Network Management IT340 midterm 2016 march

الجامعة السعودية الالكترونية
Saudi Electronic University

Ministry of Higher Education
Saudi Electronic University
College of Computing and Informatics

Mid-term Examination Cover Sheet

Second Semester: 1436 / 1437 - 2015 / 2016

Course Title:	Network Management	Course Code:	IT 340
Exam Duration:	60 Minutes	Number of Pages: (including cover page)	6

The table below is to be filled by the student

Student Name:		Student ID:	
Class Day & Time		CRN:	
Instructor Name:		Exam Date:	March

Exam Guidelines

- Mobile phones are not permitted.

Marking Scheme

Questions	Score
Q1	/30
Q2	/10
Q3	/4
Q4	/6
Total Score	/ 25

Part I : MCQ

1. Standards for LAN and MAN specifications:
   a) IEEE
   b) OSI
   c) TMN
   d) IETF

   Answer: A

2. What is the purpose of adding the Bulk Data Transfer Message on SNMPv2?
   a) Improve the security
   b) To change the structure for management information
   c) To retrieve large data
   d) To add and delete rows

   Answer: C

3. Which version of SNMP dose introduces the manager-to-manager messages?
   a) SNMPv1
   b) SNMPv2
   c) SNMPv3
   d) No one

   Answer: B

4. Which is the version of SNMP can communicate with the rest of versions?
   a) SNMPv1
   b) SNMPv2
   c) SNMPv3
   d) No one

   Answer: C

5. SNMP Model components do not include
   a) Organization Model
   b) Information Model
   c) Functional model
   d) Management model

   Answer: D

6. An organization model which allows monitoring non-SNMP objects needs:
   a) A RMON probe
   b) A proxy
   c) None of the above
   d) a and b

   Answer: B

7. Any host that could query an agent is a
   a) Manager
   b) Network Element
   c) All of the above
   d) None of the above

Answer: A

8. RMON probe acts as
   a) Agent and a manager
   b) Agent
   c) Manager
   d) None of the Above

Answer: A

9. Which SNMP feature provides a solution to the main disadvantage of SNMP polling?

   a) SNMP community strings
   b) SNMP set messages
   c) SNMP get messages
   d) SNMP trap messages

Answer: D

10. Which of the following is not an element of a SNMP Organization Model?

a) Manager
b) Agent
c) Router
d) Remote monitor
e) a, b, d

Answer: E

11. Which of the following is not a functional area of SNMPv1?
a) Test
b) Fault
c) Performance
d) Security
e) Configuration

Answer: A

12. In SNMPv1, the Message consists of:
a) Version identifier
b) Community name
c) Protocol Data Unit
d) a, b
e) a , b, c

Answer: E

13. Which feature(s) is(are) in RMON2 but not in RMON1?
a) Monitors the upper layers
b) Conformance function group
c) Conformance specifications
d) a, b, c
e) a, c

Answer: D

14. RMON probe configuration is done by :
a) SNMP traps
b) SNMP Get-Next-Request
c) SNMP Set-Request
d) SNMP agent

Answer: C

15. The filter group allows the probe to:
a) Capture the packets according to a logical expression
b) Deny access to any packet that match a logical expression
c) Count the number of packets that match a logical expression
d) Increase the number of captured packets

Answer: A

16. RMON1 is used to Monitor
a) Ethernet LAN
b) Token-ring LAN
c) Upper Layer Protocols
d) Both (a) & (b)

Answer: D

17. Basic system network management utilities include all of the following except:
a) Status monitoring tools
b) Traffic monitoring tools
c) Route monitoring tools
d) Security monitoring tools

Answer: D

18. Traffic monitoring tools include:
a) host and dig tools
b) netstat and arp.
c) traceroute
d) None of the above
e) All of the above

Answer: D

19. Which tool responsible for converting a hostname into an IP address and vice versa querying DNS?
a) nslookup
b) dig
c) ethereal
d) a+ b

Answer: A

20. All of the statements below are correct except:
a) Protocol Analyzer Analyzes data packets on any transmission line including LAN.
b) Protocol analyzer captures data and transfers to the probe.
c) Data link between probe and protocol analyzer either dial-up or dedicated link or LAN.
d) Protocol analyzer analyzes data at all protocol levels.

Answer: B

Part II TRUE and FALSE Questions

1. *tcpdump* and *ethereal* commands put a network interface in a promiscuous mode and log data. In this mode, raw data are gathered without any filtering	T
2.NetMetrix Protocol analyzer is a software package loaded on to a workstation	T
3.SNMPv2 improve the security function that SNMPv1 lacked	F
4.Table Enhancement brought by SNMPv2 for the reason of only add rows to the objects table.	F
5.In a two-tier organization mode, the agent process does not reside in the managed object.	F
6.MIB (Management Information Base) is physical database where information about all managed objects is stored.	F
7.SNMPv1 MIB has too many objects that are not used	T
8.Because SNMP uses UDP as its transmission protocol, it has many reliability and security features.	F
9.RMON Permits monitoring on a more frequent basis and hence faster fault diagnosis	T
10.A row in the filter table is associated with multiple rows in the channel table	F

PART III Fill in the Blanks

4 1 2 3
Alternatives: MRTG, ping, semantics, organization, router, matrix, statistics, host

1. Management information has syntax and _SEMANTIC_
2. The MIB specifies the _Organization_ of management information in a hierarchical tree-like structure

3. The Matrix group provides Statistics on traffic between pair of hosts.

4. MRTG is a tool that provides a visual display of traffic load

PART IV Short Questions

1. What is a community string and how is it used?

SNMP Community, Community name, Community string

Community is a relationship between an Agent and Managers.

- Security in SNMPv1 is community-based
- Authentication scheme in manager and agent
- Agent sends "*Authentication Failure Trap*" to Manager. When authentication failed.
- Community: Pairing of two application entities
- Community name: String of octets ➔ Used to validate the SNMP messages
- Two applications in the same community communicate with each other
- Application could have multiple community names
- Communication is not secured in SNMPv1 - no encryption.

2. What are the standard NM components and their roles.

- Manager
  - Sends requests to agents
  - Monitors alarms
  - Houses applications
  - Provides user interface
- Agent
  - Gathers information from objects
  - Configures parameters of objects
  - Responds to managers' requests
  - Generates alarms and sends them to mangers
- Managed object
  - Network element that is managed
  - Houses management agent
  - All objects are not managed / manageable

The End (: