# WAEC Computer Syllabus

SSCE & GCE (all countries)

# **STUDY TIP**

Study only the topics in this syllabus but ALSO with past questions to know the most common topic(s), number of questions asked per topic and how to correctly answer each question in any topic. To download our free WAEC Computer past questions PDF now...

Click on the link below.

www.examministry.com

### **PREAMBLE**

This examination syllabus is developed from the National Curriculum for Senior Secondary School Computer Studies. It highlights the scope of the course for Computer Studies examinations at this level. Its structuring revolves around conceptual approach. The major thematic areas considered in the entire syllabus include:

- 1. Computer fundamentals and evolution
- 2. Computer hardware
- 3. Computer Software
- 4. Basic Computer Operations
- 5. Computer Applications
- 6. Managing Computer files
- 7. Developing Problem-solving skills
- 8. Information and Communication Technology
- 9. Computer ethics and human issues

Each thematic area forms a concept which is further divided into sub-concepts. This examination syllabus is not a substitute for the teaching syllabus. Therefore, it does not replace the curriculum.

### **OBJECTIVES**

The objectives of the syllabus are to test candidates' understanding, knowledge and acquisition of

- 1. basic concepts of computer and its operations;
- 2. manipulative, computational and problem-solving skills;
- 3. application of software packages;
- 4. operation of computer related simple devices;
- 5. on-line skills and their applications;
- 6. safe attitudes and good practices on effective use of computer;
- 7. potential for higher studies in Computer related areas.

### **EXAMINATION SCHEME**

There will be three papers, Papers 1, 2 and 3, all of which must be taken. Papers 1 and 2 shall be a composite paper to be taken at one sitting.

- **Paper 1:** will consist of 50 multiple-choice objective questions all which are to be answered in 1 hour for 25 marks.
- **Paper 2:** will consist of five essay questions. Candidates will be required to answer any three in 1 hour for 30 marks.
- Paper 3: will test actual practical skills of school candidates and knowledge of practical work for private candidates. It will consist of three questions to be answered in 2 hours for 45 marks.

## **DETAILED SYLLABUS**

TOPIC	CONTENT	NOTE
COMPUTER	(i) Features,	Trend of
EVOLUTION	components and uses	developme
(a) Computing	of early computing	nt in
Devices I (Pre-	devices:	computing
computing age- 19 <sup>th</sup>	- Abacus;	devices
century)	- Slide Rule ;	from one
,,	- Napier's bone;	to the
	- Pascal's	other.
	calculator;	
	- Leibnitz	
	multiplier;	
	- Jacquad loom;	
	- Charles	
	Babbage's	
	analytical engine;	
	- Hollerith Census	
	Machine;	
	- Burrough's	
	Machine.	
	(ii)Contribution of each	
	of the founder of	
	these devices to	
	modern computers.	

(b) Computing  Devices II (20 <sup>th</sup> century to date)	Features, components and uses of: -ENIAC -EDVAC -UNIVAC 1 -Desktop Personal Computers -Laptop and	Sizes and basic component s should be considered in a comparativ e form.
	Notebook computers -Palmtop.	
FUNDAMENTALS OF COMPUTING	- Definition of a Computer;	
(a) Overview of Computing System	<ul> <li>Two main constituents         of a Computer         <ul> <li>Computer</li> <li>hardware;</li> <li>Computer</li> <li>software</li> </ul> </li> <li>Classification and         <ul> <li>examples of</li> </ul> </li> </ul>	Differences between hardware and software should be treated.

	hardware and
	software.
	- Functional parts
	of a
	computer
	Characteristics of
	Computers
	- Electronic in
	nature;
	- Accuracy;
	- Speed;
	- Interactive etc.
(b) Data and	d - Definition and
Information	examples of
	data and
	information;
	- Differences
	between data and
	information.

