

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2010/2011 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE

COURSE CODE: COMP 462

COURSE TITLE: CLIENT SERVER PROGRAMMING

STREAM: SESSION VIII

DAY: THURSDAY

TIME: 9.00 – 11.00 A.M.

DATE: 14/04/2011

INSTRUCTIONS:

- Answer **ALL** the questions in **PART ONE** and any **TWO** questions in **PART TWO**.

PLEASE TURN OVER

SECTION A 30 MARKS (COMPULSORY)

QUESTION 1

- a) Explain briefly the difference between client and server. (3mks)
- b) What is the use of the Common Gateway Interface (CGI)? (2mks)
- c) Illustrate the difference between 2-tier and 3-tier architecture. What are the advantages of deploying 3-tier architecture in place of 2-tier architecture? (6mks)
- d) Highlight and briefly explain what is special about the Internet. (3mks)
- e) Some of the major challenges facing the convergence of networks in businesses is performance, that is, the network can at times be painfully too slow and result in high interconnectivity costs.

Required:

- (i) Explain the meaning of the terms “bandwidth” and “ interconnectivity costs”. (3mks)
- (ii) Examine four factors that can determine the extent to which network performance degrades or slows down. (4mks)
- f) Briefly explain the advantages of servlets over traditional CGI? (6mks)
- g) What do you understand by Internet security? (3mks)

SECTION B (40 MARKS)

Instruction: Answer any 2 questions

QUESTION 2 (20marks)

- a) Describe two basic ways in which one can connect to Internet. (6mks)
- b) Server programs exhibit a high level of concurrency. Ideally, a separate task will be assigned to each of the clients the server is designed to concurrently support. Task management is best done by multitasking operating system.

Required:

List and explain the base services provided by the operating system to the server to achieve the above. (6mks)

- c) With the help of examples write a short note on the following:-
 - (i) Browser (2mks)
 - (ii) Search engines (2mks)
- d) What is the role of IIS in web applications? (4mks)

QUESTION 3 (20 MARKS)

- a) Explain the applet life cycle? Giving the syntax for each. (8mks)
- b) “fat server or fat client?” comment on this. (4mks)
- c) Discuss the use of the following Internet protocols:-
 - (i) Transfer Control Protocol/Internet Protocol (TCP/IP) (4mks)
 - (ii) Telnet (2mks)
 - (iii) Hypertext Transfer Protocol (2mks)

QUESTION 4 (20 MARKS)

- a) Discuss the principles of web design. (5mks)
- b) All client-server systems have the same characteristics. State and explain briefly. (6mks)
- c) Write an HTML code that is likely to display the following table? (6mks)

Sugar Price List				
ItemNo	ItemName	Description	List Price	Discount
1100	Sugar	Mumias Sugar 1kg	110.00	All types of sugar 20% off list price
1100	Sugar	Sony Sugar 1kg	115.00	
1100	Sugar	Tusker Sugar 1kg	110.00	

- d) Explain any three types of networks. (3mks)

QUESTION 5 (20 MARKS)

- a) Explain the role of the database administrator in client server computing. (4mks)
- b) State any three threats to database and information and suggest what should be done preventing them from becoming a reality. (3mks)
- c) Using appropriate diagrams explain the following types of servers and indicate the services they offer to their clients.
 - i) File servers (3mks)
 - ii) Database servers (3mks)
 - iii) Transaction servers (3mks)
- d) What is the importance of placing navigational tools on web pages? (4mks)