

DCN

Q.P. Code : 14558

(2½ Hours)

[ Total Marks : 75

- N.B. : (1) All questions are compulsory.  
(2) Figures to the right indicate full marks.  
(3) Illustrations, in-depth answers and diagrams will be appreciated.  
(4) Mixing of sub-questions is not allowed.

- Q1. Attempt the following (any THREE): 15
- (A) Discuss advantages of classless addressing. Suppose one of the address in a block of 16 addresses is 203.10.20.26. Find first & last address in the block.
  - (B) What are the service types specified in services field of IP4 datagram?
  - (C) What are the steps involved in ARP process?
  - (D) With respect to routing What is forwarding? Briefly explain different forwarding techniques.
  - (E) Explain working of BGP.
  - (F) Write a note on RIP.
- Q2. Attempt the following (any THREE): 15
- (A) Explain categories of port addresses.
  - (B) State & briefly write about the phases in TCP connection.
  - (C) What is congestion? Explain backpressure mechanism for close loop congestion control.
  - (D) With respect to DNS explain FQDN & PQRN.
  - (E) What are the components of e-mail system?
  - (F) Discuss the flow characteristics associated with quality of service.
- Q3. Attempt the following (any THREE): 15
- (A) Give any five measures to get protection from hacking.
  - (B) Discuss authentication & confidentiality related security services.
  - (C) With example explain behavior pattern of intruders.
  - (D) What is malicious software? Explain trap door & worm
  - (E) 'Audit record is fundamental tool for intrusion detection' Justify.
  - (F) What is the need of fire wall? Explain role of packet filter firewall.
- Q4. Attempt the following (any THREE): 15
- (A) Encode message 'BEING SECURED' using additive cipher with key 7. Also explain how it will be decoded.
  - (B) What are the components of modern Block cipher?
  - (C) Explain the DES function with diagram.
  - (D) Explain the general procedure used in RSA.
  - (E) Discuss the services provided by SSL.
  - (F) Compare conventional signature with digital signature.
- Q5. Attempt the following (any THREE): 15
- (A) Explain any 2 methods used for transition from IPv4 to IPv6.
  - (B) Explain the format of user datagram.
  - (C) Write note on Model for network security.
  - (D) Write a note on S-MIME.
  - (E) Explain DHCP in brief.
  - (F) What are the approaches of intrusion detection?

IPD15458 SEVA SADANA  
QM-Gen 3102-15