

**ONE VISION EXAMINATION CENTRE
(OVEC)**

(A Credible Private Examinations Consortium)



COMPUTING

2026/27 ACADEMIC YEAR

SCHEME OF LEARNING

FOR BASIC 7, 8 & 9

**BASIC EDUCATION TERMINAL
EXAMINATIONS**

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OVEC PRINT



NOTE THE FOLLOWING

1. The Scheme of Learning has been prepared from the new GES Curriculum for Basic Schools. It is therefore advisable for teachers to be guided by the details given by the revised curriculum for effective teaching and learning.
2. Details of the sub-strands (previously called topics) have been expanded under indicators (previously called sub-topics) in the new curriculum.
3. The Scheme of Learning has been divided into three terms which ensures teachers complete the curriculum by the end of the academic year.
4. Pupils shall be examined based on the Scheme of Learning for that particular term. Therefore, teachers are advised to follow the Scheme of Learning provided.
5. At the JHS level it shall include questions from previous classes.
6. Teachers should make sure that the general aims of teaching the various subjects outlined in the curriculum are achieved at the end of the academic year.

| BASIC 9 (COMPUTING) TERM TWO | |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SUB - STRANDS | INDICATORS |
| COMPUTER NETWORKS | <ul style="list-style-type: none"> ♦ Discuss types of e-commerce and the cashless society (Bitcoin, Transaction cards, Quick Response code (QR) payment system) ♦ Justify eLearning potentials |
| INTERNET AND SOCIAL MEDIA | <ul style="list-style-type: none"> ♦ Identify the advantages and risks in the use of social media platforms |
| INFORMATION SECURITY | <ul style="list-style-type: none"> ♦ Discuss cyberbullying, cyberstalking, digital footprint and digital shadow on the Internet ♦ Explain ten (10) information hacking techniques on the Internet environment. e.g. phishing, keyloggers, Denial of Service attack, eavesdropping, etc. |
| WEB TECHNOLOGIES | <ul style="list-style-type: none"> ♦ Examine the importance of creating blogs ♦ Develop a blog for the school or a social club ♦ Explore the steps in publishing a blog |
| INTRODUCTION TO PROGRAMMING | <ul style="list-style-type: none"> ♦ Describe the conversion of decimal into binary data type for computer to recognise the meaning, process and store ♦ Identify the different tools which are accessible in Integrated Development Environment (IDE) to aid the development of codes |
| ALGORITHM | <ul style="list-style-type: none"> ♦ Write a programme using flowchart and Pseudocode algorithm that includes sequence, selection and iteration choices in problem-solving ♦ Translate a Flowchart algorithm to Pseudocode format and vice versa. |
| ROBOTICS | <ul style="list-style-type: none"> ♦ Construct a robot artefact using available lab components and tools or emulator/simulator software pack |
| ARTIFICIAL INTELLIGENCE | <ul style="list-style-type: none"> ♦ Describe the knowledge-based systems (Expert systems) as the classical Artificial intelligence |

BASIC 9

(COMPUTING)

