



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE & TECHNOLOGY
JANUARY/FEBRUARY 2013 EXAMINATION

Course Code: CIT 732 **Time:** 2½ hrs
Course Title: Programming in PASCAL **Marks:** 70
Course Credit Unit: 3
Instruction: Answer any five (5) questions. Each question carries 14 marks

- 1a. Discuss control structures in Pascal and explain how they are achieved in Pascal Program. (10 marks)
- b. Define Syntax and semantic errors with examples (4 marks)
- 2a. Write a simple Pascal program to find the area of a circle declaring π as a constant and identify the Header and statements in the program. And draw the syntax diagram of a complete Pascal program (4 marks)
- b. List five (5) examples under each of the following categories (10 marks)
 - (i) Reserved words
 - (ii) standard identifiers
 - (iii) standard procedures
 - (iv) standard functions
- 3a. Differentiate between Formal parameters and actual parameters. (2 marks)
- b. Briefly explain the following Pascal statements/functions with possible examples
(i) Read (ii) Readln (iii) write (iv) writeln (v) eof (vi) eof (12 marks)
- 4a. Describe the structure of a Pascal program and discuss each element in the Pascal program structure. (8½ marks)
- b. Is the following Pascal program correct ? Yes or No if “yes” write out what the output of the program will be if executed on a computer, if “No” rewrite the correct version of the program (5½ marks)
Program Payroll (input, output)
Var gross, tax, net : real;
Const rate:=0.14;
Begin
 Read(gross);
 Tax = rate*gross
 Netpay:=gross-tax;
 Write(tax,net)
End.
- 5a. Briefly discuss what is meant by structured programming (4 marks)
- b. Discuss the following structured type data with examples
(i) Array (ii) Records (iii) Files (iv) Syntax diagram (10 marks)
- 6a. Write briefly on the following and use simple example to illustrate.
(i) While-Do (ii) Repeat-Until (iii) If-Then-Else (11 marks)
- b. Draw a Pascal syntax diagram for the Pascal program structure (3 marks)

- 7a. List and explain with the aid of well annotated diagrams the four stages that are necessary for a Pascal program to be executed by a computer. (6 marks)**
- b. List the Pascal operators in their natural order of precedence (highest to lowest) (8 marks)**