
41. Explain H.323 call setup process.
42. Explain IP telephone behind NAT and firewalls with a neat diagram.
43. Define TURN as a mechanism to solve NAT problem.
44. Explain H.323 architecture along with its call setup process.
45. Mention advantages and disadvantages of using Encryption in VOIP. Also explain the performance factor.
46. Explain 5 security feature for SIP.
47. Describe NAT and its different types.
48. Define incoming calls and effects of QoS as issues of firewalls and NAT.
49. Describe in details different products used in VOIP service.
50. Explain voice data processing in VOIP system with a neat digram.
51. Give highlight on the following features of VOIP :-
    1. COST
    2. SPEED and QUALITY
52. Explain IPsec tunnel and transport modes.
53. Explain the role of IPsec in VOIP.
54. Describe effects of packet size in IPsec.
55. Explain encryption at end points as a solution to the VOIPsec issues.
56. Explain in detail switch default password vulnerability.
57. What is VOIP? What are some of the advantages of VOIP?
58. What is VOIP? What are some of the disadvantages of VOIP?
59. Describe about difficulties arising from VOIPsec.
60. Explain the effects encryption/decryption on throughput in IPsec.
61. Explain role of scheduling algorithm in QoS of IPsec.
62. Explain SRTP as a solution to the VOIPsec issues.
63. Explain compression of packet size in IPsec.
64. Describe Exploitable software flaws in VOIP.
65. What is a VOIP “softphone”? What size PC is required to operate a softphone?
66. Will a VOIP system continue to function during a power failure or cable outage?
67. What did the Internet come from?
68. How old is the Internet ?
69. Describe different computer networks based on transmission mode.
70. Describe different computer networks based on time in transmission type.
71. Describe different computer networks based on authentication.
72. Describe different computer networks based on geographical location.
73. Describe different computer networks based on reliability.
74. Give details about IETF.
75. Explain ATM in detail.
76. Define topology. Also describe different type of topologies.
77. Define protocol and explain its key elements.
78. Explain access network and its types in detail.
79. Explain network infrastructure and its types in details.
80. Define hardware components of internet.
81. Differentiate between packet switching and circuit switching.
82. Explain about ISSP policy.
83. Explain about EISP policy.
84. Explain about SysSP policy.

Part C

1. Give Structure of ISO/IEC 27033 Standard with a neat flowchart.
2. Give scope of ITU-U G.992 and define following terms:-
   1. ADSL System overhead
   2. Anomalies
   3. Bearer Channel
   4. Defects
   5. Upstream and downstream.
3. Explain three principle categories of IEEE 802.3. Explain different frame fields for IEEE 802.3.
4. Give comparison of Ethernet and IEEE 802.3 and their various frame fields with a neat diagram.
5. Define Bluetooth standards with its protocol stack diagram.
6. Explain operating modes in 802.11.
7. Define NIST CSF. Mention all core functions of NIST CSF in detail.
8. Explain ISO 27001 standard in detail along with its PDCA model.
9. Explain about copyright act in detail.
10. Explain about IPR in detail.
11. Explain about patent law in detail.
12. Explain about Copyright Protection of Computer Software/Program.
13. Explain about the following :-
    1. Bern Convention
    2. TRIPS Agreement
14. Explain key management for SRTP-MIKEY.
15. Define IPsec. How better scheduling scheme will help VOIPsec security.
16. Define integrity issues related to VOIP security.
17. Define the following :-
    1. DHCP Server Insertion Attack
    2. TFTP Server Insertion Attack
18. Describe the following terms:-
    1. Session Initiation Protocol (SIP)
    2. Sniffer
    3. Media Gateway Control Protocol
    4. Jitter
    5. Firewall Control Proxy
19. What is IPSec ? Explain IPsec tunnel and transport mode with a neat figure..
20. Give highlights on the following terms related to IPsec:-
    1. Local VPN Tunnels
    2. Encryption/Decryption latency
21. Role of IPsec in VOIP
22. Describe WAN protocols in details and its 3 categories.
23. Explain in detail three methods of switching.
24. Explain about the phases in Virtual-Circuit networks.
25. Explain about different types of policies.
26. How Policies Should Be Developed ? Define What Policies Need to Be Written.
27. Elaborate on packet and circuit switching. Explain about different policy according to NIST.
28. Explain about the following :-
    1. ISSP
    2. EISP
    3. SysSP