TERM THREE

MOCKS & REVISION

BASIC 9 (COMPUTING) TERM ONE

| SUB - STRANDS | INDICATORS |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMPONENTS OF COMPUTERS AND COMPUTER SYSTEMS | <ul style="list-style-type: none"> ◆ Discuss the trends in the next generation of computers ◆ Examine the concept of Perceptual Computing ◆ Discuss the uses of Output devices such as Wearable Displays, E-Paper, E-Books, Kindle ◆ Describe Storage Systems: Network and Cloud Storage Systems, Smart Cards, Holographic Storage, Storage Systems for Large Computer Systems (home servers or media servers) ◆ Explore personalisation of the computer ◆ Identify and use file management techniques (drivers and hardware) |
| TECNOLOGY IN THE COMMUNITY (COMMUNICATION) | <ul style="list-style-type: none"> ◆ Evaluate problems in the community that can be solved with technology ◆ Propose solutions to the problems identified ◆ Design the solution selected |
| HEALTH AND SAFETY IN USING ICT TOOLS | <ul style="list-style-type: none"> ◆ Evaluate health issues at workstations ◆ Evaluate Safety Risk Reduction at issues at workstations |
| INTRODUCTION TO WORD PROCESSING | <ul style="list-style-type: none"> ◆ Demonstrate how to add pictures, insert a screenshot and screen clipping and print screen ◆ Demonstrate the use of SmartArt ◆ Demonstrate how to add Multimedia (audios, videos, animations), Charts and Hyperlinks |
| INTRODUCTION TO PRESENTATION | <ul style="list-style-type: none"> ◆ Demonstrate how to add pictures and insert screenshots ◆ Demonstrate how to animate slides in a presentation ◆ Demonstrate how to add Multimedia (audios, videos etc.), tables and charts |
| INTRODUCTION TO DESKTOP PUBLISHING | <ul style="list-style-type: none"> ◆ Create and present a desktop published document (flyer, advertisement, invitation cards, business cards) ◆ Describe a desktop published document ◆ Evaluate a desktop published document |
| INTRODUCTION TO ELECTRONIC SPREADSHEET | <ul style="list-style-type: none"> ◆ Perform data filtering, sorting and validation ◆ Demonstrate how to use styles, themes, templates and macros ◆ Demonstrate the use of data tables, pivot tables, charts and pivot charts |

BASIC 7 (COMPUTING) TERM ONE

| SUB-STRANDS | INDICATORS |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Components of Computers and Computer Systems | <ul style="list-style-type: none"> ◆ Discuss the fourth-generation computers ◆ Demonstrate understanding in the use of input devices (barcode, scanner, etc.) ◆ Examine the uses of the output devices: graphing plotter, data and multimedia projectors as well as pico projector ◆ Examine full-sized external hard drives, hard drive speed, disk caching, Storage portable hard drives, Optical Discs and Drives. ◆ Discover the latest Windows Operating System (Start screen, Use of tiles, Taskbar buttons, Preview thumbnails), temporal peeking into a window on a taskbar. ◆ Practise file management techniques (file & folder management, Users & Accounts) |
| Technology in the community | <ul style="list-style-type: none"> ◆ Describe and give examples of at least five technology tools for learning in each subject (e.g. Spreadsheets, Virtual Museum, Scrabble, Presentation, Scratch, etc.) ◆ Demonstrate the use of at least three technology tools ◆ Discuss the benefits of using technology tools in learning. ◆ Examine the negative impact of computers and computer use on the environment. ◆ Propose environmentally responsible practices that can be used to reduce the negative impact of computers and computer use on the environment. ◆ Create a component from disposed computer parts. |
| Health and safety in using ICT tools | <ul style="list-style-type: none"> ◆ Describe health measures and current regulatory requirements and potential computing-related disorders. ◆ Describe Safety measures in using ICT tools. ◆ Demonstrate how to apply Health and Safety measures in Using ICT Tools. ◆ Explore safety measures at workstations |

BASIC 7 (COMPUTING) TERM ONE [Cont'd]

| SUB-STRANDS | INDICATORS |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction to word processing | <ul style="list-style-type: none"> ◆ Explain the importance of word processing software ◆ Demonstrate how to insert, select, delete and move text ◆ Demonstrate how to find and replace content and undo edited changes ◆ Demonstrate how to spell check, carry out content translation, language setting ◆ Demonstrate how to use text-decoration, change text case, text size and colour ◆ Demonstrate how to align text, indent paragraphs, bullet, line space and shade ◆ Demonstrate how to set tabs and apply formatting |
| Introduction to presentation | <ul style="list-style-type: none"> ◆ Explain the importance of presentation software ◆ Explore features of MS-PowerPoint interface. ◆ Demonstrate how to use Special Characters. ◆ Demonstrate how to change text case, text size, text colour and decorate text ◆ Demonstrate how to align text, indent paragraphs, borders and shades ◆ Demonstrate the use of the Slide Master, design template, and be able to give a 5-slide presentation in MS-PowerPoint using the tools of the ribbons studied. |

