



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Plot 91, Cadastral Zone,
Nnamdi Azikiwe Expressway, Jabi, Abuja

**FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2021 EXAMINATIONS**

COURSE CODE: CIT 411

COURSE TITLE: Microcomputers and Microprocessors

CREDIT UNITS: 2

TIME ALLOWED: 2 HOURS

Instructions: Answer Question 1 and any other three (3)

Q1a. Describe Microprocessor as Very Large Scale Integration

(2

Marks)

- b. Briefly explain the history of microprocessor (6 Marks)
- c. Explain Microprocessor interfacing technique (6 Marks)
- d. What are the characteristics of application areas of Microprocessor? (5 Marks)
- e. How does Interrupt work? (4 Marks)
- f. Describe the keyboard input device (2 Marks)

Q2 a. Discuss what happen when an interrupt usually occurs and ends? (9 Marks)

b. Differentiate between memory and control units of microprocessors (6 Marks)

Q3 a. Demonstrate how information exchange operations of microprocessor work? (7 Marks)

b. Briefly discuss the 8051 Multiply/Divide arithmetic operation (8 Marks)

Q4 a. Explain the concept of instruction set (5 Marks)

b. Differentiate between immediate addressing and direct addressing (10 Marks)

Q5 a. Explain Stack Pointer (4 Marks)

b. With the aid of a diagram, discuss von Neumann Architecture (8 Marks)

c. Describe the benefits of Direct Memory Access (3 Marks)