

**Subject: NETWORK MANAGEMENT**

Time: 3 Hours

Max. Marks: 100

**DECEMBER 2011****NOTE: There are 9 Questions in all.**

- Please write your Roll No. at the space provided on each page immediately after receiving the Question Paper.
- 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. The secret key cryptography is \_\_\_\_\_ which use same key for encryption and decryption, but public key cryptography is \_\_\_\_\_ with a public and private key which are different.

- (A) symmetric, asymmetric                      (B) symmetric, dual  
(C) asymmetric, dual                              (D) both (B) and (C)

b. The following models are valid for network management model

- (A) Organisation, Information, Communication  
(B) Organisational, Behavioural, Functional  
(C) Information, Communication, Dataflow  
(D) None of the above

c. Unicenter TNG is a product of

- (A) CA    (B) IBM  
(C) HP    (D) Dell

d. The expansion for WBEM is:

- (A) Web Based Entity Management  
(B) Web Based Electronic Machine  
(C) Web Based Enterprise Management  
(D) None of the above

e. \_\_\_\_\_ is a threat that some unauthorized user may send information to another user, assuming the identity of an authorized user.

- (A) Masquerade                                      (B) Modification  
(C) Disclosure                                        (D) Privacy

- f. In RMON, \_\_\_\_\_ modules which are LAN probes, collect data from remote monitored network with Ethernet and token ring LAN
- (A) Data fusion (B) Data diffusion  
(C) Data gathering (D) both (B) and (C)
- g. Counter is a non negative number and can increase to a maximum value of \_\_\_\_\_
- (A)  $2^{32} - 1$  (B)  $2^{64} - 1$   
(C)  $2^{32}$  (D) None of the above
- h. RFC stands for
- (A) Radio Frequency Communications  
(B) Request For Comments  
(C) Radio For Commoners  
(D) None of the above
- i. Valid reports in quality of service for planning and management
- (A) Traffic patterns (B) Current status  
(C) Personnel (D) Network availability
- j. Facilities Installation is a responsibility covered under \_\_\_\_\_ as part of Network Management.
- (A) Network Operations (B) Network Provisioning  
(C) Network Maintenance (D) Both (B) and (C)

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

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- Q.2** a. Describe the salient characteristics and features of client–server architecture models and provide an analogy with the client–server operation in a post office. (9)
- b. What are the names of seven OSI Layers? Please list the salient services provided by each of these layers. (7)
- Q.3** a. Describe the communication protocol used to transfer information between managed object and managing processes, as well as between management processes. (6)
- b. Explain ASN.1. Give an example to illustrate data type definition. (3+2)

- c. Explain the functional model component of the OSI network Management Model. (5)
- Q.4** a. Explain history of SNMP Management. (4)
- b. Describe simple two-tier and three tier organization model of SNMP management. (5)
- c. Draw the flow to indicate SNMP manager and SNMP agent in SNMP network Management architecture. (7)
- Q.5** a. Explain SNMP access policy in SNMP management with diagram. (5)
- b. Explain any four SNMP operations. (3)
- c. Explain features of RMON1 and RMON2. (4)
- d. Explain the working of ATM Remote monitoring. (4)
- Q.6** a. List seven network monitoring tools with the operating system and their functionality. (7)
- b. Explain the components of network management system. (4)
- c. Compare high-end and low-end system management features. (5)
- Q.7** a. Explain any two event correlation techniques. (8)
- b. Explain any four security management techniques. (8)
- Q.8** a. Explain accounting management and report management. (8)
- b. Describe the policy management architecture proposed by Lewis for network management. (8)
- Q.9** a. Explain Desktop Management Interface (DMI) with a diagram. Explain DMI functional block diagram. (8)
- b. Explain Jiro architectures. (4)
- c. Explain feature of Java Dynamic management kit. (4)