



CRAWFORD UNIVERSITY FAITH CITY, IGBESA
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER AND MATHEMATICAL SCIENCES
HARMATTAN SEMESTER EXAMINATION **SESSION: 2022/23**

COURSE CODE: ICT 425

UNITS: 3

COURSE TITLE: MICROCOMPUTER AND MICROPROCESSOR THEORY

TIME: 2.5HRS

INSTRUCTION: ANSWER FOUR (4) QUESTIONS ONLY

1. (a) Describe Microprocessor and discuss its operation techniques (5mks)
(b) Explain Harvard microprocessor architecture (Note diagram required) (4mks)
(c) Explain any six applications of 16bit, 32bit and 64bit microprocessors. (6mks)
2. (a) Highlight live configuration of 8085 microprocessor (5mks)
(b) Explain the with the aid of a diagram the general architecture of a microprocessor (6mks)
(c) Explain the Super Harvard of a processor (4mks)
3. (a) Describe microcontroller and enumerate its evolutionary steps (4mks)
(b) In a tabular form present the comparative salient features of 8052, 8052, 8031 and 8032 microcontroller (6mks)
(c) Explain any six applications of microcontroller (5mks)
4. (a) Explain the major components of a microcomputer (6mks)
(b) Describe any six features that digital signal processing optimizes (4mks)
(c) In a tabular form presents the comparative salient feature of PIC17C43, PIC17C44 and PIC17C752 on any three headings of your choice (5mks)
5. (a) Draw the 8085 40 pins microprocessor and label it (5mks)
(b) Explain the following terms: (i) Address Bus (ii) Data Bus (iii) Control Bus (6mks)
(c) Explain the two state of 8086 pipelining (4mks)
6. (a) Describe Digital Signal Processor (DSP) hardware and list any five characteristics of it. (5mks)
(b) With the aid of a diagram, show the architecture of a digital signal processor (4mks)
(c) Outline four (4) features of a digital signal processor. (3mks)