BASIC 8 (COMPUTING) TERM THREE

| SUB - STRANDS | INDICATIORS |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INTRODUCTION TO PROGRAMMING | <ul style="list-style-type: none"> ◆ Describe the basic concepts in programming (Constants, Variables, Expressions, Statements /Instructions, logical and arithmetic operators, Operator precedence, etc.) |
| ALOGORITHM | <ul style="list-style-type: none"> ◆ Apply variables, expressions, assignment statements and operator precedence order (BODMAS rule) to process and store numbers and text in a programme ◆ Describe and use sequence, selection and iteration statements in a programme. Understand the difference between variables and constants and be able to choose appropriate naming conventions when writing statements. |
| ROBOTICS | <ul style="list-style-type: none"> ◆ Describe the principles underlying the operation of the components of a robot (Controller Mechanical, Sensors) |
| ARTIFICIAL INTELLIGENCE | <ul style="list-style-type: none"> ◆ Discuss Artificial Neural Networks (ANN) and compare intelligence in humans, animals and machines |

BASIC 8 (COMPUTING) TERM TWO

| SUB - STRANDS | INDICATORS |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INTRODUCTION TO DESKTOP PUBLISHING | <ul style="list-style-type: none"> ◆ Explain the importance of desktop publishing software (DTP) ◆ Create and save a new document from a blank or pre-designed template ◆ Demonstrate the use of the commands in MS-Publisher ribbons under each tab (Home, Page Design, Mailings, Review, View) ◆ Change the orientation and margins of a document ◆ Add and modify pictures from different sources ◆ Add and modify text ◆ Create and present a Publisher document (flyer, advertisement, invitation cards, business cards) |
| INTRODUCTION TO ELECTRONIC SPREADSHEET | <ul style="list-style-type: none"> ◆ Perform operations using functions and Built-in functions ◆ Demonstrate how to create complex formulas ◆ Demonstrate how to copy formulas and references |
| COMPUTER NETWORKS | <ul style="list-style-type: none"> ◆ Describe the data communication models for networks. ◆ Describe the Internet, world wide web (www) and Internet Protocol (IP) addresses |
| INTERNET AND SOCIAL MEDIA | <ul style="list-style-type: none"> ◆ Identify the various types of Social Media sites such as Photo sharing (Instagram, Snapchat, Pinterest) and Video sharing (YouTube, Facebook Live, Periscope, Vimeo) |
| INFORMATION SECURITY | <ul style="list-style-type: none"> ◆ Describe the nature of four major data threats (Interruption, Interception, Modification, Fabrication) ◆ Map the protection methods to each of the four identified data threats (Authorization, Authentications, Encryption and Decryption) |
| WEB TECHNOLOGIES | <ul style="list-style-type: none"> ◆ Demonstrate how to effectively search from a web browser. ◆ Explore the use of more than one search engine. |

