



**NATIONAL OPEN UNIVERSITY OF NIGERIA,
PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA
FACULTY OF SCIENCES
2021_1 EXAMINATION**

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 explain the two (2) main components of System Development **(4 marks)**
- 1b. Briefly analyse real time systems **(3 marks)**
- 1c. Assuming you were recruited to work in an IT firm. Your first task is to convince the Management of the firm to employ distributed systems in their service delivery. Mention and specify the four (4) main merits of distributed systems **(4 marks)**
- 1d. List and describe any six Graphical User Interface controls for inputs **(6 marks)**
- 1e. CASE tools are essential tools for Systems Analysis and Design. Outline and briefly describe any five types of **these tools (5 marks)**

2a. You have been nominated by Company *ABC* to lead the fact finding activity for a bespoke software project to be developed by your company for Company *XYZ*. You are required to collect the following information as shown in i, ii, iii, iv, v and vi. Which fact finding technique will be most suitable for each of the following assignments? **(6 marks)**

- i. Collecting information from the customer service staff while they are at work.
- ii. Collecting information from the CEO of *XYZ* Company.
- iii. Collecting information from Five Hundred staff members of *XYZ* Company.
- vi. To confirm by observation, the authenticity of information collected from another source.
 - v. Collecting information from older staff in the five departments of company *XYZ* in such a way that the problem will be discussed, where they are expected to provide answers to your questions.
 - vi. Collecting very important information from the Chief Executive Officer of the company who happens to be a very busy fellow.

2b. Briefly analyse Soft Real Time Systems **(2 marks)**

2c. Within the context of systems analysis and design, give a concise description of the the following principles of design **(4 marks)**



- i. Coupling
- ii. Span of control
- iii. Cohesion
- iv. Modularity and partitioning

3a. Using a commercial Bank branch as a case study, state the key roles of the following types of participants in a Joint Application Development session. Give an example of each type of participant. **(7.5 marks)**

- i. Manager
- ii. Users
- iii. System Analyst
- iv. Sponsor
- v. Scribe

3b. **Outline** and describe the three types of maintenance activities. **(4.5 marks)**

4a. Write a short note on "Documentation". **(4 marks)**

4b. Describe the Process and steps of documentation **(6 marks)**

4c. Analyse the term 'System Requirement Specification' **(2 marks)**

5a. As a System Analyst in *ABC Company*, you have been designated to collect facts for a new software to be developed for client *XYZ*. Describe the fact finding technique you would use if you decide to collect information by observing the staff of *XYZ* during work hours? **(4 mark)**

5b. List two advantages and disadvantages of the fact finding technique in "a" above. **(4 marks)**

5c. Give any **4** reasons to justify the need for **documentation** in system development. **(4 marks)**

6a. Mention and describe any 6 tools for describing design **(6 marks)**

6b. What do you understand by Technical Feasibility? **(2 marks)**

6c. Write a short note on Structure Analysis **(4 marks)**