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| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 1** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | Data Representation in a computer | DEFINITION & INTRODUCTION | By the end of the lesson, the learner should be able to* Define data
* Define information
* Classify computers according to functionality with illustration
 | * Questions and answers
* Discussions in groups
* brainstorming
 | * computer keyboard
* electronic circuits
* Charts
* Photographs
* Pictures from books
 | * Longhorn Computer studies Bk 3 page 1-3
* Computer studies by Onunga and Shah page 1
 |  |
|  | **2** |  |  DATA REPRESENTATION | By the end of the lesson, the learner should be able to* Represent data in digital computers
1. On electronic circuits
2. On magnetic media
3. Optical media
 | * Discussions in groups
* Exercises by the teacher
 | * Charts
* Floppy diskettes
* Compact disk
* Electronic circuit
 | * Longhorn Computer studies Bk 3 page 23
* Computer studies by Onunga and Shah page 1
 |  |
|  | **3-4** | Data Representation | DATA REPRESENTATION | By the end of the lesson, the learner should be able to* Give reasons why binary system is used in computers
* Define bits, bytes, nibble and word
 | * Discussions
* Question and answer
 | * charts
 | * Longhorn Computer studies Bk 3 page 24
* Computer studies by Onunga and Shah page 1
 |  |
| **2** | **1** | Data Representation | NUMBER SYSTEMS | By the end of the lesson, the learner should be able to* Define decimal number
* Represent data in decimal number system
* Represent data in actual number system
 | * Group discussions
* Exercises given and marked by the teacher
 | * Charts
* Simple calculations
 | * Longhorn Computer studies Bk 3 page 25
* Computer studies by Onunga and Shah page 6
 |  |
|  | **2** |  | NUMBER SYSTEM | By the end of the lesson, the learner should be able to* Represent data in actual number system
* Represent data in Hexadecimal number system
 | * Group discussions
* Questions and answering
* exercises
 | * charts
* simple calculations
* Computer
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 7-8
 |  |
|  | **3/4** | **QUIZ AND PROBLEM SOLVING****Teacher administers small assignment and revises for better retention** |  |  |  |
| **3** | **1** | Data representation | FURTHER CONVERSION OF NUMBER SYSTEMS | By the end of the lesson, the learner should be able to* Convert binary number to decimal number system
* Convert decimal numbers to binary numbers
 | * Questions and answers
* Discussions in groups
 | * Charts
* Simple calculations
* Questions papers
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 8
 |  |
|  | **2** | “ | “ | By the end of the lesson,, the learner should be able to* Convert binary fraction to decimal number system
* Convert a decimal fraction to binary
 | * Discussions
* Questions and answers
 | * Charts
* Simple calculations
* Questions papers
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page
 |  |
|  | **3-4** | **PROBLEM SOLVING AND QUIZ****Teacher administers questions and answer session for better retention** |  |  |
| **4** | **1** | DATA REPRESENTATION | Converting octal numbers to decimal and binary numbers | By the end of the lesson, the learner should be able to* Convert octal numbers to decimal numbers
* Convert octal numbers to binary numbers
 | * Discussion
* Question and answer
 | * Chart
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 12
 |  |
|  | **2** | DATA REPRESENTATIONS | Converting hexadecimal numbers to binary number | By the end of the lesson, the learner should be able to* Convert hexadecimal to decimal numbers
* Convert hexadecimal numbers to binary numbers
 | * Discussions
* Question and answer
 | * Charts
* Simple calculations
* Computers
* Scientific calculators
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 13-15
 |  |
| **3-4** | **QUIZ AND PROBLEM SOLVING** **Can be inform of a question/answer session for retention** |
| **5** | **1** | DATA REPRESENTATIONS | Symbolic Representation using coding schemes | By the end of the lesson, the learner should be able to* Explain the binary coded decimal code as a representation Scheme (BCD)
* Explain the extended Binary coded decimal interchange code (EBCDIC)
 | * Discussions
* Question and answer
 | * Charts
* Scientific Calculators
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 22-27
 |  |
|  | **2** | DATA REPRESENTATION | Symbolic Representation using coding schemes | By the end of the lesson, the learner should be able to* Explain the American standard code for information interchange code (ASCII) as a representation scheme
 | * Discussion in groups
 | * Charts
* Scientific and simple calculator
* computer
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 22-27
 |  |
|  | **3-4** | **QUIZ FOR TETENTION****Administer a small exam** |
| **6** | **1** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Represent signed binary numbers using prefixing an extra sign bit to a binary number and ones complement
