

KABARAK



UNIVERSITY

EXAMINATIONS

2008/2009 ACADEMIC YEAR

**FOR THE DEGREE OF BACHELOR COMPUTER
SCIENCE**

COURSE CODE: COMP 325

COURSE TITLE: APPLICATION ARCHITECTURE

STREAM: Y3S2

DAY: THURSDAY

TIME: 2.00 - 4.00 P.M.

DATE: 11/12/2008

INSTRUCTIONS:

Answer Question One and Any Other Two Questions.

PLEASE TURN OVER

QUESTION ONE (30 marks)

- (a) One of the growing Banks in Kenya wants to hire you as an application software programmer in their head office Nairobi. What do you understand by application software and explain any three subtypes of application software that you may need to program? (6marks)
- (b) With the help of a diagram explain the tiers of 3-tier architecture. (6 marks)
- (c) Design an interface and Write a VB program to calculate simple interest. (5 marks)
- (d) You have been employed as the project manager of orange mobile company in charge of developing client software. Highlight any four Characteristics of client software that will make it effective and reliable. (2 marks)
- (e) An organization wants to develop a new system using client/sever architecture and appoint you as the supervisor briefly explain the advantages of client/sever architecture. (4 marks)
- (f) Differentiate between intranet and extranet. (2 marks)
- (g) Write a HTML code to display a centered image and a separate link on the same page to “www.kabarak.ac.ke” web page on the internet. (5 marks)

QUESTION TWO (20 marks)

- (a) Write a java script program to display the words “welcome to our new site” on a browser. (4 marks)
- (b) Differentiate between the call by value and call by reference as used in VB programming. (4 marks)
- (c) With the help of a HTML code explain the use of the preformatted text tag in any web document. (2marks)
- (d) You are the ICT manger of KPLC and the users want their applications customized to meet their individual needs. Briefly explain to them what user-written software is so that your work can be simplified. (4 marks)
- (e) Discuss the limitations of a two tier client/sever architecture. (4marks)
- (f) As an administrator you want to help all the staff members of Kabarak University to access the local area network from anywhere in this country. Which server can support this and what are its functions? (2 marks)

QUESTION THREE (20 marks)

- (a) Write a VB program to implement the use of the IF ...ELSE construct. (4 marks)
- (b) Differentiate between file sharing architecture and mainframe architecture. (4 marks)
- (c) Define internet? (2 marks)
- (d) You want to start software Production Company in Nairobi. If you have to use the 3-tier technology in most of your applications identify the major Application areas where this technology is used. (3 marks)
- (e) In relation to worldwide web differentiate between HTTP and Hyperlinks (4 marks)
- (f) Functions are essential in any programming language; explain why we need functions in VB? (3 marks)

QUESTION FOUR (20 marks)

- (a) Using the FOR ...EACH loops in VB write a program to count the number of textboxes in a form. (6 marks)
- (b) Identify and explain two limitations of the 3-tier architecture technology. (2marks)
- (c) Differentiate between the Picture Box and the Image Box controls as used in visual basic (4marks)
- (d) Briefly explain what you understand by the term Rapid Development Application (4 marks)
- (e) Highlight the characteristics of a server that makes it function effectively. (4 marks)

QUESTION FIVE (20 marks)

- (a) A complete application will need at some point to have more than one server briefly explain function of these servers:
 - (i) Proxy server. (2 marks)
 - (ii) Application server. (2 marks)
- (b) Peer-to-peer networks are sometimes considered to be more reliable. What are the advantages of peer-to-peer that makes it so? (4 marks)
- (c) What are the differences between a JavaScript and a VBScript? (2 marks)
- (d) Write a VB program to implement the select case statement. (3 marks)
- (e) How would you differentiate between web pages and web directories? (2 marks)
- (f) Define a protocol (1 marks)
- (g) What is an array? Write a VB code to show how an array is declared. (4 marks)