

**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**UNIVERSITY VILLAGE, 91 CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI, ABUJA**  
**FACULTY OF SCIENCE**  
**2024 1 EXAMINATION**

**COURSE CODE: CIT 344**  
**COURSE TITLE: Introduction to Computer Design**  
**CREDIT: 3 Units**  
**TIME: 2½ Hours**

**INSTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions**

- 1a) List two (2) types of latches logic circuit. (2 marks)
- 1b) Briefly describe the three (3) groups of 80 x 86 program control instructions belong to. (6marks)
- 1c) List out at least six (6) set of commands that allow assembler to perform a good number of operations using Assembly language. (6marks)
- 1d) State how combinational circuits differs with a sequential circuit. (4marks)
- 1e) State two (2) types of adder circuit in a computer system. (1 mark)
- 1f)i) With a well-labeled block diagram, shows the difference between the two types of adders.(3marks)
- ii) Why is adder important in a computer? (1 mark)
- 1g) Give the meaning of this acronym MIDI and what does it use for in finite state machine applications. (2 marks)
- 2a) What does the remaining six 4-bit combination of BCD code represent? (2marks)
- 2bi) Explain the term Mealy Machines. (3marks)
- 2bii) Explain the term octal number system. (2marks)
- 2c) Define BCD code. (3 marks)
- 2d) State five (5) application of multiplexers. (5marks)
- 3a) List and explain the types of sequential logic circuit. (4marks)