Introduction to computer networks (BBIT 241) (DBIT 223) (DCIS 121) (CISY 131) 1ST TRIMESTER 2015

**KENYA METHODIST UNIVERSITY**

**END OF 1'***st '***TRIMESTER 2015 (FT) EXAMINATION**

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| **FACULTY** |  | : | COMPUTING & INFORMATICS | |
| **DEPARTMENT** | | | : | COMPUTER SCIENCE |
| **UNIT CODE** |  | : | BBIT 241/DBIT 223/DCIS 121/CISY 131 | |
| **UNIT TITLE** | | | : | INTRODUCTION TO COMPUTER NETWORKS |
| **TIME** |  |  | : | 2 HOURS |

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**INSTRUCTIONS**

* *Answer all questions in Section A and any Two in section B*

**SECTION A:**

**Question One**

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| * Describe the following terminologies as used in networking: | (10 Marks) |

* FDDI
* CDDI
* NIC
* CSMA/CD
* MODEM

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| * To achieve communication between two remote computers, a complex set of rules is implemented. Sketch the seven layers ISO OSI model and briefly describe the role of each of the seven layers. | (15 marks) |
| * Discuss the importance of standardization with respect to Networks. Provide one standardization body. | (5 marks) |

**SECTION B:**

**Question Two**

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| * Discuss five principal factors you should consider when selecting the type of media during the design of a computer network. | (5 marks) | |
| * Discuss using illustrations the LAN topologies. Provide a strength and a weakness for each topology identified. | (9 marks) | |
| * Describe in details how the multiple-access scheme of the Ethernet works. |  | (6 marks) |

**Question Three**

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| * Networks are very crucial infrastructure in an organization. Using an organization of your choice, discuss the advantages of using networks. Discuss five advantages. | (10 marks) | | |
| * Using a relevant illustration, discuss the client/server relationship. |  |  | (5 marks) |
| * Computers need to have IP addresses in order to allow access to shared resources. What is the relationship between a domain name and IP address? Illustrate your answer with relevant examples. | (5 marks) | | |

**Question Four**

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| * The internet is a blessing in disguise, discuss. | (5 marks) | |
| * Discuss any one sliding window techniques | (5 marks) | |
| * What is a network operating system? Discuss an example of NOS and describe how it works. | (5 marks) | |
| * Briefly discuss the operations of a packet and a circuit switched network. |  | (5 marks) |