



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE AND FOOD SYSTEMS DEVELOPMENT

DEPARTMENT OF INFORMATION SYSTEMS

EXAMINATION PAPER

COURSE CODE : DIS115
COURSE TITLE : COMPUTER ORGANISATION AND ARCHITECTURE
SPECIAL REQUIREMENTS : None
DURATION : 3 Hours
LEVEL : 1.1
DATE : 2026

INSTRUCTIONS TO CANDIDATES:

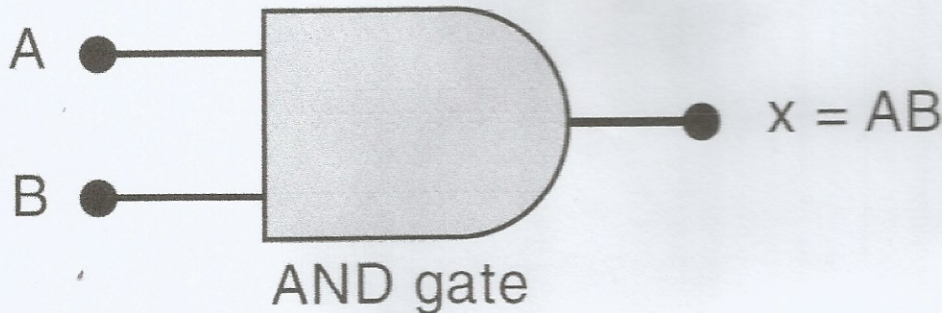
1. You may use a calculator
2. Answer any **FOUR (4)** questions.
3. Begin each question on a new page.
4. The number of marks for each question or part question is shown in brackets

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QUESTION 1

a) State and describe the main components of the Central Processing Unit (CPU) [15]

i. Represent the following gate on a truth table [10]



QUESTION 2

a) Discuss 3 pipelining hazards [15]

b) Explain the concept of pipe lining and how it improves performance. [10]

QUESTION 3

a) With the aid of an example, compare hexadecimal systems and octal representation systems [10].

b) Discuss RISC architecture and CISC architecture. [15]

QUESTION 4

a) Discuss the memory hierarchy of a computer system. [10]

b) Explain with the aid of a diagram, the bus structure of a computer. [15]

QUESTION 5

a) Explain the meaning of the following types of addressing

i. Direct,

ii. Indexed.

Give a reason why each may need to be used. [10]

b) Explain the fetch and the execute cycle in detail, giving an example. [15]

*****END OF PAPER*****