**INFORMATION AND COMMUNICATION TECHNOLOGY (ELECTIVE)**

1. **AIMS**

The aims of the syllabus are to:

(1) test candidates’ appreciation of the concepts of Information and Communication Technology (ICT);

(2) test the capabilities of candidates in the application of ICT skills in education and business;

(3) verify candidates’ potential for higher studies in Information and Communication Technology and related areas.

2. **SCHEME OF EXAMINATION**

There will be three papers, Papers 1, 2 and 3 all of which must be taken. Papers 1 and 2

will be a composite paper to be taken at a sitting.

**PAPER 1:** Will consist of fifty multiple-choice objective questions all of which must be

answered within 1 hour for 25 marks.

**PAPER 2:** Will consist of five essay-type questions. Candidates will be required to answer

three questions within 1 hour for 30 marks.

**PAPER 3:** Will be a practical test consisting of three questions all of which must be

answered within 2 hours, for 45 marks.

1. **DETAILED SYLLABUS**

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| **TOPIC NOTES** |
| 1. DATA 1.1 Data types e.g integers, real numbers,  . REPRESENTATION strings etc  1.2 Number bases with special reference to  binary, decimal and hexadecimal.  1.3 Units of data storage.  2. INTRODUCTION 2.1 Meaning of information system  TO INFORMATION 2.2 Knowledge of the different  SYSTEMS types of information systems.  2.3 Attributes of good information.  2.4 Internal and external information eg. intranet, extranet, memos, intercom,  talking drum, mobile phone etc.  2.5 The role of information in society.  3. INTRODUCTION 3.1 The Internet  TO DIGITAL 3.2 Computer crime  TECHNOLOGY 3.3 The role and impact of Information  CULTURE Technology on everyday life e.g  e-business, e-health, e-mail,  e-learning, Computer Based Training, Computer Assisted Manufacturing, Computer Aided Design, etc. |

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| * 1. Knowledge of media types e.g digital videos and   2. digital sounds, voice over internet protocol (VOIP),voice recognition system, etc.   4. WORD 4.1 Creating, editing and formatting documents.  PROCESSING 4.2 Business documents eg. memos, reports etc.  4.3 Mail merge.  4.4 Printing of documents.  5. DESKTOP 5.1 Creating, editing and formatting documents.  PUBLISHING 5.2 Printing publications.  6. SPREADSHEET 6.1 Creating, editing and formatting documents.  6.2 Sorting and querying for information.  6.3 Creating graphs and charts to represent data in  worksheets.  6.4 Working with functions  6.5 Data security: use of passwords.  7. HARDWARE 7.1 External components and their functions.  7.2 Internal components and their functions.  7.3 Computer Diagnostics and Maintenance.  8. SOFTWARE 8.1 System software e.g operating systems and  their functions.  8.2 Utility programmes and their uses.  8.3 Types of application programs.  8.4 Software licensing considerations.  8.5 Installation and upgrading of computer  software.  8.6 Software terminologies and concepts:  - machine language;  - high-level versus low level;  - use of fourth generation language; - use of language translators;  - source code;  - Error messages;  - Software portability;  - Compilers;  - Interpreters;  - Assemblers, etc.    9. NETWORKING 9.1 Network concept.  9.2 Types of networks.  9.3 Network Topology  9.4 Network Architecture.  9.5 Network configuration.  9.6 Communication of data on networks.  9.7 Data security on networks.  10. INTRODUCTION 10.1 Flow charts  TO 10.2 Algorithms and data structures  PROGRAMMING 10.3 Program development life cycle. 10.4 Programming languages.  10.5 Web design using HyperText Mark-up Language (HTML).  10.6 Practical knowledge of BASIC and HTML  programming languages. Questions will  however be limited to QBASIC.  11. DATA BASE 11.1 Designing and creating data bases.  MANAGEMENT 11.2 Working with queries.  SYSTEM 11.3 Working with forms.  11.4 Working with reports.  12. APPLICATION 12.1 Types of tools.  OF ICT TOOLS 12.2 Learning with ICT tools  IN EDUCATION 12.3 Advantages and disadvantages of using ICT tools in learning. |