FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY (SICT) DEPARTMENT OF COMPUTER SCIENCE 2019/2020 HARMATTAN SEMESTER EXAMINATIONS

CSC 501: SOFTWARE ENGINEERING

Time: 21/2 hours

Date: February 10, 2021

Instruction: Answer ANY FOUR (4) questions.

QUESTION 1

- (a) Software Engineering adopts most of the engineering principles. Justify. (10 marks)
- (b) Explain five (5) general rules for DFD development. (5 marks)

QUESTION 2

SICT wants to develop an online course registration system. Do the following:

- (a) Specify the characteristics of good software (system). (3marks)
- (b) Develop System Requirement Specification. (3marks)
- (c) Design DFD at level 0. (5marks)
- (d) Identify various probable Software modules and their operations. (4 marks)

QUESTION 3

- (a) Differentiate between verification and validation in software development. (5 marks)
- (b) Testing is a critical phase in the software development life cycle, which ensures that the final product delivered is of very high quality. Explain (10marks)

QUESTION 4

- (a) Explain the role of an Integrated Development Environment (IDE) in software development. (10marks)
- (b) Give five (5) examples of IDEs. (5marks)

QUESTION 5

- (a) Explain your understanding of Software Engineering Standards. (5marks)
- (b) Is there any need for Standards in software Engineering? Justify your answer. (5marks)
- (c) Discuss any type of Software Engineering standard of your choice, and give four (4) examples of it. (5marks)

OUESTION 6

- (a) As a software Engineer, you have two specific jobs. Explain. (5marks)
- (b) Identify and explain the major constraints to Software Development. (10marks).