 | * Teacher demonstrates
* Group discussions
* Questions and answering
 | * Simple calculators
* PDA’s
* charts
 | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
|  | **2** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Represent signed binary numbers using two’s complement
 | * Teachers demonstrates
* Question and answer
* Group discussions
 | “ | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
|  | **3-4** |  | BINARY ADDITION | By the end of the lesson, the learner should be able to* Perform seven possible binary additions
* Outline the procedure for binary additions
 | * Demonstration by the teacher
* Teacher gives and marks questions
* Group discussions
 | * Charts
 | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
| **7** | **1** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Perform direct subtraction
* Perform subtraction using ones complement
 | * Discussions
* Demonstration by teacher
* Question and answer
 | * Charts
* calculator
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 28
 |  |
|  | **2** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to * Perform subtraction using twos complement
 | * Discussions
* Demonstration by teacher
* Question and answer
 | * Charts
* calculator
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 28
 |  |
|  | **3-4** | **QUIZ AND PROBLEM SOLVING****Teacher evaluates by giving questions to ascertain whether objectives are achieved** |  |  |
| **8** | **1** | Data Processing | DEFINITION AND INTRODUCTION | By the end of the lesson, the learner should be able to* Define data information and data processing
* Describe the data processing cycle
* Give methods of data collection
 | * Group discussions
* Question and answering
* brainstorming
 | * charts
* computer
 | * Longhorn Computer studies Bk 3 page 32
* Computer studies by Onunga and Shah page 32-35
 |  |
|  | **2** | Data Processing | DATA PROCESSING CYCLE | By the end of the lesson, the learner should be able to* List stages for data processing
* Describe the listed data processing cycle stage
 | * Group discussions
* Question and answering
* Brainstorming
 | * charts
* computer
 | * Longhorn Computer studies Bk 3 page 32
* Computer studies by Onunga and Shah page 32-35
 |  |
|  | **3-4** | Data Processing | DATA PROCESSING CYCLE | By the end of the lesson, the learner should be able to* Give the errors that influence the accuracy of data and information output
* Explain the errors in data processing
 | * Discussion in groups
* Question and answer
* Assignments marked by the teacher
 | * Flash cards
* Charts
* computer
 | * Longhorn Computer studies Bk 3 page 35
* Computer studies by Onunga and Shah page 33
 |  |
| **9** | **1** | Data processing | DATA INTEGRITY | By the end of the lesson, the learner should be able to* Define data integrity
* Give the measurements of data integrity
* Accuracy
* Timelines
* Relevance
* Describe the listed data integrity measurements
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* Simple information system
 | * Computer studies by Onunga and Shah page 41
 |  |
|  | **2** | Data processing | DATA PROCESSING METHODS | By the end of this lesson, the learner should be able to* State the ways of minimizing threat to data integrity
* List and describe the methods of data processing
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* Simple information system
 | * Computer studies by Onunga and Shah page 41
 |  |
|  | **3-4** | Data processing | COMPUTER FILES | By the end of the lesson, the learner should be able to* Define a computer file
* Give the types of computer files
* State the advantages of computerized filing
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Charts
 | * Computer studies by Onunga and Shah page 49
 |  |
| **10** | **1** | Data processing | ELEMENTS OF COMPUTER FILE | By the end of the lesson, the learner should be able to* List the elements of a computer file
* Describe the listed elements of a computer file
 | * Discussion in groups
* Question and answer
* demonstration
 | * database
* chart with relation database
 | * Longhorn Computer studies Bk 3 page 40
 |  |
|  | **2** | Data processing | CLASSIFICATION OF COMPUTER FILES | By the end of the lesson, the learner should be able to* Classify computer files
* Differentiate between logical and physical computer files
 | * Illustration by the teacher
 | * Floppy diskette
* Compact disc
* Computer video tape
 | * Longhorn Computer studies Bk 3 page 41
* Computer studies by Onunga and Shah page 50
 |  |
|  | **3-4** | Data processing | COMPUTER PROCESSING FILES | By the end of the lesson, the learner should be able to* Give the types of processing files
* Describe the listed types of processing files
* Master files
* Transaction file
* Reference files
* Backup files
* Sort files
 | * Discussions
* Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 41
