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UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
THIRD YEAR SEMESTER ONE EXAMINATIONS

FOR THE DEGREE OF BACHELORS OF
(COMMERCE)

COURSE CODE: BIT 311

COURSE TITLE: SYSTEMS ANALYSIS AND DESIGN

DATE: 06/12/2023

TIME: 2.00P.M - 4.00P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

QUESTION ONE- COMPULSORY (30 MARKS)

- a. Describe functional characteristics of Decision Support Systems (DSS). [5 marks]
- b. Define the following terms as used in system analysis and development. [5 marks]
- i. System
 - ii. Entropy
 - iii. Differentiation
 - iv. Deployment
 - v. Equifinality
- c. With the help of a diagram, describe the key elements of the same. [10 marks]
- d. Define the term project and provide examples to illustrate its characteristics. [5 marks]
- e. Define and explain the concept of the system life cycle. [5 marks]

QUESTION TWO (20 MARKS)

- a. Describe how the CMM can motivate organizations to improve their system development processes. [4 marks]
- b. Explain the concepts of boundary and environment in the context of a system. How do these concepts contribute to defining the scope and interactions of a system? [8 marks]
- c. Identify and explain the four basic functions of project management. [8 marks]

QUESTION THREE (20 MARKS)

- a. Define front-office and back-office information systems. [2 marks]
- b. Providing relevant examples, identify and describe three different types of systems. [6 marks]
- c. Explain three essential competencies that project managers should possess. [6 marks]
- d. Explain the PIECES framework and its significance in categorizing problems, opportunities, and directives. [6 marks]

QUESTION FOUR (20 MARKS)

- a. Discuss any four primary components of an information system. **[8 marks]**
- b. Discuss three common causes of failure in information systems and technology projects. **[6 marks]**
- c. Define problems, opportunities, and directives in the context of systems development. **[6 marks]**

QUESTION FIVE (20 MARKS)

- a. Discuss how information systems architecture influences decision-making during systems development. **[6 marks]**
- b. "It is important to identify system architecture". Discuss. **[5 marks]**
- c. Briefly explain any potential disadvantages of prototyping in information systems development. **[5 marks]**
- d. Differentiate between black box and white box testing methods. **[4 marks]**