MARCH 2018 EXAMINATION

COURSE CODE: CIT432
COURSE CREDIT: 3
COURSE TITLE: SOFTWARE ENGINEERING I
TIME ALLOWED: 3 HOURS
INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER FOUR (4)
                QUESTIONS

QUESTION

1a. Assuming you were recently enlisted on industrial training in a software development

   firm. If your first task is to manage the software project of the firm, give an overview of

   the tasks involved in software project management.   (4 marks)

1b. Enumerate all the processes involved in software project management.   (8 Marks)

1c. With the aid of a well-labelled diagram, illustrate how the fishbone diagram deals

   with cause and effect.   (10 Marks)

                                                          [Total = 22 marks]

2. Write short notes on the following:

   a. System software

   b. The Computer BIOS and Device Firmware   **) 3 marks each**

   c. The Utility software   .

   d. Operating system

                                                          [Total = 12 marks]

3a. Software engineering is a critical course for computer scientists.

3a.i. Declare if the above statement is True or False?   (2 marks)

3a.ii. Write down four reasons to support the response provided in question 2a.i (8 marks)

3b. Give a brief explanation of the concept of software generations.   (2 marks)

                                                          [Total = 12 marks]

4. Give a brief account of the following software life cycle models:

    a. Spiral model

    b. Extreme programming   **) 3 marks each**

    c. Object-oriented model   .

    d. Incremental model

[Total = 12 marks]

5a.Give a concise description of the waterfall Model.   (2 marks)

5b.Enumerate the phases involved in a typical waterfall model.   (8 marks)

5c.State any two (2) advantages of the waterfall model.   (2 marks)

[Total = 12 marks]

6a.Explain the concept of Formal Methods.   .   (2 marks)

6b. As with programming language semantics, styles of formal methods may be roughly

    classified into three (3) styles. Mention and discuss each.   .   (9 marks)

6a. State one (1) limitation of formal methods.   . (1 marks)

[Total = 12 marks]