NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MARCH/APRIL 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

Course Code: CIT703

Course Title: Information Technology and Software Development

Time Allowed: 3 Hours

Course Unit: 3

Instruction: Answer Any Five Questions

   1a   Explain what is meant by DFD.
                     4marks
   b.   List five advantages of DFDs.
                     5 marks
   c.   State the five basic constructs used by DFDs.
                     5 marks

2.   Explain the following terms:
      i)   Requirement Analysis and Specification
      ii)   Functional Specification
      iii)   Software Integration and Testing
      iv)   Software Maintenance
                   3 ½ marks each

3a.   Explain what is meant by software process.
      5 marks

   b.   State the purpose of software process.
                   4 marks
   c.   List five goals of software process.
      5 marks

4a.   Describe what you understand by Extreme Programming (XP).   5 marks

      b.   List two of the drawbacks in XP.
      4 marks

      c.   Describe the essence of communication in XP
      5 marks

5a.   What is a transition network?   4 marks

    b.   State two uses of a transition network.
             4 marks

   c. Transition networks are closely related to finite state machines(FSM), and to *d*ata flow diagrams(DFD), but they are augmented with the other capabilities. Give three of such capabilities.

                                        6 marks

6a.   Explain what is meant by Entity-Relationship Modeling.
                           4 marks

 b..   Distinguish between the following terms:

                 i   Entity and entity set

                 ii   Relationship and relationship set
                       5 marks

 c.   State the constraints to which the contents of a database must conform as defined by the E-R scheme. 5 MARKS

      7a.   What do Software Project Planning involves?
         7 marks

       b.   Explain what is meant by the Use Case of software or systems.