LANDMARK UNIVERSITY, OMU-ARAN

COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL AND INFORMATION ENGINEERING
B. ENG ELECTRICAL AND ELECTRONICS ENGINEERING
2021/2022 ALPHA SEMESTER EXAMINATIONS

COURSE CODE:	GEC 215	COURSE TITLE:	APPLIED COMPUTER PROGRAMMING
COURSE UNIT:	2	TIME:	2 HOURS
INSTRUCTION(S):	ANSWER QUESTION ONE AND ANY TWO (2) QUESTIONS		

Question One (30 Marks)

(a) Define the following terms:
   i. Pseudocode
   ii. Variable
   iii. Algorithm

(b) Procedure (4 marks)

(c) Mention two needs for software life cycle model (2 marks)

(d) Mention the two types of operators and give two examples each (4 marks)

(e) Explain the five stages involved in the software life cycle model (10 marks)

(f) Design an algorithm and the corresponding flowchart for adding the following number: 26, 49, 85, 578, 7286, 2, -2 (10 marks)

A B C D E F G

Question Two (20 Marks)

(a) Differentiate the problem and problem solution in programming design (4 marks)

(b) Briefly give a detailed explanation of evolutionary model using any developed APP you know. (6 marks)

(c) Write an algorithm to determine the result of the equation: $f(x) = \sum_{x,x\geq 0}^{-x,x<0}$ (10 marks)

Question Three (20 Marks)

(a) Differentiate between operation and operands using a simple illustration (5 marks)

(b) Explain the term "QBASIC" (3 marks)

(c) Write an algorithm to find the largest value of any three numbers (12 marks)

Question Four (20 Marks)

(a) Mention two advantages and two disadvantages of spiral model (4 marks)

(b) Explain the four quadrants of spiral model (8 marks)

(c) Design an algorithm and the corresponding flowchart for adding the test scores as given below: 26, 49, 98, 87, 62, 75. (8 marks)

Question Five (20 Marks)

(a) With aid of an appropriate diagram, explain prototyping model of software life cycle model (12 marks)

(b) Mention four flowcharting symbols and their functions (8 marks)