

DiplETE – CS (Current & New Scheme)

Time: 3 Hours

Max. Marks: 100

JUNE 2016

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. Which of the following protocol can detect collision?
- (A) CSMA (B) LSMA/CA
(C) CSMA/CD (D) None of these
- b. Which layer compresses the data?
- (A) Session Layer (B) Network Layer
(C) Transport Layer (D) Presentation Layer
- c. How many unique addresses are possible using IPv4 addressing?
- (A) 2^{32} (B) 2^{128}
(C) 2^{64} (D) 2^{256}
- d. SNMP agents are
- (A) Management Devices
(B) NMS (Network management Stations)
(C) PDUs
(D) Network Devices such as routers, hubs, or switches
- e. _____ is concerned with initializing and gracefully shutting down networking elements and networks.
- (A) Configuration Management (B) Security Management
(C) Network Management System (D) Management Application
- f. You are designing a network which needs to support 200 users. You don't plan to extend the segment beyond the current number of users. Which subnet mask would best meet your needs?
- (A) 255.255.0.0 (B) 255.255.255.0
(C) 255.0.0.0 (D) 255.255.255.200

- g. The full duplex mode increases the capacity of each domain from
 (A) 10 to 20 mbps (B) 20 to 30 mbps
 (C) 30 to 40 mbps (D) 40 to 50 mbps
- h. Which is the maximum uploading speed for 56 K MODEM?
 (A) 33.6 kbps (B) 56 kbps
 (C) 28 kbps (D) 48 kbps
- i. Which group is not a part of RMON1?
 (A) Alarm (B) Filter
 (C) Capture (D) Address Map
- j. WBEM is based on Internet Standards and Distributed Management Task Force (DMTF)
 (A) True (B) False

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

- Q.2** a. What are the challenges of Information Technology managers in managing the network? (10)
- b. What do you understand by System Management? List the parameters that can be monitored using system tools to monitor the performance of the computer system. (3+3)
- Q.3** a. Describe a list and an ordered list in ASN.1 syntax. (6)
- b. Explain Network Management functional model. (10)
- Q.4** a. Explain SNMP communication Model in detail. (10)
- b. Differentiate internet and intranet in detail. (6)
- Q.5** a. Write a short note on report management function. (8)
- b. Differentiate between policy base management & service level management. (8)
- Q.6** a. Find dotted decimal notation class, network id, and network address of the following addresses (8)
- | | | | | |
|-------|----------|----------|----------|----------|
| (i) | 00010000 | 10010001 | 11100001 | 11000111 |
| (ii) | 10100000 | 00011000 | 00001111 | 10000001 |
| (iii) | 11011101 | 10001111 | 00000011 | 10000011 |
- b. What is network fault management? Explain Active and passive fault management. (3+5)

- Q.7** a. What is SNMP? Give basic components of SNMP and its functions. (8)
- b. Explain Information Model with SMI and MIB. (8)
- Q.8 (For Current Scheme students i.e. DC70)**
- a. What is NMS? Explain the benefits of NMS. (3+5)
- b. Explain Cabletron's Spectrum Platform with the help of neat diagram. (8)
- Q.8 (For New Scheme students i.e. DC123)**
- a. Discuss Network Status tools and Network traffic monitoring tools. (8)
- b. Discuss SNMP MIB Tools and its types. (8)
- Q.9 (For Current Scheme students i.e. DC70)**
- a. Define Web-Based Enterprise Management (WBEM), explain its features & Architecture. (2+4+2)
- b. Explain how SNMP management can be interfaced with web along with diagram. (8)
- Q.9 (For New Scheme students i.e. DC123)**
- a. What is Virtual Path – Virtual Circuit? Explain with suitable diagram. (8)
- b. Discuss Broadband access technologies in detail. (8)