COMPUTER		
ETHICS AND		
HUMAN ISSUES		
Security and Ethics	1. Sources of security breaches:  - Virus, worms and Trojan horses;  - Poor implementation of network;  - Poor implementation or lack of ICT policies;  - Carelessness-giving out personal and vital information on the net without careful screening.  - Hackers, spammers etc.	Definition and effects of viruses and worms should be treated  Definition of hackers and spammers should be treated
	2. Preventive measures	

- Use of antivirus software e.g. Norton, McAfee, Explanatio Avast, etc of n Use of firewall; firewall is Exercising care in required giving out vital and personal information Definition - Encryption of - Proper Network encryption Implementation should be and Polies treated - Using sites with web certificates - Exercising care in opening e-mail attachments 3. Legal Issues -Copyright (software copyright) -ownership right to

	-text;	
	-images;	
	-audio;	
	-video	
	-Privacy of audio	
	and video	
	software	
	-Cyber crimes	
	-identify theft;	
	-internet fraud	
	-Hacking	
COMPUTER		
	Definition and	
HARDWARE		
(a) Input devices	examples of input devices	
	The use of	
	keyboard, mouse,	
	scanner, joystick,	
	light pen, etc	
	Classification of	
	keys on the	
	keyboard into	
	Function, Numeric,	
	Alphabetic	

	-Cursor keys
	-Features, function
	and operation of
	the mouse
	-Differences in
	keyboard, mouse,
	light pen and
	scanner
Output Devices	-Definition and
	examples
	-Output devices:
	monitor, printer,
	speaker, plotter – Examples
	Type, features and and types
	uses. of printers
	-Differences and
	between input and monitors
	output devices should be
	-Similarities and treated.
	differences in
	inkjet, laser and
	line printer
Central Processing	Components of Combination
Unit	C.P.U.: Arithmetic n of the
	and logic unit, CPU and

	control unit	Memory
	Function of ALU and	Unit as
	Control Unit	system
		unit should
		be
		mentioned.
Memory Unit	Types of Memory	
	Unit: Primaryand	Physical
	Secondary memory	identificatio
	-Components of	n of RAM
	Primary memory	and ROM
	unit: ROM and RAM	devices
	Differences and	required.
	uses of ROM and	
	RAM	
	Examples of	
	Seconadry memory	
	devices: floppy	
	disk, hard disk,	
	compact disk(CD),	
	flash disk, digital-	
	video-disk(DVD)	
	Unit of storage in	
	memory devices:	
	bits, nibble, bytes,	Simple

	kilobytes,	calculation
	megabytes,	involving
	gigabytes,	the
	terabytes	conversion
	Interconversion of	from a unit
	unit of storage.	to another
	-Comparative study	Size and
	of auxiliary storage	shape
	devices in respect	variation of
	of their size, speed	floppy,
	and technology	flask/USB
		and
		compact
		disks
		should be
		noted
Logic Circuits	-Definition, types	Logic
	and uses of	equation
	standard logic gate:	for AND,
	AND, NOT, OR	NOT, OR
	Symbols of AND,	gate should
	NOT, OR gates	be treated.
	-Construction of	Uses of
	truth table for	logic gates
	standard logic gates	are

	-Differences	required.
	between AND, NOT,	
	OR gates	
	-NAND and NOR as	
	alternative logic	
	gates should be	
	treated	
	Construction of	
	Truth Table for	
	NAND and NOR	Simple
	Construction of a	definition
	simple comparator	of a
	with -XOR(	comparator
	Exclusive OR)	is required.
	-NOR gate	
COMPUTER		
SOFTWARE	(i) Definition and types	Differences
(a) System Software	of software	between
	- System software	system and
	- Application	application
	software	software is
	(ii) System software	required
	and their	
	examples	

