NATIONAL OPEN UNIVERSITY OF NIGERIA

PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE

2022_2 EXAMINATION

COURSE CODE: **CIT 333**
COURSE TITLE: **Software Engineering**
CREDIT UNIT: **2**
TIME ALLOWED: **2HRS**
INSTRUCTION: **ANSWER QUESTION ONE (1) AND ANY OTHER THREE**

Question 1

1(a)

(i) Define programming software and application software ***(3 marks)***
(ii) Give five (5) instances of (i) above ***(10 marks)***

1(b)

(i) Give a brief summary of the goals of software engineering ***(8 marks)***
(ii) Briefly highlight the origin of software engineering ***(3 marks)***
(iii) Evaluate four (4) areas where evolution of software engineering is notable ***(6 marks)***

Question 2

(i) What are the principles for using Modular Design? ***(8 marks)***
(ii) State five (5) major tasks involve in Implementation of a system ***(5 marks)***
(iii) According to the Capability Maturity Model (CMMI-SW v1.1), define verification ***(2 marks)***
(iv) Software Crisis manifest itself in various forms, state five (5) of these forms ***(5 marks)***

Question 3

(a) State the concept of Software Engineering ***(2 marks)***
(b) Highlight and evaluate five (5) sub-disciplines in Software Engineering ***(12 marks)***

(c) Sounds engineering principles must be applied throughout development, from the design phase to final fielding of the system in order to attain a software system that satisfies the major goals. Give a concise explanation of these principles ***(6 marks)***

Question 4

(a) What are CASE Tools and CASE Environment? ***(2 marks)***
(b) Briefly evaluate four (4) classification of CASE environment ***(12 marks)***
(c) A Test Engineer uses software testing methods to describe his opinion when designing test cases. Briefly analyse two (2) of these testing methods ***(6 marks)***

Question 5

(a) There are phase-specific Software Quality Assurance activities that should be conducted during the Software Acquisition Life Cycle, evaluate five (5) out of the eight phases ***(11½ marks)***

(b)
(i) Name four (4) types of white box testing we have in software testing methods ***(4 marks)***
(ii) Program testing and fault detection can be aided significantly by testing tools and debuggers. Mention three of these tools (***4½ marks)***