 |  |
| **11** | **1** | Data processing | FILE ORGANIZATION METHODS | By the end of the lesson, the learner should be able to* Define file organization
* List the methods of organizing files on a storage media
* Describe the listed methods of file organization
 | * Question and answer
* Brainstorming
* Discussions in groups
 | * Floppy diskettes
* Compact disk
* Video tapes
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 42
* Computer studies by Onunga and Shah page 55
 |  |
|  | **2** | Data processing | ELECTRONIC DATA PROCESSING | By the end of the lesson, the learner should be able to* Give the data processing modes
* Describe
1. Online processing
2. Real-time processing
3. Distributed processing
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 43-45
* Computer studies by Onunga and Shah page 61
 |  |
|  | **3-4** | Data processing | ELECTRONIC DATA PROCESSING MODES | Bythe end of the lesson, the learner should be able to* Describe
1. Time- sharing
2. Batch processing
3. Multi processing
4. Multi-tasking
5. Interactive processing
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Charts
* Flash cards
 | * Computer studies by Onunga and Shah page 612-69
 |  |
|  | **12-13** | **END OF TERM EXAMS AND CLOSING OF SCHOOL** |
|  |
| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 2** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | DEFINITION OF PROGRAMMING | By the end of this lesson, the learner should be able to* Define programming
* List the terms used in programming
* Describe the listed terms
* Differentiate between source program and object program
 | * Question and answer
* Discussion in groups
* Illustration by the teacher
 | * Charts
* Books
* Journals
* Software
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 47
* Computer studies by Onunga and Shah page 72
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | LEVELS OF PROGRAMMING LANGUAGE | By the end of the lesson, the learner should be able to* Classify the programming languages
* Describe the low level programming language
 | * Demonstration
* Q/A
 | * Flash cards
* Charts
* books
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 49-51
* Computer studies by Onunga and Shah page 73
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | LEVELS OF PROGRAMMING LANGUAGE | By the end of the lesson, the learner should be able to* Describe the high level language
* State the advantages and disadvantages of low-level and high level languages
 | * Q/A
* Discussion
 | * Flash cards
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 59
* Computer studies by Onunga and Shah page 74-75
 |  |
| **2** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to* List the stages in program development
* Describe
1. program recognition
2. program definition
 | * Question and answer
* Discussion in groups
 | * Flash cards
* charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 60-66
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to * Describe
1. Program design
2. Program coding
 | * Demonstration
* Illustrations by teacher
 | * Computer software
 | * Computer studies by Onunga and Shah page 83
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to* Describe
1. program testing
2. Program implementation and maintenance
 | * Discussions in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* charts
 | * Computer studies by Onunga and Shah page 85
 |  |
| **3** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DOCUMENTATION | By the end of the lesson, the learner should be able to* Define the term program documentation
* State the forms of documentation
* Describe the target groups for documentation
 | * Discussions in groups
* Illustrations by the teacher
* Question and answer
 | * Chalkboard
* charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 67
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | DEVELOPMENT OF ALGORITHMS  | By the end of the lesson, the learner should be able to* Define algorithm
* List tools used in algorithm
* Distinguish between pseudo code and flow charts
 | * Discussion in groups
* Question and answer
* Illustration by the teacher
 | * Chalkboard
* Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 68
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | DESIGNING MORE COMPLEX ALGORITHMS | By the end of the lesson, the learner should be able to* Give comparison between a pseudo code and a flow chart
* Design complex algorithms
 | * Question and answer
* Demonstration by the teacher
* Group discussions
 | * Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 68
 |  |
| **4** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM CONTROL STRUCTURES | By the end of the lesson, the learner should be able to* Define program control structures
* List three control structures
* Describe sequence as a control structure
 | * Discussions in groups
 | * Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 72-78
* Computer studies by Onunga and Shah page 93
