EDO UNIVERSITY, IYAMHO, EDO STATE
FACULTY OF SCIENCE
DEPARTMENT OF ICT/MATHEMATICS.
Second Semester Examination, 2016/17 Session

Course Title: Structural Programming Using FORTRAN. **Course Code:** CMP 121
Time allowed: 3 Hours **Instruction**: Answer Any Five Questions, they carry equal marks

1a. What does the following expressions mean in FORTRAN (i) x **= 2** (ii) z **= x + y**(2 marks)

1b. With very simple expression illustrate three (3) ways of using the **print** statement in FORTRAN (6 marks)

1c. What is the expression for performing exponentiation in FORTRAN, e.g. show this expression in FORTRAN X^5 (4 marks)

2. Consider the following simple program in FORTRAN

1. *Program calculate*
2. *Implicit none*
3. *! a simple calculator*
4. *Real :: x,y,z,answer*
5. *x = 5*
6. *y = 2.5*
7. *z = 3.5*
8. *Answer = x+y/z*
9. *Print*, 'result is', answer*
10. *End program calculate*

Explain the meaning of lines 1, 2,3and 4 (14 marks)

3. Write a FORTRAN program to simulate a simple calculator, your program should present users with four options 1-4 (1 =addition, 2=subtraction, 3= multiplication, 4=division). Using the **if** statement, the program should request users to enter two variables, followed by one of the above options to perform to arithmetic operation associated with the option.(14 marks)

4. Write a FORTRAN program find the volume of a cylinder (The formula for the area of a cylinder is : $V = \pi r^2 h$) (14 marks)

5. Write a FORTRAN program to implement an array of hundred students, the program should read and store their scores and output the average score in the class. 14 marks)

6. Write a program, which asks the user student number and print the faculty name of the student attending using first two digits of the number as follows; (14 marks)

(01) Computer Science(02) Biochemistry, (03) Microbiology,(04) Chemistry, (05) Physics,
(06) Mathematics
The output of your program should be read:
Please enter your department code:
05
Your department is:Physics

7.Write a program to calculate cumulative sums of the odd integers from 1 through 100.(14 marks)