

# QUESTION 1.

6



5 (a) Convert the denary number 107 to binary.

.....

(b) Represent the denary number 300 as it would be stored in a 12-bit binary register.

..... [2]

(c) Convert the denary number 179 to hexadecimal.

..... [2]

6 One of the roles of an operating system is to deal with interrupts.

(a) Explain the term interrupt.

.....  
.....  
.....  
..... [2]

(b) Identify **three** devices that make use of interrupts.

Device 1 .....  
Device 2 .....  
Device 3 ..... [3]

# QUESTION 2.



(d) For the fourth question, he writes the answer:

“This is when a person copies another person’s computer program and tries to claim it as his own.”

State what Jesse is describing.

..... [1]

(e) For the fifth question, he writes the answer:

“This is the legal protection that a person can obtain, to provide protection against his work being stolen.”

State what Jesse is describing.

..... [1]

7 The Von Neumann model for a computer system has several components that are used in the fetch-execute cycle.

(a) One component is main memory.

(i) Describe what is meant by main memory and how it is used in the Von Neumann model for a computer system.

.....  
.....  
.....  
.....  
.....  
.....  
..... [3]

(ii) State **two** other components in the Von Neumann model for a computer system.

1 .....  
2 ..... [2]

12

(b) Computer systems often use interrupts.

**Five** statements are given about interrupts.

**Tick (✓)** to show if each statement is **True** or **False**.

Statement	True (✓)	False (✓)
Interrupts can be hardware based or software based		
Interrupts are handled by the operating system		
Interrupts allow a computer to multitask		
Interrupts work out which program to give priority to		
Interrupts are vital to a computer and it cannot function without them		

