

DiplETE – CS (Current & New Scheme)

Time: 3 Hours

JUNE 2018

Max. Marks: 100

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Q2 TO Q7 CAN BE ATTEMPTED BY BOTH CURRENT AND NEW SCHEME STUDENTS.
- Q8 AND Q9 HAVE BEEN GIVEN INTERNAL OPTIONS FOR CURRENT SCHEME (CODE DC70) AND NEW SCHEME (CODE DC123) STUDENTS.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2×10)

- a. Layer 5 in OSI Protocol is also known as _____
 (A) Presentation layer (B) Session Layer
 (C) Transport Layer (D) Network Layer
- b. Bing is a short form for point to point bandwidth ping
 (A) True (B) False
- c. Tivoli is a product of
 (A) CA (B) IBM
 (C) HP (D) Dell
- d. The expansion for POTS is:
 (A) Plain Old Typewriter System (B) Protocol on Telephone System
 (C) Plain Old Telephone System (D) None of these
- e. Masquerade is the threat that some unauthorized user may send information to another user, assuming the identity of an authorized user.
 (A) True (B) False
- f. _____ is a router that connects two networks and can perform protocol conversion
 (A) Hub (B) Switch
 (C) Either (A) or (B) (D) None of these
- g. The traffic monitoring tool _____ captures and inspects network packets.
 (A) Snoop (B) ping
 (C) bing (D) None of these

- h. RFC stands for
(A) Radio Frequency Communications
(B) Request for Comments
(C) Radio for Commoners
(D) None of these
- i. Interexchange Key (IK) is a random number generated on a per message basis and is used to encrypt the message text and to generate an MIC, if one is needed.
(A) False (B) True
- j. _____ layer controls flow of data in both directions.
(A) Session (B) Network
(C) Transport (D) Data link

**Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.**

- Q.2** a. Most of the popular host operating systems come with the TCP/IP Suite and are amenable to SNMP management. The current networks management systems, however, suffer from several limitations. Describe them. (8)
- b. Describe the salient characteristics and features of client-server architecture and models. Provide an analogy with the client-server operation in a post office. (8)
- Q.3** a. Describe the OSI Network Management Model. (10)
- b. Explain different network standards. (6)
- Q.4** a. Describe the history of SNMP Management (8)
- b. Specify in detail the Communication Model. (8)
- Q.5** a. Describe specifications of encapsulated SNMP message using a diagram. (8)
- b. What is the format of a trap? (2)
- c. Describe RMON2 Standard. (6)
- Q.6** a. Discuss the CASE Based Reasoning (CBR) event correlation technique. (8)
- b. What is the purpose of a firewall? Where is it located? What are the benefits of implementing a firewall? (8)
- Q.7** a. Write a short note on accounting management function of network management application. (7)
- b. What is policy based management? Discuss briefly with the help of a suitable diagram. (9)

Q.8 (For Current Scheme student i.e. DC70)

- a. Describe the basic configuration of a protocol analyzer. What are the capabilities of the protocol analyzers that are available in the market? (9)
- b. List the seven network monitoring tools along with the operating system and description of what they do. (7)

Q.8 (For New Scheme student i.e. DC123)

- a. What is traffic load monitoring? (8)
- b. What is management information base? Discuss its role in network management. (8)

Q.9 (For Current Scheme student i.e. DC70)

- a. Explain web interface to SNMP management along with a diagram. (8)
- b. Write short notes on NMS with Web Interface and Web based Management. (8)

Q.9 (For New Scheme student i.e. DC123)

- a. How ATM Network Management is performed? Explain ATM Network Reference model with diagram. (10)
- b. Explain cable modem and its management in broadband network. (6)