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SIR ARTHUR LEWIS COMMUNITY COLLEGE
DIVISION OF TECHNICAL EDUCATION AND MANAGEMENT STUDIES

EXAMINATION SESSION : End of Semester Two Examination
TUTOR : Annie Sealy-Auguste
PROGRAM TITLE : Computer Systems Engineering
PROGRAM CODE : 3EE-CMS-AD
COURSE TITLE : **Internet Applications**
COURSE CODE : CIT224
CLASS : Year Two
DATE : Monday 27th April, 2009
COMMENCEMENT TIME : 9:00 a.m.
DURATION : 2 ½ Hours
ROOM(S) : CMT -W1
INVILIGATOR(S) :

DTENS PAST PAPERS
TECHNICAL.



INSTRUCTIONS:

There are ten (10) questions on this exam paper. Please answer all questions. Place your name on all sheets paper submitted to the invigilator. This is a closed book examination. The maximum number of marks indicated at the end of each question. Use this as a rough guide to determine the depth to which each question will need to be answered. You have two and a half hours (2 1/2) hours to complete this examination. Please note that calculators are allowed in the examination.

- ◆ Please number your responses accurately
- ◆ All cell phones must be turned off during the Examination
- ◆ **Note:** Bags, books as well as writing paper not given by the invigilator should be deposited at the front of the examination room or as otherwise indicated.
- ◆ Students must sign **IN** and **OUT** on the exam class list

1. (a) Differentiate between the Internet and the WWW. (2 marks)
- (b) Explain the following Internet Application Protocols (4 marks)
 - (i) POP
 - (ii) FTP
 - (iii) SMTP
 - (iv) Telnet
- (c) Using an appropriate example, explain the series of events that occur in getting a webpage to display in your web browser (6 marks)
2. (a) Give two advantages of creating a Computer Network (2 marks)
- (b) Differentiate between physical and logical Topology (2 marks)
- (c) With the aid of a diagram illustrate the Bus and Star topologies (4 marks)
3. (a) Give the Function of the TCP/IP protocols (2 marks)
- (b) Give the layers of the TCP/IP protocol suite (4 marks)
- (c) Using a diagram compare the TCP/IP suite with the OSI model (4 marks)
4. (a) Explain the purpose of IP addressing (2 marks)
- (b) Explain the structure of Class B and C IP addresses (4 marks)
- (c) Give a suitable application for the use Class A and Class C addresses, give a reason for your answer (4 marks)
5. Given the following IP address – **207.42.136.9/30**, determine the following
 - (i) The network Class (1 mark)
 - (ii) How many bits are used without subnetting (1 mark)
 - (iii) The Default mask (1 mark)
 - (iv) The network address before subnetting (1 mark)
 - (v) The number of bits borrowed (1 mark)
 - (vi) The Subnet Mask (2 marks)
 - (vii) The Network Address after subnetting (3 marks)
6. (a) Give the purpose of a Firewall (2 marks)
- (b) With the aid of a diagram illustrate how a Packet Filter Firewall work (4 marks)
- (c) With the aid of a diagram illustrate how an Application level gateway work (4 marks)
7. (a) With the aid of a diagram, explain data encryption and decryption (5 marks)
- (b) Using the Transpose encryption technique, with key 4, **decipher** the following message “vucu-dgiaiiaarrlrntat-csdam” (5 marks)
8. (a) Discuss three (3) issues that should be considered before building a website (6 marks)
- (b) Give two (2) characteristics of a Teaching site and a Training Site (4 marks)
9. (a) Differentiate between the Internet and an Intranet (2 marks)
- (b) Within a business or organisation context explain the function of an Intranet and an Extranet (4 marks)
- (c) Explain the structure of Two Tier and Three Tier architectures (4 marks)
10. (a) Differentiate between E-commerce and E-business (2 marks)
- (b) Discuss two benefits of E-commerce to a Buyer and Seller (4 marks)
- (c) Differentiate between Directories and Search engines (2 marks)
- (d) Explain how the Boolean operators “AND” and “NOT” are used in (2 marks)