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM CONTROL STRUCTURES | By the end of the lesson, the learner should be able to* Describe the use of iteration (looping) as a control structure
 | * Discussion in groups
 | * Charts
* chalkboard
 | * Computer studies by Onunga and Shah page 94
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | Program control structures | By the end of the lesson, the learner should be able to* Describe selection as a control structure
* Design a more complex algorithm
 | * Illustration by the teacher
* Discussion in groups
* Question and answer
 | * Chart
* chalkboard
 | * Computer studies by Onunga and Shah page 94
 |  |
| **5** | **1** | **PROBLEM SOLVING** |  |  |  |
|  | **2** | SYSTEM DEVELOPMENT | Definition | By the end of the lesson, the learner should be able to* Define the term system
* Describe a system list
* List the characteristics of a system
 | * Discussion
* Question and answer
 | * Charts
* Chalkboard
* Journals
* Computer
* books
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 91-95
* Computer studies by Onunga and Shah page 168
 |  |
|  | **3-4** | SYSTEM DEVELOPMENT | Information system | By the end of the lesson, the learner should be able to* Describe the listed characteristics of a system
* Define information system
 | * Discussion in groups
* Illustration by the teacher
 | * Charts
* Flash cards
* Chalkboard
* Computer
* Books
 | * Computer studies by Onunga and Shah page 170
 |  |
| **6** | **1** | SYSTEM DEVELOPMENT | Information system | By the end of the lesson, the learner should be able to* State the main purpose of an information system
* Give reasons why information system is developed
* State the role of information system analyst
 | * Discussion
* Illustrations by the teacher
* Question and answer
 | * Charts
* Flash cards
* Computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 95
 |  |
|  | **2** | SYSTEM DEVELOPMENT | Theories of system development | By the end of the lesson, the learner should be able to* Describe tradition approach
* Describe rapid application development
 | * Discussions in groups
* Illustration by the teacher
 | * Chalk board
* Flash cards
* Charts
 | * Computer studies by Onunga and Shah page 170
 |  |
|  | **3-4** |  | Theories of system development | By the end of the lesson, the learner should be able to* Describe the structured approach
* Give examples of ways of information of gathering
 | * Discussions in groups
* Illustration by the teacher
 | * Chalk board
* Flash cards
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 97
 |  |
| **7** | **1** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* State and define all the stages of system development
 | * Illustration by the teacher
* Question and answer
 | * Chalk board
* charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 97
 |  |
|  | **2** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* Give the methods used in information gathering
* Describe interviews studying of available documents as used in information gathering
 | * Demonstration
* Discussion
 | * Chalk board
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 100-104
* Computer studies by Onunga and Shah page 175
 |  |
|  | **3-4** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* Prepare a questionnaire
* Prepare and present a fait finding report
* Describe how automated methods are used
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Sample questionnaire
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 104
 |  |
| **8** | **1** | SYSTEM DEVELOPMENT | Requirements specification | By the end of the lesson, the learner should be able to* Describe output specification
* Describe input specification
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 105
 |  |
|  |  | SYSTEM DEVELOPMENT | Requirements specification | By the end of the lesson, the learner should be able to* Describe file/data stores
* Describe hardware and software requirements
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 109
 |  |
|  |  | SYSTEM DEVELOPMENT | System design | By the end of the lesson, the learner should be able to* Define system flowchart
* Identify common flowchart symbols
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 109
 |  |
| **9** | **1** | SYSTEM DEVELOPMENT | Designing a system flowchart | By the end of the lesson, the learner should be able to* Identify guidelines fro designing system flowcharts
* Write a system flowchart using a case study
 | * Discussions
* Question and answer
* Illustration by the teacher
 | * Charts
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 110
 |  |
|  | **2** |  | Designing a system flowchart | By the end of the lesson, the learner should be able to* Write a simple book borrowing module flowchart
* Write cleaners information system flowchart
 | * Illustration by the teacher
* Discussion in groups
 | * Charts
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 110
 |  |