	<ul> <li>Operating</li> <li>System e.g. MS</li> <li>Windows</li> <li>Translator e.g.</li> <li>Compiler</li> </ul>	Operating
	- Tools/ Utility e.g.	
	Anti-virus	phones,
		ipad and
	(iii) Examples of	other
	Operating System	computeriz
	- MS Windows	ed devices
	- Linux	should be
	- UNIX	treated.
	- MS-DOS etc	E.g.
		Android,
	(iv) Examples of	Blackberry,
	Translators	etc.
(b) Operating System	- Assemblers	
	- Compilers	Differences
	- Interpreters	among the
	(v) Examples of	translators
	Utility	should be
	Programs	noted
	- Editor	
	- Anti-virus etc	

	(i) Definition, types, examples and Differences function of between Operating GUI and System Command - Graphic User line Interface(GUI) Operating - GUI (MS Systems Windows, Linux, are etc) required Command line (MS DOS, UNIX, etc)
(c) Application Software	(i) Definition and Differences types of between application user application (ii) Common program Application and Application Packages and application their packages are examples are required processing(MS

	Windows)
	- Spreadsheet(MS
	Excel)
	- Database(MS
	Access)
	- Graphics
	(iii) Packages for
	spreadsheet
	purpose
	- Accounting
	software
	- Payroll program
	- Banking software
	- Education
	management
	software
	- Statistical
	packages
	- Hospital
	management
	software
COMPUTER	
APPLICATION	(i) Definition and
(a) Word	examples of
	word processing

Processing		and	word		
		processor			
		-MS Word			
		-Wordstar			
		-WordPerfe	ct		
	(ii)	Features of	Word		
		Processing			
		programs	in		
		general.			
	(iii)	Application	areas		
		of	Word		
		Processing			
		programs			
		-Office			
		-Publishing			
		-Journalism			
		-Education,	etc.		
	(iv	') Featu	ires of	Definit	ion
	MS			of	each
		Word		operat	ional
	(v)	Steps	in	term	is
		activating	and	require	ed.
		exiting MS	Word		
	(vi)	Basic oper	ations		
		in MS Word			

-Create
- Edit
- Save
-Retrieve
-Print
- Close
(vii) Further
operations
in MS Word
-move
-сору
-cut
-use of
different
Types
and sizes
of fonts
_
formatting
-justifying
-
search/explore
-spell
checking
-file

	merging, etc	
(b) Spreadsheet	(i) Definition and examples of spreadsheet program  -VisiCALC -MS Excel -SuperCALC -Autocad, etc  (ii) Feature of spreadsheet program  (iii)Application areas of Spreadsheet programs: -Accounting -Statistical calculation -Student result, etc  (iv)Features of MS Excel	
	Environment	

-status bar	
-menu bar	
-formula bar,	
etc	
(v)Definition of	
basic	
terms in MS	
Excel	
-worksheet	
-workbook	
-cells	
-cell ranges	Simple
(vi)Data types in	calculations
Excel	with and
-Number	without
-Labels	built-in
-Formula	function
(vii)Basic operation	e.g. sum,
in	average,
Excel	etc
-Data Entry	
-Saving	
-Retrieve	
Сору	
-Move	

	(viii)Arithmetic calculations using formula and built-in function (ix)Additional operation in Excel -Editing -Formatting -Printing -Drawing charts, etc	Pie chart, histogram, bar chart, etc
(c) Database	(i)Definition of	
(c) Database	database and database packages (ii)Examples of database packages -Dbase IV,	

```
-Foxbase
    -MS Access
    -Oracle, etc
(iii)Basic terms in
    Database
    -File
       -Record
       -Field
       -Key
(iv)Types
                  of
database
    organization
    methods
                and
their
    features
    -Hierarchical
    -Network
    -Relational
(v)Features
                  of
database
   format
   -Files
           designed
as
    tables
    -Tables
```

```
comprise
           row and
          columns
         -Row
     containing
          related
          information
     about a record.
            -Column
             containing
             specific
type of
             information
about a field.
     (vi)Steps
                       in
     creating
         database
         -define
                      the
     structure
         -indicate field
          type(numeric,
          character,
     data,
          text, etc)
            -enter data
```

