



**NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION**

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CIT736
COURSE TITLE: Computer Programming

TIME: 2 HOURS

Instruction: Attempt any four (4) questions

Question 1

Write short notes on the following

- a) Machine Language (6 marks)
- b) Symbolic languages (6 marks)
- c) High Languages(5.5 marks)

Question 2

Explain in writing the following terms;

- a) Conversion Error (3.5 marks)
- b) Syntax Error (3.5 marks)
- c) Round-off Error (3.5 marks)
- d) Run-time Error (3.5 marks)
- e) Logical Error (3.5 marks)
- f)

Question 3

- a) Enumerate five properties of a good Program. (5 marks)
- b) Itemize the generic format/form of the main unit of a Program. (7.5 marks)
- c) What is the difference between a FORTRAN function and a FORTRAN subroutine? (5marks)

d)

Question 4

- a. Draw the flowchart for a program that reads 3 integers and prints out their sum, product and average (7 marks)
- b. Write a Pascal program that calculates and displays the squares of all numbers between 1 and 1000 as well as the sum and average of these squares. (8.5 marks)
- c. Briefly explain the logic behind desk checking (2 marks)

Question 5

Discuss in writing the following terms;

- a) ARRAYS? (7.5 marks)
- b) Static Size Arrays (5 marks)
- c) Dynamic Arrays (5 marks)

Question 6

Study the program below;

- a) Explain each line of code. (6.5 marks)
- b) What does the program do? (5 marks)

```
PROGRAM print_random
  IMPLICIT none
  REAL :: r
  INTEGER :: i
  CALL RANDOM_SEED
  DO i=1,5
    CALL RANDOM_NUMBER(r)
    WRITE (6,'(f9.7)') r
  END DO
END PROGRAM print_random
```

- c) State and explain 3 methods/ways to step through code during debugging (6 marks)