



**NATIONAL OPEN UNIVERSITY OF NIGERIA,  
PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA  
FACULTY OF SCIENCES  
DEPARTMENT OF COMPUTER SCIENCE  
2020\_1 EXAMINATION**

**COURSE CODE: CIT851**

**COURSE CREDIT: 3 UNITS**

**COURSE TITLE: ADVANCED SYSTEMS ANALYSIS AND DESIGN**

**TIME ALLOWED: 2<sup>1</sup>/<sub>2</sub> HOURS**

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

**Question One**

- 1a. Outline the guidelines for user interface design. (3mks)
- 1b. Briefly describe the following types of CASE tools:
- i. Planning and management tools (2mks)
  - ii. Analysis tools (2mks)
  - iii. Information integrator (2mks)
  - iv. Database design toolset. (2mks)
- 1c. Write short notes on the following concepts:
- i. Systems Analysis (2mks)
  - ii. Systems Analyst (2mks)
  - iii. Systems Design (2mks)
- 1d. Outline the participants in a Joint Application Development and also explain their respective roles. (5mks)
- Total of 22mks**

**Question Two**

- 2a. Define the following terms:
- i. Outsourcing (1mk)
  - ii. Consulting (1mk)
- 2b. What are the expectations of a Systems Analyst in the development of a new information system. (4mks)
- 2c.
- i. List the four skills a Systems Analyst must possess. (2mks)
  - ii. Define the term System Development Life Cycle. (1mk)
  - iii. List the phases of System Development Life Cycle. (1mk)
- 2d. Distinguish briefly between Logical Design and Physical Design. (2mks)

**Question Three**

- 3a. What is cost benefit analysis? (4mks)
- 3b. In cost benefit analysis, discuss briefly the following:
- i. Cost of Human Resources (1m)
  - ii. Cost of Infrastructure (1mk)
- 3c. Economic feasibility has two components: costs and benefits, briefly discuss both of them. (4mks)
- 3d. What is Joint Application Development (JAD)? (2mks)

#### **Question Four**

4a. Write briefly on the steps to follow during physical design as relates to systems analysis and design. (3mks)

4b. With respect to E-R diagram, write briefly on the following:

- i. Entity (1mk)
- ii. Attribute (1 ½ mks)
- iii. Relationships (1mk)
- iv. Cardinality (1mk)

4c.

- i. What are the five criteria for form design? (2 1/2mks)
- ii. Explain any two of the criteria in 4c (i) above. (2mks)

#### **Question Five**

5a. what are the restrictions for naming tables and fields in database. (1 1/2 mks)

5b.

- i. What is CASE tool? (1mk)
- ii. What are the five generic classifications of CASE tool? (2 ½ mks)
- iii. Discuss any two of the five generic classifications of CASE tool. (3mks)

5c. Describe briefly the following types of system testing:

- i. Recovery testing (2mks)
- ii. Security testing (2mks)

#### **Question Six**

6a.

- i. Describe a user manual. (2mks)
- ii. Outline any five components of a user manual. (2 ½ mks)

6b. Briefly explain the factors which affect the ease of software maintenance. (4 ½ mks)

6c. Write briefly on the following:

- i. Organizational Issues (1mk)
- ii. Process Issues (1mk)
- iii. Technical Issues (1mk)