

EXAMINATIONS 2013 / 2014
ARHOLIADAU 2013 / 2014

Semester 2

FACULTY OF: APPLIED DESIGN AND ENGINEERING
SCHOOL OF APPLIED COMPUTING

NAME OF COURSE/PROGRAMME: **B.Sc. (Hons) Computing Portfolio**
BEng Computer Network Technology

YEAR OR LEVEL: **Level 6**

NAME OF MODULE/UNIT/EXAM PAPER: **Network Management**

MODULE NO: **M3X8644**

M3X8533

DATE OF EXAMINATION: **May 2014**

EXAMINATION TIMES:

START TIME:

FINISH TIME:

TIME ALLOWED: **2 hours**

INSTRUCTIONS TO CANDIDATES:

Answer three out of the four questions. Each question carries equal marks.

Candidates are not permitted to bring calculators, dictionaries; text books/case studies or any other reference materials into the exam room.

QUESTION ONE

(a) Why network management is needed?

(2 marks)

(b) Name two Network Management Protocols other than SNMP and discuss SNMP; you should include the SNMP framework in your discussion.

(15 marks)

(c) Explain Configuration Management and Accounting Management of the ISO model.

(8 marks)

QUESTION TWO

(a) Life Time Tech Company (LTTC) is upgrading its network infrastructure that consists of 4 departments and requires your expertise to build an enterprise WLAN. Each department operates in a different subnet for ease of identification and network management.

- Propose a WLAN design for each department at LTTC. The maximum number of users in any department is 30.
- The IP network address used is 172.17.21.0 and subnet mask 255.255.255.0
- Outline all the necessary requirements that would be needed for the new design
- Provide a labelled network diagram to aid in your proposal.
- State any assumptions made

(25 marks)

QUESTION THREE

(a) Life Time Tech Company decided to allow its employee to work from home or use mobile devices. What types of VPN solution would you recommend by justifying your choice?

(8 marks)

(b) explain three benefits of VPNs

(6 marks)

(c) Name and describe the characteristics of secure VPNs

(11 marks)

QUESTION FOUR

- (a) Figure 1 shows an example of a Solicited-Node Multicast Address. What would happen if R1 wanted to exchange packets with R2?

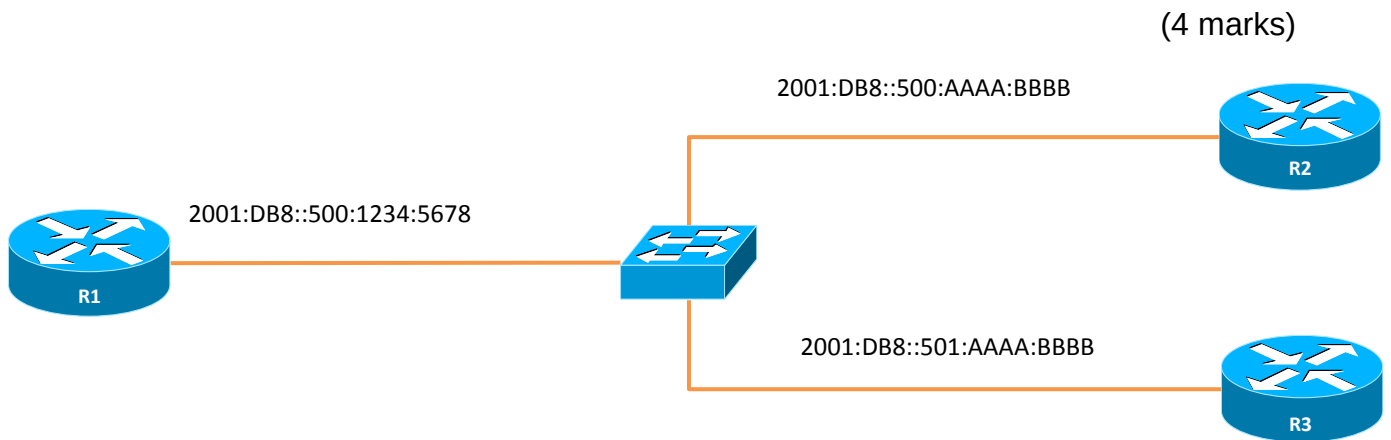


Figure 1

- (b) Name at least 4 new features of IPv6.

(4 marks)

- (c) The network Manager for Life Time Tech Company (LTTC) requires your expertise to conduct an in-house training session for his network staff on IPv6. Provide information for the staff to understand IPv6 addressing for the future. You can give as much information as possible about IPv6 and include some of the weaknesses of IPv4. You may use appropriate diagrams if necessary.

(17 marks)