	-	<u> </u>
	-save data	
	(vii)Basic	
	operations on	
	already	
	created database.	
	Database	
	-searching	
	-modifying	
	-sorting	
	-reporting	
	-selecting	
	-inserting,	
	etc	
(d) Graphics	(i)Definition of	
(d) Graphics	Graphics	
	(ii)Examples of	
	Graphics	
	packages	
	-Paint	
	-Harvard graphics	
	-Photoshop	
	-Coreldraw, etc	
	(iii)Features in	
	activating	

	and existing
	Coreldraw
	(iv)Simple design
	using
	Coreldraw
	-Business card
	-School logo
	-National flag
	-Invitation card
	-Certification,
	etc
(e) Presentation	(i)Definition of
package	presentation
	package
	(ii)Examples of
	presentation
	package
	-MS PowerPoint, etc
	(iii)Features of
	PowerPoint
	environment
	(iv)Steps in
	activating
	and exiting
	PowerPoint

	(v)PowerPoint	
	operation	
	-create new	
	presentation	
	-insert pictures,	
	text,	
	graphs	
	-animated contents	
	-add new slide	
	-save presentation	
	-run slide	
	show	
	-print	
	presentation	
	-close	
	presentation	
MANAGING		
COMPUTER FILES	(i)Definition of	
(a) Concept of	some	
Computer Files	terms	
	-computer file	
	-record	
	-field	
	-data item	
	(ii)Types of data	

item -numeric -alphabetic Differences -alphanumeric among the (iii)File structure organizatio n methods organisation (Data itemare recordrequired file—database) (iv)Types of file organization -serial -sequential -index -random (v) Methods of accessing files -serial -sequential -random (vi) File classification -master file -transaction file

-reference file  (vii)Criteria for classifying files: -nature of  content(program and data) File  (b) Handling Computer Files File method using	
classifying files:	
files: -nature of  content(program and data) File  (b) Handling -organisation processing Computer Files  method using	
-nature of  content(program and data)  (b) Handling -organisation processing Computer Files  method using	
content(program and data)  (b) Handling  Computer Files  rontent(program and data) File -organisation processing method using	
and data) File  (b) Handling -organisation processing  Computer Files method using	
and data) File  (b) Handling -organisation processing  Computer Files method using	
(b) Handling -organisation processing  Computer Files method using	
Computer Files method using	
phowers DACIC	
-storage BASIC	
medium programm	İ
ng	S
(i)Basic operation required.	
on	
computer files	
-file	
-delete	
-retrieve	
-insert	
-copy	
-view	
-update	
-open	
-close	

(ii) Effect of file insecurity -data loss -data corruption -data becomes unreliable (iii)Causes of data loss -overwriting inadvertent deletion (iv)Methods of file security of -use backup of -use antivirus -password -proper labelling of storage

	devices,	
	etc	
	(v)Differences	
	between	
	computer files	
	and	
	manual files	
	(vi)Advantages of	
	computer files	
	-more	
	secure	
	-fast to	
	access,etc	
	(vii)Disadvantages	
	of	
	computer files	
	-expensive to	
	set up	
	-irregular supply	
	of electricity	
BASIC COMPUTER		
OPERATIONS	(i) Description and	Difference
	types	between

(a) Booting	of booting cold and
and shutting	process warm
down process	(ii)Types of booting booting
	process should be
	-cold booting treated
	-warm
	booting
	(iii)Steps involved
	in:
	-booting a
	computer;
	-shutting
	down a
	computer
	(iv)Identification of
	features on a
	desktop
(b) Computer	Fetch-
Data	execute
Conversion	cycle is not
	(i)Definition of required
	registers,
	address, bus
	(ii)Types and

functions of registers: MDR, CIR, SCR (iii)Differences between register and main memory (iv)Steps involved in how а computer converts data to required information (Input-Process-Output) (v)Factors affecting speed of data transfer: -bus speed; -bus width.