|  | **3-4** |  | Designing a system flowchart | By the end of the lesson, the learner should be able to* Write a sample library books management system flowchart
* Use data flow diagrams
 | * Question and answer
* Discussion in groups
 | * Chalkboard
* chart
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 110
 |  |
| **10** | **1** | SYSTEM DEVELOPMENT | System Construction | By the end of the lesson, the learner should be able to* Define the term system construction
* Identify number of technique that can be used to construct a designed system
 | * Question and answer
* Discussion in groups
 | * Charts
* Chalkboard
* Information system (Cleaner)
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 110
 |  |
|  | **2** |  | System Implementation | By the end of the lesson, the learner should be able to* Define system implementation and file conversion
* Describe factors considered during file conversion
 | * Illustrations by the teacher
* discussion
 | * Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 116
 |  |
|  | **3-4** |  | Change over strategies | By the end of the lesson, the learner should be able to* Define the term changeover
* List the system change over strategies
* Describe three listed changeover strategies
 | * Discussions
* Question and answer
 | * Flash card
* Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 116
 |  |
| **11** | **1** |  | System maintenance and revision | By the end of the lesson, the learner should be able to* Define system maintenance
* Define system review
* Describe security control measures
 | * Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 116
 |  |
|  | **2** |  | System documentation | By the end of the lesson, the learner should be able to* Write a report on case study
 | * Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 117
 |  |
|  | **3-4** |  | System documentation | By the end of the lesson, the learner should be able to* Develop a system using a case study
 | * Illustration by the teacher
* Discussions
 | * A chart
* Computer
* Printer
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 117
 |  |
| **12** | **1** |  | System documentation | By the end of the lesson, the learner should be able to* Identify comprehensive system documentation details
* Write a report on the case study
 | * Discussions
* Question and answer
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 118-120
 |  |
|  | **2,3& 4** |  | **PRACTICALS** |  |  |
| **END OF TERM EXAMINATION** |
|  |
| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 3** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | PROGRAMMING WITH VISUAL AIDS | Definition  | By the end of the lesson, the learner should be able to* Define the term visual basic
* Start up visual basic
* Identify features of visual basic
 | * Demonstration by the teacher
* Discussions
* Question and answer
 | * Chalkboard
* Computer
* chart
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 122
 |  |
|  | **2** | PROGRAMMING | Visual basic toolbox | Bythe end of the lesson, the learner should be able to* Identify parts of the visual basic tool box
* Describe parts of the visual basic toolbox
 | * Demonstration
* Question and answer
 | * Chalkboard
* Photograph
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 123
 |  |
|  | **3-4** |  | Saving a visual project | By the end of the lesson, the learner should be able to* Save a visual basic project
* Open an existing visual basic project
 | * Demonstration by the teacher
* Question and answer
* Practical
 | * Computer
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 123
 |  |
| **2** | **1** |  | Visual basic fundamental concepts | By the end of the lesson, the learner should be able to* Identify the visual basic fundamental concepts
* Describe the listed fundamental concepts
 | * Discussions
* Questions and answer
 | * Chalkboard
* Charts
* Computer
* Simple calculators
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 136
 |  |
|  | **2** |  | Mathematical operators | By the end of the lesson, the learner should be able to* Identify mathematical operators
* Describe the listed mathematical operators
 | * Discussions
* Question and answers
 | * Chalkboard
* Charts
* Computer
* Simple calculators
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 137
 |  |
|  | **3-4** |  | Numeric strings and values | By the end of the lesson, the learner should be able to* convert a numeric string to a value
* Convert a value to a string
 | * Illustrations by the teacher
* Discussions
* Question and answer
 | * Charts
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 137
 |  |
| **3** | **1** |  | Project developments | By the end of the lesson, the learner should be able to* Create a program used to calculate the area of a rectangle
 | * Discussion in groups
* Illustrations by the teacher
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 145
 |  |
|  | **2** |  | Project developments | By the end of the lesson, the learner should be able to* Write a program used to find roots of a quadratic expression