BASIC 7 (COMPUTING) TERM TWO

| SUB-STRANDS | INDICATORS |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction to Electronic Spreadsheet | <ul style="list-style-type: none"> ◆ Explain the importance of electronic spreadsheet ◆ Explore features of MS-Excel interface ◆ Demonstrate how to set the cell datatype (General, Number, Currency, etc.). ◆ Demonstrate how to use Align Text, Merge & Wrap, Borders and Shades ◆ Demonstrate how to adjust margins and set page orientation ◆ Demonstrate how to set up a header and a footer. ◆ Demonstrate the use of the Autofill function in MS-Excel worksheet ◆ Demonstrate how to create formulas |
| Computer Networks | <ul style="list-style-type: none"> ◆ Draw diagrams to illustrate features of the network topologies (Bus, Star, Ring, Mesh) ◆ Describe types of networks [Personal Area Network (PAN), Local Area Network (LAN), Metropolitan Area Network (MAN), Wide Area Network (WAN)] ◆ Discuss the entrepreneurial opportunities in networking computing devices |
| Internet and Social Media | <ul style="list-style-type: none"> ◆ Identify the various types and uses of Social Media sites such as those for Social Networking (Facebook, LinkedIn, WhatsApp) and Microblogging (Twitter, Tumblr) ◆ Demonstrate the use of the following features of Electronic mail: Attachment and Address book |
| Information Security | <ul style="list-style-type: none"> ◆ Discuss the key principles of information security (confidentiality, integrity and availability) ◆ Explore the legal issues regarding intellectual property rights (e.g. Copyright, Patent, Trademark, Piracy, Copyright Infringement) ◆ Evaluate information security forensic auditing and criminal laws against offenders |
| Web Technologies | <ul style="list-style-type: none"> ◆ Identify the importance of the web in learning [Virtual Learning Environments (VLEs)] ◆ Explore the use of open learning websites in the classroom ◆ Demonstrate the techniques for evaluating web pages (Accuracy, Credibility, Content, Current, Functionality) |

BASIC 7 (COMPUTING) TERM THREE

| SUB-STRANDS | INDICATORS |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction to Programming | <ul style="list-style-type: none"> ◆ Demonstrate the correct use of programming terminologies ◆ Demonstrate understanding in the use of data types (e.g. float, integer, string, char, etc.) ◆ Demonstrate the use of constants and variables used in programming |
| Algorithm | <ul style="list-style-type: none"> ◆ Understand the use of sequence, selection and iteration in writing a programme. Describe the meanings of the term's algorithm, decomposition and abstraction ◆ Perform a linear search |
| Robotics | <ul style="list-style-type: none"> ◆ Review the various applications of robotic machines in society. |
| Artificial Intelligence | <ul style="list-style-type: none"> ◆ Discuss the application of various areas of artificial intelligence (Machine learning, Artificial Neural Networks, Virtual Reality, Augmented Reality, Mixed Reality, Gamification. |

BASIC 8 (COMPUTING) TERM ONE

| SUB - STRANDS | INDICATORS |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMPONENTS OF COMPUTERS AND COMPUTER SYSTEMS | <ul style="list-style-type: none"> ◆ Discuss the fifth generation of computers with emphasis of on quantum computing ◆ Demonstrate understanding of direct data entry devices (Graphic Tablet, Magnetic Card Reader, Optical Card Reader, QR code reader, Radio Frequency Identification (RFID) Readers) ◆ Examine the uses of the output devices: Braille printers, Impact, Inkjet, Thermal, Wax, 3D printers ◆ Describe storage devices: Flash Memory Storage Systems, Embedded Flash Memory Cards and Readers, USB Flash Drives, Solid State Drives and Hybrid hard drives ◆ Explore the use of the Charms bar ◆ Practise file management techniques (Drive Management) |
| TECNOLOGY IN THE COMMUNITY (COMMUNICATION) | <ul style="list-style-type: none"> ◆ Discuss technologies that help to improve computer accessibility (adaptive and assistive technologies) ◆ Describe how portable computing devices affect our everyday lives ◆ Explain the issues associated with online services (e.g. social media, wikis, blogs, etc.) |
| HEALTH AND SAFETY IN USING ICT TOOLS | <ul style="list-style-type: none"> ◆ Discuss health issues at workstations ◆ Discuss safety measures in risk reduction at workstations |
| INTRODUCTION TO WORD PROCESSING | <ul style="list-style-type: none"> ◆ Demonstrate how to create a table and hyperlinks ◆ Demonstrate how to merge, split, add formula, borders and shades ◆ Demonstrate how to format a page (e.g. page adjustment, inserting header and footer, page numbers, breaks and orientations) |
| INTRODUCTION TO PRESENTATION | <ul style="list-style-type: none"> ◆ Demonstrate how to add pictures, screenshot and edit and format pictures ◆ Demonstrate how to add a drawing canvas, shapes, and also edit, format and add text to shapes ◆ Demonstrate how to add text to shapes and arrange shapes. |