



**NATIONAL OPEN UNIVERSITY OF NIGERIA,
PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA
FACULTY OF SCIENCES
2021_2 EXAMINATION 45678**

COURSE CODE: CIT851

COURSE CREDIT: 3

COURSE TITLE: ADVANCED SYSTEMS ANALYSIS AND DESIGN

TIME ALLOWED: 2¹/₂ HOURS

INSTRUCTION: ANSWER QUESTION ONE (1) AND ANY OTHER FOUR (4) QUESTIONS

QUESTIONS

- 1a. Mention and briefly explain any four (4) duties of a Systems Analyst. **(6 marks)**
- 1b. Write short notes on the following SDLC phases.
- i. Project identification and selection
 - ii. Project initiation and planning
 - iii. Physical design
 - iv. Implementation **(6 marks)**
- 1c. Identify and describe the steps you would take to design a database for **Jekins** firm **(3 marks)**
- 1d. Evaluate the concept of Decision Tree, within the context of Systems Analysis and Design. **(2 marks)**
- 1e. Distinguish between Front-End and Back-End CASE tools, giving examples of each of them **(3 marks)**
- 1f. Write a short note on Referential Integrity **(2 marks)**

[22 marks total]

- 2a.** In simple terms, analyse the Divide-and-Conquer approach of system development. **(3 marks)**
- 2b.** Write short notes on the following Information System development approaches;
- i. Prototyping
 - ii. Joint Application Development
 - iii. Participatory Design

v

(6 marks)

- 2c. Evaluate the concept of "forward engineering" in system development . **(3 marks)**



3a. Assuming you were recruited as a System Developer, state and elucidate on the first six (6) steps of the System Development Life Cycle you should adopt in executing your task. **(9 marks)**

3b. Outline and briefly analyse the three (3) classes of information. **(3 marks)**

4a. Elucidate on any three (3) ways of installing a new system **(3 marks)**

4b. List the characteristics of a System Requirement Specification **(3 marks)**

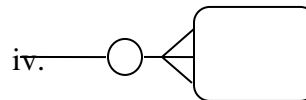
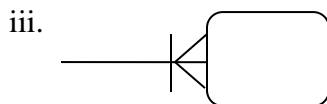
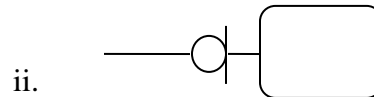
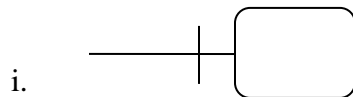
4c. Outline and describe any six (6) guidelines for User Interface design **(6 marks)**

5a. Briefly describe and show the notation of any four (4) components of a Data Flow Diagram. **(6 marks)**

5b. State two (2) rules for drawing each of the four (4) components listed in a above. **(4 marks)**

5c. What is Process modeling? **(2 marks)**

6a. What type of cardinality is given in each of the following graphic notations? **(4 marks)**



6c. Define CASE tools? **(3 marks)**

6d. Classify the following according to the type of output

- i. reports to managers
- ii. invoices
- iii. account statements
- iv. reports to fellow staff

(2 marks)