 | * Discussion in groups
* Illustrations by the teacher
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 147
 |  |
|  | **3-4** |  | Case constructLooping construct | By the end of this lesson, the learner should be able to* Use case statement that can display the name of a weekday when its number is provided
* Write a program using do-loop
* Write a program using FOR-NEXT LOOP
 | * Demonstration by the teacher
* Discussion
* Question and answer
 | * Chart
* Chalkboard
* Computer
* printer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 147
 |  |
| **4** | **1** |  | Working with graphical objects | By the end of the lesson, the learner should be able to* Insert a picture using picture box
* Define module and procedure
* Declare general subroutines
 | * Demonstration
* Question and answer
* discussion
 | * chart
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 150
 |  |
|  | **2** |  | Working with graphical objects | By the end of the lesson, the learner should be able to* Write a general subroutine that solves y= xn given that the value of n are integers
 | * Demonstration
* Question and answer
* practical
 | * computer
* printer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 151
 |  |
|  | **3-4** |  | Creating means and dialog boxes | By the end of the lesson, the learner should be able to* Create a dropdown menu
* Create a message and dialog boxes
 | * Demonstration
* Discussions
* Question and answers
 | * computer
* printer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 151
 |  |
|  | **1** |  | List boxes and control boxes | By the end of the lesson, the learner should be able to* Define list box and combo box
* Create a list box and a combo box
* Create a project that loads a list of items
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 161
 |  |
| **5** | **2** |  | Visual basic data structures | By the end of the lesson, the learner should be able to* Define the term arrays
* Declare an array
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 163
 |  |
|  | **3-4** |  | Visual basic data structures | By the end of the lesson, the learner should be able to* Declare two dimensional arrays
* Write array of records
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 161
 |  |
| **6** | **1** |  | Data files | By the end of the lesson, the learner should be able to* Define a file
* Identify types of files recognized by visual basic
* Link visual basic to data base
 | * Demonstration
* Practical
* Discussion
 | * Chart
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 187-189
 |  |
|  | **2** | INTRODUCTION TO DATA BASE DESIGN | Definition  | By the end of the lesson, the learner should be able to* Define database
* Identify relationships in database
 | * Demonstration
* Practical
* Discussion
 | * Chart
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 187-189
 |  |
|  | **3-4** |  | Defining attributes | By the end of the lesson, the learner should be able to* Define a foreign key
* Distinguish between an entity and attributes
* Create one to many relationships
 | * Question and answer
* Practical
* Demonstration
* discussions
 | * computer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 203-204
 |  |
| **7** | **1** |  | File table structure | By the end of the lesson, the learner should be able to* Create a table
* Set primary key and foreign key
 | * Demonstration
* Discussion
* Practical
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 217
 |  |
|  | **2** |  | Enforcing Referential integrity  | By the end of the lesson, the learner should be able to* Enforce referential integrity between tables
* Normalize table
 | * Demonstration
* Discussion
* Practical
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 217
 |  |
|  | **3-4** |  | Forms and commands | By the end of the lesson, the learner should be able to* Create a form/ interface
* Call for commands
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 21o
 |  |
| **8** | **1** |  | Creating reports | By the end of the lesson, the learner should be able to* Describe the tools used to automate database
* Create a switchboard
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Chart
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 211
 |  |
|  | **2** |  | Automating database | By the end of the lesson, the learner should be able to* Describe the tools used to automate database
* Create a switchboard
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Chart
* computer
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 212
 |  |
|  | **3-4** |  | Automating database | By the end of the lesson, the learner should be able to* Create macros
* Develop a system using a case study
 | * Demonstration
* Assignment
 | * Computer
* Chart
 | * Longhorn Computer studies by Mburu and ChemwaBk 3 page 212
 |  |
| **REVISION AND END TERM EXAMS** |
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