



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT 2K 10J)**

EIT 2308: WIRELESS NETWORK

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions
Answer question **ONE** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

SECTION A (COMPULSORY)

Question One (20 marks)

- a) Name **FOUR** wireless network security methods. **(4 marks)**
- b) Differentiate between Access Point mode and Infrastructure mode of an Access Point. **(6 marks)**
- c) Explain **FIVE** fallback on wireless networks. **(10 marks)**

SECTION B (Answer Any Two Questions)

Question Two (20 marks)

- a) Describe any **THREE** service offered by wireless network **(9 marks)**
- b) Explain **TWO** advantages of wired network over wireless network. **(6 marks)**
- c) Define the following terms as used in wireless networks.
 - i) Bandwidth **(2 marks)**
 - ii) Interference **(3 marks)**

Question Three (20 marks)

- a) Explain any **THREE** devices used in wireless network. **(6 marks)**
- b) Discuss **FOUR** wireless network challenges. **(12 marks)**
- c) Briefly explain Access Point of a wireless network. **(2 marks)**

Question Four (20 marks)

- a) Outline any **TWO** cellular wireless networks giving the frequency range of operation for each. **(6 marks)**
- b) Define the following as applied in cellular networks.
 - i) Subscriber Identity Module (SAM)
 - ii) Global System for Communication (GSM) **(4 marks)**
- c) Draw the structure of a GSM network and clearly label all the parts. **(10 marks)**

Question Five (20 marks)

- a) Differentiate between 2G and 3G cellular network. **(6 marks)**
- b) Name the **THREE** new physical layer channels that were implemented in VMTS release 5 to boost its speed from 7 – 2 mbps to 14.4mbps. **(3 marks)**
- c) Explain how cell switching is achieved by base station without interfering a continuous call. **(4 marks)**
- d) Outline **FOUR** advantages of a cellular wireless network. **(4 marks)**

e) List any **THREE** services offered via cellular wireless network.

(3 marks)