# INFORMATION 8 COMMUNICATION TECHNOLOGY(ICT )

(a) Communic ation Systems

- (i)What'ICT' acronym stands for.
- (ii) Types of ICT-Broadcasting

\_

Telecommunication

- -Data Network
- -Information

Systems

-Satellite

Communications

-Examples of

Broadcasting

-Radio

broadcasting

-Television

broadcasting

-Satellite

system

-Examples of Telecommunication -Public Switched Telephone Network(PSTN)-Landline -Mobile phone systems -Circuit Switched **Packet** Telephone System(CSPT) -Satellite telephone system -Fixed wireless telephone system -Examples of data networks -Personal Area

	Network(PAN)	
	-Local Area	
	Network(LAN)	
	-Metropolitan	
	Area	
	Network(MAN)	
	-Wide Area	
	Network(WAN)	
	-Internet	
	-Examples of	
	Information	
	Systems	
	-Data	
	Processing	
	System	
	-Global	
	Positioning	
	System(GPS)	
(b) Application	(i)Application Areas	Definition
areas of ICT	of ICT include	and
	the following:	description
	-	of these
	Teleconferencing	terms are

	-Video	required
	conferencing	
	-	
	Telecommuting	
	-	
	Telecomputing	
	-Messaging	
	-Information	
	search, retrieval	
	and archival.	Knowledge
	(ii)ICT based	on the
	gadgets	operations
	and their	on these
	operations	ICT-based
	-Mobile	gadgets is
	phones	required.
	-Computers	
	-Fax machines	
	-Automated	
	Teller	
	Machines(ATM)	
	-Dispensing	
(c)Internet	machines	
	-Point of Sale	

Machines	
- Automated	
Cash	
Register(ACR)	Demonstra
-Radio sets	tion of
-Television	these
sets, etc	terms
(i)Definition of	through
Internet	Internet
and some	access is
Internet terms:	required
-Homepage	
-Browse	
-Browser	
-Chatroom	
-Cybercafe	
-HTTP	
-HTML	
-ISP	Access
-Webpage	Internet
-Website,etc	through
	these
(ii)Types of internet	browsers.
browsers	

	-Internet	
	explorer	
	-Netscape	
	navigator	Application
	-Opera	of the
	-Firefox	features of
	-Cometbird	Internet
	,etc	browser
	(iii)Features c	of window is
	Internet	required
	browsers:	
	-Title bar	
	-Menu bar	Benefits of
	-Tool bar	Internet to
(d) Electronic Mail(e-	-Address	our society
mail)Services	bar,etc	should be
	(iv)Types c	of stressed
	Internet	
	services	
	-Electronic	
	mail (e-	
	mail)	
	-e-mail	
	discussion	
	group	

-Instant messaging -Telnet -Usenet -File Transfer Protocol(FTP) Procedure -Worldwide for sending web(www) and -Chatting, etc receiving of (i)Definition e-mail is electronic required mail (ii)E-mail Services: sending/receiving email -chatting, etc (iii)Steps involved in creating e-mail account (iv)Steps involved in opening mail

	box	
	(v)Features in an e-	
	mail	
	address e.g.	
	fmemail@fmegovng	
	.org	
	(vi)Definition and	
	steps	
	involved in	
	chatting	
(e)Networking	(i)Definition of a	
	Computer	
	Network	
	(ii)Types of	
	Network	
	-PAN	
	-LAN	
	-WAN	
	-MAN	Differences
	-Internet	in the
	(iii) Network	various

	topology	topologies
	-Star	should be
	-Bus	treated
	-Ring	
	(iv)Network devices	
	-Hub	Knowledge
	-Modems	of "Bridge"
	-Switches	as a
(f) Introduction to	-Routers	networking
Worldwide web	-Network	device is
(W.W.W.)	Interface	required.
	Card(NIC)	
	(v)Advantages of	
	Networking	
	(i)What is the	
	`W.W.'	
	acronym stands	
	for	
	(ii)Brief history of	
	W.W.W.	
	(iii)Basic	Nigeria's
	terminologies:	contributio
	-W.W.W.	n to www
	-website	should be
	-webpage	mentioned

