



(Knowledge for Development)

KIBABII UNIVERSITY COLLEGE

A CONSTITUENT COLLEGE OF

MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS

2014/2015 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER

MAIN EXAMINATION

FOR THE DEGREE OF

BACHELOR OF SCIENCE COMPUTER SCIENCE

COURSE CODE: CSC 124

COURSE TITLE: INTERNET TECHNOLOGIES

DATE: 8th MAY, 2015

TIME: 8.00-10.00 AM

INSTRUCTIONS TO CANDIDATES

Answer Question One in Section A and Any other TWO (2) Questions in Section B

SECTION A

Answer all questions in this section

Question One [30 Marks]

1. Differentiate between the following terms as used in internet technologies: **[4 Marks]**
 - i) HTML and XML
 - ii) JavaScript and PHP
 - iv) Selector and Value
 - v) CSS and Class
2. State two functions of each of the following: **[5 Marks]**
 - i. DHCP server
 - ii. HTTP protocol
 - iii. Proxy Server
 - iv. Router
 - v. Wireless Access Point (WAP)
3. Packet switching and circuit switching are two distinct modes of voice/data transfer. Briefly explain each showing the differences. **[3 Marks]**
4. i) What is IP address, how is it different from MAC Address **[2 Marks]**
ii) Explain two ways of assigning IP address to a node in a network **[2 Marks]**
5. Assuming you have been employed as webmaster. Discuss four ways of enhancing audience access to your website. **[4 Marks]**
6. HTTP protocol is important in browsing. **[5 Marks]**
 - i) Explain two functions of HTTP protocol
 - ii) State the port on which it operates
 - iii) Name four messages HTTP uses
7. Differentiate between domain name and URL **[2 Marks]**
8. You are Network Technologist and you are currently in Nairobi. **[3 Marks]**
 - i) State the protocol and the port number you will use to access a server in Kibabii University College remotely
 - ii) State the protocol and port number(s) you will use to send files from your laptop to a server in Kibabii University College.

SECTION B

Answer any two questions in this section

Question Two [20 Marks]

- a) State and explain five principles of web design **[10 Marks]**
- b) If you were employed as a Systems Administrator in a University, discuss five servers you would advice to be set up within the University's LAN **[10 Marks]**

Question Three [20 Marks]

- a) Briefly explain the role of DNS **[3 Marks]**
- b) Give THREE distinct reasons for DNS error messages. **[3 Marks]**
- c) Explain the difference between the following: **[10 Marks]**

- i. Subnet and Subnet Mask
 - ii. Intranet and Extranet
 - iii. Dynamic and static website
 - iv. Physical Address (MAC) and IP Address
 - v. Broadband and Dial up connections
- d) Discuss the following showing the differences **[4 Marks]**
- i) Open system and closed system
 - ii) Physical and Logical network designs

Question Four [20 Marks]

- a) Describe two characteristics of each of the following: **[6 Marks]**
- i. UTP cable
 - ii. Fiber cable
 - iii. Blue tooth
- b) Consider the following XML markup:
- ```

1 <?xml version="1.0" encoding="ISO-8859-1"?
2 <cricket ground history>
3 <stadium>
4 <name>Eden Gardens</name>
5 <matches>35</matches>
6 </stadium>
7 <name>Feroz Shah Kotla</name>
8 <matches>29</matches>
9 </stadium>
10 /cricket ground history>

```

- i) Identify THREE errors in the XML markup above. **[3 Marks]**
  - ii) Add a field to store the “city” in which each cricket ground is located. **[2 Marks]**
- c) Apart from the IP address, name and explain two other parameters you set in a computer in order to connect to the internet **[4 Marks]**
- d) State five two characteristics of WAN **[5 Marks]**

**Question Five [20 Marks]**

- a) Differentiate between the following: **[4 Marks]**
- i. VLAN and WLAN
  - ii. WIMAX and WIFI
- b) List and explain two advantages and two disadvantages of wireless network **[4 Marks]**
- c) Explain why internet uses client server architecture **[2 Marks]**
- d) Discuss five factors you consider when designing a website for an organization **[10 Marks]**