



FOUNTAIN UNIVERSITY, OSOGBO.  
(UNIVERSITY OF NASRU-LLAHI-IL-FATHI SOCIETY OF NIGERIA)  
DEPARTMENT OF MATHEMATICAL AND COMPUTER SCIENCE  
SECOND SEMESTER EXAMINATION 2019/2020 SESSION

COURSE TITLE: FOUNDATION OF SEQUENTIAL PROGRAMMING

COURSE CODE: CPS 208

UNIT: 2UNITS

DURATION: 2HRS

Instruction: Attempt Question 1 and any other two (2) questions

QUESTION 1

- a) Discuss three (3) mode of execution in high Level programming. [5 Marks]
- b) Briefly explain the three categories of statements in assembly language. [6 Marks]
- c) Explain the term identifiers in an assembly language programming. [5 Marks]
- d) What are constant? Give two examples each of
  - i Integer constant
  - ii. Character and String constant [5 Marks]
- e) Write an Assembly language program to find the Sum of all numbers between 1 to 10 starting from the rear and divide by 5. It then stores the result in AX. [6 Marks]
- f) What is the function of LOAD and STORE mnemonic? [3 Marks]

QUESTION 2

- (a) Explain with the aid of appropriate diagram, the basic component of a Computer Architecture. [10 Marks]
- (b) Write instructions to evaluate the arithmetic expression  $a + (b - c)$  leaving the result in ax using
  - (i) 1 register,
  - (ii) 2 registers,
  - (iii) 3 registers [10 marks]

QUESTION 3

- (a) Explain how processors perform its function or execute instructions. [6 Marks]
- (b) In a tabular form, list four 16bits and 32bits registers with their functions. [8 Marks]
- (c) Write an assembly language program adds the hexadecimal constant values **60000h** and **80000h** together and subtract **20000h** from it using register EAX. Give the output of EAX. [6 Marks]

QUESTION 4

- (a)What do you understand by Assembler directives? [5 Marks]
- (b) Write the function of the following assembler directives;
  - i. .ORIG,
  - ii. .FILL,
  - iii. .BLKW,
  - iv. .STRINGZ, and
  - v. .END. [3 marks each]

-----END-----