-homepage	
-protocol, etc	
(iv)Protocol	
-HTTP	
-HTML	
(v)Uses/benefits of	
www	Use of
(vi)Navigating	HTTP and
through	HTML
websites	should be
www.waeconline.or	mentioned
g	
-	
www.itbeginswithu.	
org	Visits to
-	these
www.servenigeria.c	websites
om	are
-	essential
www.phillipemeagw	
ali.com	
-	
www.jambonline.or	
g	
(vii)Difference	

	between	
	e-mail and	
	website	
	address	
	features:	
	e.g.www.waeconlin	
	e.org and	
	waec@yahoo.com	
	(viii)Software for	
	web	
	development	
	-Frontpage	
	- etc	
(g) Cables and	(i)Types of Network	Identificati
Connectors	Cables and	on of
	Connectors	different
	-Cables: Twisted	Network
	pair,	Cables
	coaxial, fibre optic,	Connectors
	telephone	should be
	-Connectors: RJ45,	treated
	RJ11, T-	
	connectors	
	(ii)Types of Computer	

	Cables	
	and Connector	
	-Cables:Power cables	
	Data cables	
	- Printer	
	Cable,universal serial	
	bus(USB), monitor	
	cable, serial cable	
	-Connectors: Male	
	and	
	female	
DEVELOPING		
PROBLEM-		
SOLVING SKILLS		
(a) Programmi	(i) Programming	
ng	Language:	
Language(PL)	Definition,	
3 3 ( )	examples, levels	
	and features:	
	(ii)Levels and	
	examples of	
	programming	
	language	
	-Machine	

	Language(ML) ,	
	e.g.100011001	
	-Low Level	
	Language(LLL),	
	e.g. Assembly	
	Language	
	-High Level	
	Language(HLL)	
	e.g. BASIC,C++,	
	FORTRAN, etc.	
	(iii)Comparison of	
	ML,	
	LLL, HLL.	
	(iv)Advantages and	
	disadvantages	
	of ML,	
	LLL and HLL.	
(b)High Level	(i) Definition and	Other
Languages	examples	programmi
	(ii)Classification of	ng
	HLL	languages
	as	such as
	-Scientific	Java,
	-Gen-purpose	Python,

	-Business	etc. should
	-AI	be
	-String	mentioned.
	processing	
	language(SPL)	
	(iii)Features of	
	BASIC,	
	C, PASCAL,	
	COBOL -	
	Comparative	
	study	
(c)Algorithm and	(i)Definition of :	
Flowchart	Algorithhm and	
	Flowchart	
	(ii)Functions of	
	Algorithm	
	(iii)Characteristics	
	of	
	Algorithm:	
	-Finite	
	-Effective	
	-Unambiguous	
	(iv)Writing	
	algorithm	
	for:	

rrogramming	рговісті	
Programming	problem	
(d)BASIC	programming	
	diagrams for given	
	flowchart symbol (vii)Flowchart	
	(vi)Use of each	
	decisions, etc	
	- I/O, Process,	
	symbols:	
	(v)Flowchart 	
	numbers, etc	
	first ten odd	
	the	
	-Computing out	
	c) <sup>2</sup> /(d+2)	
	y=a(b-	
	equation:	
	-Evaluation of	
	set of numbers	
	of a given	
	average	
	-Computing	

	should be
	treated
(i)What BASIC	
acronym stands for	
(ii)BASIC	
characteristics	
(iii)Types of data	
-variable	
-	
constant/literal	
-numeric	
-	
string/alphanumeric	
(iv)BASIC	
Statements	
INPUT	
PRINT, LPRINT	
LET	
END	
REM	
READ	Program to
DATA	calculate
(v)Arithmetic	-Area of
operators	triangle
(-,+,*,/)	-Area of a

