



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2023_1 POP EXAMINATION.

COURSE CODE: CIT736
COURSE TITLE: COMPUTER PROGRAMMING
CREDIT UNIT: 2
TIME ALLOWED: 2HRS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO (2) QUESTIONS

- 1a.** Write a short note on Machine Language (5marks)
1b. Write a short note on Symbolic Language (5marks)
1c. List and explain the main properties of a good computer program (15marks)
1d. Describe “10 FORMAT (H1, 5F6.3)” from the line statement bellow (5marks)
- 2a.** Write a short note on High Level Language (5marks)
2b. Write a short note on array (5marks)
2c. State the formats for a 2 dimensional and multidimensional array (5marks)
2d. Find the value of g if $x=4$, $y=3$ and $z=2$ in $g = 2y+4x - (xy+4z+4) / xyz$ in the given Arithmetic expression (5marks)
- 3a.** Differentiate between subroutines and functions in FORTRAN (3marks)
3b. Write a short note on similarity between subroutines and functions in FORTRAN (7marks)
3c. Define the operation of the Standard Functions on the given parameter(x) (10marks)
- i. ABS(x) -
 - ii. COS(x) -
 - iii. EXP(x) -
 - iv. LN(x) -
 - v. ROUND(x) -
 - vi. SIN(x) -
 - vii. SQRT(x) -
 - viii. SQR(x) -
 - ix. EOLN -
 - x. EOF -
- 4a.** Write a FORTRAN Program to compute and output the average of five numbers (10marks)
4b. Write the meaning for the following field descriptors that are used along with the FORMAT statements in FORTRAN (10marks)
- I -
 - F -
 - E -
 - G -
 - A -

X -
H -
/ -
T -

5a. List and briefly discuss the different types of data types with examples used in Pascal programming language (10marks)

5b Use an Algorithm to implement a FORTRAN Program to compute and output the product of any ten numbers (5 marks)

5c. Use a flowchart to implement a FORTRAN Program to compute and output the product of any ten numbers (5marks)