



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Plot 91, Cadastral Zone Nnamdi Azikiwe Express Way, Jabi- Abuja

FACULTY OF EDUCATION
2023 2 EXAMINATIONS_

PROGRAMME: M. ED

**COURSE TITLE: RESPONSIBILITY AND ACCOUNTABILITY IN EDUCATIONAL
MANAGEMENT**

COURSE CODE: EDA855

CREDIT UNITS: 2

TIME: 2 ½ Hrs.

INSTRUCTION: ANSWER QUESTION NO. ONE AND ANY OTHER TWO QUESTIONS

Question 1

1a. Explain four (4) factors of responsibility that can hinder implementation of education programmes (10mks)

1b. Discuss the nature and scope of accountability in education (10mks)

1c. Discuss five (5) qualities of a Good Organizational Chart (10mks)

Total= 30mks

Question 2

2a. Identify and discuss four (4) characteristics of an administrative structure (16mks).

2b. Explain two (2) roles of the school administrator in school accounting (4mks)

Question 3

3b. Explain in details four (4) major types of accountability in education (12mks)

3b. Discuss in details four (4) Basic Patterns of Organizational structures (8mks)

Question 4

4a. Discuss four (4) Importance of Budgetary Practices in School Management (8mks)

4b. i) Describe the concept of financial education, and ii) Identify six (6) sources of funding education (12mks).



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)**

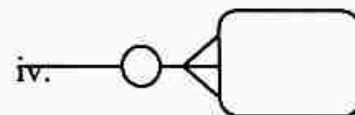
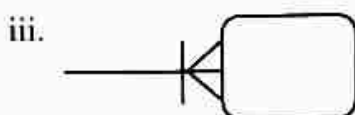
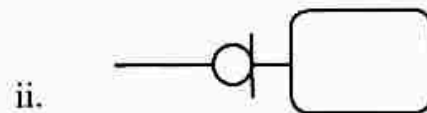
4c. Outline and describe any six (6) guidelines for User Interface design **(6 marks)**

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)

3. Separate the intervals in which the function f defined on \mathbb{R} by

$$f(x) = 2x^3 - 15x^2 + 36x + 5 \text{ for all } x \in \mathbb{R} \text{ is increasing in every interval} \quad (4 \text{ marks})$$

b. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ be a continuous function defined on \mathbb{R} . Show that

f is differentiable on \mathbb{R} . (4 marks)

d. Show that the function f defined on \mathbb{R} by $f(x) = x^3 - 3x^2 + 3x - 5$ for all $x \in \mathbb{R}$ is increasing in every interval (4 marks)

4. Discuss the Rolle's Theorem for the function defined by

i. $f(x) = x^3 - 6x^2 + 11x - 6$ for all $x \in [1,3]$ (6 marks)

ii. $f(x) = (x-a)^m(x-b)^n$ for all $x \in [a,b]$ where m and n are positive integers (6 marks)

5. Let f be the function defined on $[-1,2]$ as $f(x) = |x|$. Find the derivative of f (6 marks)

b. Find whether or not the hypothesis and conclusion of Lagrange's mean value theorem

for the functions defined as $f(x) = \frac{1}{x}$ for all $x \in [1,4]$ (6 marks)

6. Use Cauchy's mean value theorem to the functions f and g defined as $f(x) = x^2$, $g(x) = x$

for all $x \in [a,b]$. (4 marks)

b. Prove that $\frac{\sin \alpha - \sin \beta}{\cos \beta - \cos \alpha} = \cot \theta$. where $0 < \alpha < \theta < \beta < \frac{\pi}{2}$.

(i) a function f said to be non decreasing on an interval I ? (4 marks)

(ii) a function f said to be monotonic on I ? (4 marks)

4) Generate the corresponding target machine code for the expression in 4(a). **(5 marks)**

(c) Complete the table by writing out the corresponding semantic rules for each of the production rule.

$$E \rightarrow E + T$$

$$E \rightarrow T$$

$$T \rightarrow T * F$$

$$T \rightarrow F$$

$$F \rightarrow (F)$$

$$F \rightarrow \text{num} \quad \text{(6 marks)}$$

5(a) What are the drawbacks of syntax analyzers that makes the semantic analysis phase very important? **(3 marks)**

(b) Differentiate between the Deterministic and Non-deterministic Finite automata **(8 marks)**

(c) How is a Finite automaton different from the Transition tree **(4 marks)**

6(a) Write down what is involved when considering code generation task. **(3 marks)**

(b) Differentiate between the Kleene star and Kleene plus closure **(4 marks)**

(c) Define Dead Code Elimination and give example with explanation **(8 marks)**