

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**JABI FCT ABUJA**

**FACULTY OF SCIENCE**

**November 2018 EXAMINATION**

**CIT831: Software Engineering Methodologies**

**CREDIT UNITS: 3**

**TIME ALLOWED: 2 ½ Hours**

**INSTRUCTION(S): Attempt Question 1 and any other four (4) questions**

**Question 1**

1. Explain any five validation checks necessary for a well-designed software In order to ensure that system designed meets the needs of customers **(5 marks)**
2. List and explain any 3 requirements validation techniques (**3 marks)**
3. List the steps in developing a specification **(3 marks)**
4. What are viewpoints? List any three types of viewpoints **(8 marks)**
5. Justify the use of data flow diagrams in system development **(3 marks)**

**Question 2**

List and explain in chronological order the activities that occur during the waterfall life cycle paradigm **(12 marks)**

**Question 3**

1. What are the phases involved in software design? **(8 marks)**
2. State the advantages of formal specification? **(4 marks)**

**Question 4**

1. Outline the key factors to be considered in developing fault-free software? **(6 marks)**
2. What are the advantages of soft-ware re-use? **(6 marks)**

**Question 5**

1. List and discuss the stages in software testing **(6 marks)**
2. Explain the different model types in software development **(6 marks)**

**Question 6**

1. Briefly discuss any 5 qualities of dependable software system **(5 marks)**
2. What are the basic requirements for software re-use? **(6 marks)**
3. List any 2 areas of application of the evolutionary development (**2 marks)**