



EXAMINATIONS 2012 / 2013
ARHOLIADAU 2012 / 2013

Semester 2

FACULTY OF: APPLIED DESIGN AND ENGINEERING
SCHOOL OF APPLIED COMPUTING

NAME OF COURSE/PROGRAMME: **B.Sc. (Hons) / HND Computer Networks**

BEng (Hons) Computer Networks Technology

YEAR OR LEVEL: **Level 5**

NAME OF MODULE/UNIT/EXAM PAPER: **Wireless Networks and Protocol Design**

MODULE NO: **M2X8524**

M2X8633

M5X8937

DATE OF EXAMINATION: **22nd May 2013/**

EXAMINATION TIMES:

START TIME: **12:00pm**

FINISH TIME: **2:00pm**

TIME ALLOWED: **2 hours**

INSTRUCTIONS TO CANDIDATES:

Answer three out of 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) List and briefly define LLC services (9 marks)
- (b) Name and define the 802.11 services (16 marks)

QUESTION TWO

- (a) List and define key requirements for wireless LANs. (10 marks)
- (b) From your networking knowledge about wired and wireless networks, draw and label a hierarchy network topology that incorporates wireless devices, workstations, switches, routers etc. (15 marks)

QUESTION THREE

- (a) State the three security mechanisms that were deployed by the IEEE to protect the security of IEEE 802.11 networks and name the three basic security goals that the security mechanisms provided for data. State these mechanisms in their order of implementation. For example, which one came first, second, and then third. (9 marks)
- (b) What security weaknesses were discovered in the security mechanisms and why? (10 mark)
- (c) What was the security enhancement made on each security mechanisms? (6 marks)

QUESTION FOUR

- (a) What are the two distinct part of wireless ATM and what are their responsibilities? (10 marks)
- (b) With the aid of a diagram or table, compare a WLAN and a LAN (15 marks)