DB-003-004603 Seat No. _____

B. Sc. IT (Sem. VI) Examination

April / May – 2015

Network Management & Information Security

(New Course)

Faculty Code : 003
Subject Code : 004603

Time : $2\frac{1}{2}$ Hours [Total Marks : **70**

Instructions : (1) Section - I : Total 20 Questions are there, each question contains 1 mark. All are compulsory.

(2) Section - II : Q. 2 (a) contains 6 questions, 3 questions are compulsory. (b) contains 6 questions, 3 que. are compulsory. (c) Contains 5 questions, two are compulsory.

(3) Q. 3 (a) contains 6 questions, 3 questions are compulsory. (b) contains 6 questions, 3 que. are compulsory. (c) Contains 5 questions, 2 are compulsory.

SECTION - I

1 Choose one answer for each question : **20**

(1) SNMP uses two other protocols : _____ and _____.

(A) MIB; SMTP

(B) SMI; MIB

(C) FTP; SMI

(D) None of the above

(2) _____ defines the general rules for naming objects, defining object types, and showing how to encode objects and values.

(A) MIB

(B) BER

(C) SMI

(D) None of the above

(3) _____ algorithm transforms ciphertext to plaintext.

(A) encryption

(B) decryption

(C) either (A) and (B)

(D) neither (A) nor (B)

(4) In _____, the key is also called the secret key.

(A) symmetric-key

(B) asymmetric-key

(C) either (A) and (B)

(D) neither (A) nor (B)

(5) A _____ cipher replaces one character with another character.

(A) substitution

(B) transposition

(C) either (A) and (B)

(D) neither (A) nor (B)

(6) One commonly used public-key cryptography method is the _____ algorithm.

(A) RSS (B) RAS

(C) RSA (D) RAA

(7) An IPv4 address consists of _____ bits.

(A) 4 (B) 8

(C) 32 (D) 64

(8) The IPv4 header size _____.

(A) is 20 to 60 bytes long

(B) is always 20 bytes long

(C) is always 60 bytes long

(D) depends on the MTU

(9) IP is _____ datagram protocol.

(A) an unreliable

(B) a connectionless

(C) Both (A) and (B)

(D) None of the above

(10) In tunnel mode IPsec protects the -

(A) entire IP packet

(B) IP header

(C) IP payload

(D) none of the mentioned

(11) An attempt to make a computer resource unavailable to its intended users is called -

(A) denial-of-service attack

(B) virus attack

(C) worms attack

(D) botnet process

(12) Mechanism to protect private networks from outside attack is -

(A) Firewall

(B) Antivirus

(C) Digital signature

(D) Formatting

(13) A hacker contacts you on my phone or email and attempts to acquire your password.

(A) spoofing

(B) philshing

(C) spanning

(D) bugging

(14) MTU is specified by -

(A) IP Datagram size

(B) Hardware technology

(C) TCP Segment size

(D) None of the above

(15) Which one of the following is an error reporting protocol ?

(A) ARP

(B) ICMP

(C) TCP

(D) UDP

(16) Select the correct order for the different phases of virus execution.

(i) Propagation phase

(ii) Dormat phase

(iii) Execution phase

(iv) Triggering phase

(A) (i), (ii), (iii) and (iv)

(B) (i), (iii), (ii) and (iv)

(C) (ii), (i), (iv) and (iii)

(D) (ii), (iii), (iv) and (i)

(17) The components of IP security includes _____.

(A) Authentication Header (AH)

(B) Encapsulating Security Payload (ESP)

(C) Internet Key Exchange (IKE)

(D) All of the above

(18) A _____ is an extension of an enterprise's private intranet across a public Network such as the Internet, creating a secure private connection.

(A) VNP (B) VPN

(C) VSN (D) VSPN

(19) Which of the following shows the layer sequence as layers 2, 5, 7, 4 and 3 in OSI ?

(A) Data link, session, application, transport and network

(B) Network, transport, application, session and presentation

(C) Data link, transport, application, session and network

(D) Network, session, application, network and transport

(20) Which is the full name of RARP ?

(A) Recursive Address Resolving Protocol

(B) Reverse Address Resolution Protocol

(C) Random Address Resolution Protocol

(D) Recursive Address Resolution Protocol

SECTION - II

2 (a) Attempt the following : (any **three**) **6**

(1) What is the need of information security ?

(2) Explain ICMP.

(3) Discuss IP.

(4) Network Scanning.

(5) Proxy Server.

(6) Explain web tracking.

(b) Attempt the following : (any **three**) **9**

(1) Discuss Virus and Worm.

(2) Explain the term Maximum transfer unit.

(3) Define IKE and SA.

(4) Define : Dictionary Attack and Brute Force Attack.

(5) Give brief note on : Public Key Cryptography.

(6) Explain cookie and parental control.

(c) Answer the following : (any **two**) **10**

(1) Define Information Security and its Attributes.

(2) What is Network Management System ? Explain SNMP.

(3) Explain OSI model in detail.

(4) Give brief note on TCP and UDP Header.

(5) Discuss RSA with example.

3 (a) Attempt the following : (any **three**) **6**

(1) Trojan Horse.

(2) Connectionless Protocol.

(3) Tunneling.

(4) SYN Flood.

(5) Cross over Error Rate.

(6) Nonrepudiation.

(b) Answer the following : (any **three**) **9**

(1) Define the term : Impersonation and Unauthorized Access.

(2) Internet Debugging Tools.

(3) ARP and RARP.

(4) Firewalls.

(5) Discuss false acceptance and false rejection rate.

(6) Define plain text, cipher text and decryption algorithm.

(c) Answer the following : (any **two**) **10**

(1) Malicious software.

(2) What is attack ? Explain various types of attacks.

(3) Give brief note on ESP and AH.

(4) Explain Bio metric techniques with its types.

(5) Elaborate Password policies and Discipline.
