

DiplETE – CS (Current Scheme)

Time: 3 Hours

JUNE 2015

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.
- 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. The NMS standard _____ addresses both network and administrative aspects of management.
- (A) SNMP/Internet (B) TMN
(C) Web-Based Management (D) OSI/CMIP
- c. In the concise definition of object macro, described in RFC1212, the _____ clause is the columnar object identifier.
- (A) Index (B) Reference
(C) DefVal (D) Description
- 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. A pairing of an SNMP community with an SNMP community profile is defined as SNMP _____ policy.
- (A) peer-to-peer (B) match
(C) access (D) none of these
- f. Token ring group _____ is associated with the function of generating historical utilization and error statistics of promiscuous data.
- (A) Statistics (B) Promiscuous Statistics
(C) Graph (D) None of these

- g. The traffic monitoring tool _____ captures and inspects network packets.
- (A) snoop (B) ping
(C) bing (D) iptrace
- h. ISDN stands for
- (A) Indian Services Digital Network
(B) Integrated Services Digital Network
(C) International Services Digital Network
(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. Common Information Model (CIM) consists of three modules _____
- (A) Network Management Model, Organization Model and Information Model
(B) A core model, common models, and extension models
(C) Programs, algorithms and protocols
(D) Hubs, bridges and routers

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. (10)
- b. Write the most popular uses of the Internet for home users. (6)
- Q.3** a. Describe the components of the 2-tier Network Management Organizational model and their relationship. (8)
- b. With the help of a block diagram illustrate SNMP ASN.1 Data Type. (8)
- Q.4** a. What are organization responsible for developing Internet Standards? (6)
- b. With the help of suitable diagram explain the two-tier and three-tier organization model of SNMP management. (5+5)
- Q.5** a. Describe the SNMP traps in the communication model along with the indications. What is the format of a trap? (6+2)
- b. Describe RMON2 Standard. In addition to existing groups in RMON, what are the 10 groups under which RMON2 objects are divided into? (4+4)

- Q.6** a. Describe the basic configuration of a protocol analyzer. What are the capabilities of the protocol analyzers that are available in the market? (8)
- b. What are the 5 NMS components? Illustrate through a diagram as well as a table listing the service provided by each of these with examples. (8)
- Q.7** a. What is a Fault? Discuss the 5 steps involved in fault management. (6)
- b. What are the basic guidelines to set up policies and procedures? (5)
- c. What is the purpose of a firewall? Where is it located? What are the benefits of implementing a firewall? (5)
- Q.8** a. Write a description of report management function of network management application. What are the specific planning and management reports? (8)
- b. What is policy based management? Draw a diagram for the policy based management. (8)
- Q.9** a. Explain web interface to SNMP management along with a diagram. (8)
- b. Write short notes on Desktop Management Interface (DMI) with diagrams. (8)