



NCC EDUCATION

**INTERNATIONAL DIPLOMA
IN
COMPUTER STUDIES**

**FUNDAMENTALS OF HARDWARE
AND
OPERATING SYSTEMS**

MARCH 2009 – LOCAL EXAMINATION

SECTION A

Answer all questions from this section.

SECTION B

Answer any two questions from this section.

Time: 2 hours

Clearly cross out surplus answers.

Failure to do this in Section B will result in only the first two answers being marked.

Any reference material brought into the examination room must be handed to the invigilator before the start of the examination.

SECTION A**ANSWER ALL QUESTIONS IN THIS SECTION**

	Marks
QUESTION 1	4
Briefly describe the purpose of an <i>expansion slot</i> and give TWO (2) examples of an expansion slot.	
QUESTION 2	4
List FOUR (4) types of PC adapter card.	
QUESTION 3	4
Distinguish between <i>serial ports</i> and <i>parallel ports</i> in a computer.	
QUESTION 4	4
Briefly explain the use of <i>virtual memory</i> in a computer.	
QUESTION 5	4
Briefly describe the purpose of an <i>infrared port</i> in a computer.	
QUESTION 6	4
Briefly describe the hard disk drive's fragmentation process.	
QUESTION 7	4
Briefly describe the purpose of an <i>integrated drive electronics (IDE)</i> interface in a computer.	
QUESTION 8	4
Explain the purpose of a <i>bootstrapping process</i> in a computer.	
QUESTION 9	4
Describe the purpose of a <i>Small Computer Systems Interface (SCSI)</i> in a computer.	
QUESTION 10	4
List FOUR (4) common virus symptoms.	

Total 40 Marks**QUESTIONS CONTINUE ON NEXT PAGE**

SECTION B**ANSWER ANY TWO QUESTIONS**

QUESTION 1	Marks
a) Briefly explain the elements of a system's primary memory.	9
b) Briefly describe the structure and operation of a <i>liquid crystal display (LCD)</i> in a computer.	9
c) Explain the difference between <i>half-duplex</i> and <i>full-duplex</i> communication modes.	2
d) Briefly explain the use of <i>Hyper Text Transfer Protocol (HTTP)</i> and <i>File Transfer Protocol (FTP)</i> in a computer network.	10

Total 30 Marks

QUESTION 2	Marks
a) Briefly describe FOUR (4) methods that could be used to initiate data transfer between the system and its peripherals.	12
b) Explain what an IP address is.	3
c) Briefly explain the different classes of IP address used in LANs.	9
d) Explain the difference between the low-level and high-level formatting operations of a magnetic disk.	6

Total 30 Marks

QUESTION 3	Marks
a) Briefly explain the use of <i>USB</i> and <i>FireWire</i> in a computer.	6
b) Explain the purpose of a modem in a computer network.	4
c) List FIVE (5) basic steps that should be considered before installing a new operating system on a hard drive.	5
d) Describe the operation and purpose of <i>Wireless local area networks (WLANs)</i> .	6
e) Describe THREE (3) ways of performing backup operations to create copies of important information.	9

Total 30 Marks**END OF PAPER**