



**KIMATHI UNIVERSITY COLLEGE OF TECHNOLOGY**

University Examinations 2010/2011

**SECOND YEAR SUPPLEMENTARY/SPECIAL EXAMINATION FOR THE DEGREE OF  
BACHELOR OF SCIENCE COMPUTER SCIENCE**

**ICS 2223: Introduction to the Internet**

**DATE: 9<sup>th</sup> November 2010**

**TIME: 2.00 pm – 4.00 pm**

*Instructions: Answer Question 1 and Any Other Two.*

**Q1 30 Marks (Compulsory)**

- a) Describe the following internet terms **(12 Marks)**
- i) WWW
  - ii) IP address
  - iii) Domain name
  - iv) Worm
  - v) Script
  - vi) Host
- b) Explain why internet is a complex communication system in respect to infrastructure and management **(8 Marks)**
- c) Identify, explain the role, and give examples of various resources and parties involved in the provision of internet services **(10 Marks)**

**Q2 20 Marks**

- a) Explain the role of Network and Datalink layers in respect to data transmission **(4 Marks)**
- b) Illustrate the layers of TCP/IP protocol stack and briefly explain their role **(8 Marks)**
- c) Sketch IP datagram and explain the term encapsulation **(6 Marks)**

### **Q3 20 Marks**

- a) Explain two factors you may put into consideration when selecting the graphic format of a web page and give any three examples of web page graphic format **(5 Marks)**
- b) Explain how the following may affect the performance of a web page **(6 Marks)**
  - i) Link speed
  - ii) Client Hardware
  - iii) Client software
- c) Describe a positive and negative use of internet cookie **(4 Marks)**
- d) Using appropriate event handler, write a JavaScript code that changes background color when the mouse is over a link **(5 Marks)**

### **Q4 20 Marks**

- a) State the name of the link on a router that connects to the LAN and the link that connects to the WAN and state any two differences between them **(6 Marks)**
- b) Briefly describe any two features of a computer that can be put in place of internet router **(4 Marks)**
- c) Describe the internet client server model **(4 Marks)**
- d) Discuss any two applications that operate using the client/server paradigm **(4 Marks)**

### **Q5 20 Marks**

- a) Explain the role of the following TCP/IP protocols **(10 Marks)**
  - i) HTTP
  - ii) UDP
  - iii) SMTP
  - iv) RIP
  - v) POP
- b) Describe VPN **(4 Marks)**
- c) Briefly explain why insecurity has increased over the Internet and highlight any two security strategies **(6 Marks)**