



**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)**