

Time: 3 Hours

**JUNE 2014**

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. Network Management can be defined as OAM&P which is abbreviation for\_\_\_\_\_
- (A) Operations, Audit, Maintenance and Provisioning  
 (B) Operations, Administration, Maintenance and Provisioning  
 (C) Operations, Administration, Management and Provisioning  
 (D) Operations, Administration, Maintenance and Protocols
- b. In the seven-layered SNA model, the physical, data link and application layers have \_\_\_\_\_ correspondence with the OSI layers.
- (A) One-to-many (B) One-to-one  
 (C) Many-to-one (D) No communication
- c. OSI uses the following protocols for transportation
- (A) connection-oriented (B) connectionless  
 (C) both (A) & (B) (D) none of these
- d. Two new data types defined in the RMON1 textual conventions were
- (A) WebString and EntryStatus (B) OwnerString and EntryText  
 (C) OwnerStatus and EntryString (D) OwnerString and EntryStatus
- e. \_\_\_\_\_ is a non-negative integer and measures time in units of hundredths of a second.
- (A) Counter (B) Gauge  
 (C) Time Ticks (D) Opaque

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- f. The traffic management tool iptrace \_\_\_\_\_
- (A) is used for measuring round-trip packet loss
  - (B) measures point-to-point bandwidth of a link
  - (C) inspects Ethernet packets
  - (D) none of these
- 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 these
- h. BERT stands for
- (A) Bit Error Rate Transfer
  - (B) Byte Error Rate Tester
  - (C) Bit Error Rate Tester
  - (D) Byte Error Rate Transfer
- i. In \_\_\_\_\_ an event correlator is built on an object-oriented model associated with each managed object.
- (A) Role-based reasoning
  - (B) Model-based reasoning
  - (C) Case-based reasoning
  - (D) Critic-based adaption
- j. The Jiro Platform comprises of \_\_\_\_\_.
- (A) ODBC and DCOM
  - (B) Object Model and Component Model
  - (C) Three Tier Model
  - (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. With the help of suitable diagram explain the architecture of the telephone network model. (8)
- b. Explain different OSI network management applications defined by ISO. (8)
- Q.3** a. List the five Network Management Standards with their salient points. (10)
- b. Describe the two-tier Network Management organizational model with diagram. (6)
- Q.4** a. List SNMP based ASN.1 data type structures with supported data types and appropriate comments. (8)
- b. Draw a diagram for SNMP Network Management Architecture and explain the data path between the manager application process and the agent application process via the four transport function protocols. (8)

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- Q.5** a. Define an SNMP access policy in SNMP management. Elaborate using a diagram. (10)
- b. What is Remote Monitoring? (6)
- Q.6** a. Write the syntax and one example for the following SNMP command-line tools  
(i) SNMP Get Command (ii) SNMP Get-Next Command (3×3)  
(iii) SNMP Walk Command
- b. With the help of suitable diagram, describe a functional NMS Configuration? (7)
- Q.7** a. What is meant by network provisioning? How is it implemented in the ATM technology? (11)
- b. Describe the basic five points guide to setting up policies and procedures. (5)
- Q.8** a. How we classify reports under report management? List the different category for each report. (8)
- b. Define the term Service level management. What is the objective of service level management? (8)
- Q.9** a. Explain Desktop Management Interface with a diagram. (8)
- b. What is Jiro? Draw a diagram to explain. (8)