



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF COMPUTER SCIENCE**

**SEPTEMBER, 2020\_1 EXAMINATIONS**

**COURSE CODE : CIT 736**  
**COURSE TITLE : COMPUTER PROGRAMMING**  
**CREDIT UNIT : 2**  
**TIME ALLOWED: 2 HOURS**  
**INSTRUCTION : ANSWER QUESTIONS 1(ONE) AND ANY OTHER THREE (3)**

- 1a) Given a three-dimensional array A(X,Y,Z). Write a two line FORTRAN 90/95 code that
- i) Determine the maximum value less than 5000 in this array.  
(6 marks)
  - ii) Computes the average value greater than 1000 in an array.  
(6marks)
- 1(b) As a computer programmer, describe the steps you would adopt in dealing with errors emanating from program compilation and execution  
(5 marks)
- c.) Enumerate the four compilers that are used to compile and execute a FORTRAN 90/95 programs. (4 marks)
- 1d.) Write down any four (4) standard Identifier in Pascal (4 marks)
2. (a) In a tabular form and with appropriate examples differentiate between programming languages and command languages? (6 marks)
- (b) Analyze the different forms (data types) that values of variables assume in a program (6 marks)
- c.) Describe the process you would adopt to desk-check the program you have  
(3 marks)
- 3a) Using suitable diagram, illustrate the process of language translation. (8 marks)
- 3b.) Analyze the effect of the following FORTRAN statements:
- i. OPEN (UNIT = 6, FILE = 'great.dat', STATUS ='OLD', ACTION ='READ')
  - ii. OPEN (UNIT = 8, STATUS ='SCRATCH', IOSTAT ='ierror')
  - iii. 20 FORMAT (8F6.3)
- (7 marks)

4. a.) Given a typical program, what criteria would you use to assess the quality of the program? (**9 marks**)  
b) Write out the ten (10) steps to be followed when coding, compiling and executing a Fortran 90/95 program using MS-DEV (**6 marks**)
  
- 5.a.) Write a program in FORTRAN to find the total and product of three numbers "T, F, V" (**4½ marks**)  
b.) Using a given set of values (T=5, F=15, V=4) Desk-check the source code using the format (**2½ marks**)  
c) Characterize eight standard input and output routines and extensions supported by PASCAL (**8 marks**)