



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