(vi)Arithmetic	rectangle
Expressions	-Average
(vii)Evaluation of	of 3
Arithmetic	numbers,et
expressions	С
(viii)Simple BASIC	The simple
Programs	BASIC
	program
	developed
	should be
	executable
	on the
(ix)Running Simple	computer.
Programs	
(i)Built-in functions	
in	
BASIC	

-SQR(X)	
-INT(X)	
-SIN(X)	
-ABS(X)	
-RND(X)	
-COS(X)	
-TAN(X)	
-LOG(X)	
-EXP(X)	
(ii)BASIC Notation	
of	Numbers of
$-b\pm\sqrt{b^2-4ac}$	iterations
2a	should not
-(x-y)/(x+y)	exceed
-(a+b) +c/sind	eight (8).
-e <sup>x+y</sup> -	
sin(x+ny), etc	
(iii)BASIC program	
to	
-find the square	
root	
of numbers	
-find square	
root of S,	
round up to an	

integer -find the cosine of known values -find the tangent of given angles. -plot sine wave curve (iv)Additional **BASIC Statements** -DIM Statement -FOR - NEXT statement -WHILE-END statement (v)Defining onedimensional array, using DIM statement. (vi)Operating on Array elements

	Toronto C	
	-Input of array	
	-Output of	
	array	
	-Arithmetic	
	operations on	
	array	
	(vii)Write BASIC	
	program to :	
	-store a vector	
	of 10	
	numbers	
	-calculate the	
	mean	
	of 100 numeric	
	values	
	-calculate area	
	of 10	
	different	
	rectangles	
	-Compute the	
	sum of	
	the first 100	
	integers	
(f)Systems	(i)Definition of	

Development	system	
Cycle	development	
	cycle	
	(ii)Description of	
	system	
	development	
	cycle	
	(iii)Stages in	
	system	
	development	
	Cycle	
	-Preliminary	
	study	
	-Feasibility	
	-Investigate	
	study	
	-Analysis	
	-Design	
	-	
	Implementation	
	-Maintenance	
	-Study review	
	(iv)Description of	
	each	
	stage of	

	system	
	-	
	development	
	cycle	
	(v)Diagram of	
	system	
	development	
	cycle	
(e)Program	(i)Definition of	Flow
Development	program	diagram on
Cycle	(ii)Characteristics of	how a
	а	compiler
	good	and
	Program	interpreter
	-Accuracy	works is
	-Readability	required
	-Maintainability	
	-Efficiency	
	-Generality	
	-Clarity	
	(iii)Precautions in	
	developing a	
	program	
	-Be stable,	
	steady	
	and patient	

-No step skipping -Follow order of execution (iv)Steps involved in program development -Problem definition -Problem analysis -Flow chatting -Desk checking -Program coding -Program compilation -Program testing/debugging -Program

documentation	
documentation	
(v)Description of	
each of	
stages in	
program	
development	
(vi)Examples of :	
-Interpreted	
program	
(BASIC)	
-Compiled	
program	
(COBOL,	
FORTRAN)	

## 1. LIST OF FACILITIES AND MAJOR EQUIPMENT / MATERIALS REQUIRED:

- (1) Computer set
- (2) Laptops
- (3) Scanners
- (4) Printers
- (5) Fax Machine

(6)	GSM Phone
(7)	Memory chips
(8)	Hard disks
(9)	Flash drives

- (10) Internet connectivity
- (11) DVD
- (12) Compact disks
- (13) Cables (power and data)
- (14) Word processing packages, database package, BASIC program and CorelDraw

## DISCLAIMER

The above topics are where all your Computer Studies questions for **WAEC** or **GCE** this year will be asked from.

But it does **NOT** say which *topic is most common* and how many questions are asked *per* topic.

So, study only the topics in this syllabus but ALSO with **past questions** to better prepare for your Computer Studies exam in either WAEC internal (...as a school candidate) or **external** (...as a **GCE** candidate).

Speaking of which,

Would you like to download our **free** WAEC or GCE past questions on Computer Studies *now*?

Click on the link below...

www.examministry.com