**COMPUTER SCIENCE**

For Class X (marks 55)

**1. Data Representation**

i. Data definition:

* Numeric, alphabetic and alphanumeric

ii. Number systems:

* Decimal, Binary, Octal & Hexadecimal

iii. Number system conversion

iv. Representation of numbers using (1’s) and (2’s) complements

v. Binary arithmetic:

- Addition, subtraction, multiplication and division

vi. Fixed and floating point number representation

vii. Code:

- Coding scheme (Binary Coded Decimal, ASCII)

**2. Boolean Algebra**

i. Boolean constant, variable, logical operators, Boolean expressions, Boolean functions

ii. Laws and theorems of Boolean algebra

iii. Truth tables

iv. Simplification of Boolean functions, laws and Karnaugh maps

**3. Problem Solving**

i. Defining the problem

ii. Analysis of the problem, illustrated with examples

iii. Algorithms

iv. Flow charts:

* + Flow charts symbols, examples of flow charts using daily life applications

v. Computer programming:

* + - * Conversion of flow chart, algorithm into computer language instructions

vi. Running and debugging programs

vii. Implementation

viii. Documentation

**4. Data Types Assignment (INPUT/OUTPUT) Statement**

i. Character sets, reserved words, commands and statements

ii. Numeric and strings

iii. Constants and variables

iv. Operators: arithmetic, relational and logical

v. Hierarchy of operators, expressions

vi. Arithmetic, relational and logical

vii. Assignment statements

viii. Input, READ-DATA

ix. PRINT, PRINT USING

**5. Control Statements**

i. Go to, ON – GO TO

ii. If – Then – Else, on Error – Go to…

iii. For … Next statement, While and Wend statement, Loops and nested loops

**6. Arrays**

i. One and two – dimensional arrays

ii. Reading, writing and manipulation of arrays

**7. Sub-Program and File Handling**

i. Functions:

* + Built-in functions (ABS, INT, RND, SQR, LOG, EXP, SIN, COS, TAN, CINT, INT, SGN, FIX, HEX$, LEFT$, MID$, CHR$, STR$, TIME$, INKEY$, SPACE$) and user defined functions

ii. Subroutines

iii. Reading and writing into files

**8. Graphics**

i. Sketching and drawing of graphics using utilities such as DRAW and COLOR

ii. Generating lines, rectangles, circles etc

**LIST OF PRACTICALS**

1. Familiarization of DOS commands (external commands) as given in chapter 7.
2. Familiarization of DOS commands (internal commands) as given in chapter 7.
3. Demonstration of the installation of WINDOWS.
4. Demonstration of computer components: (cards, motherboards, buses, connectors, serial ports and other important ICs).
5. Familiarization with WINDOWS (all the WINDOWS icons) including shutdown process.
6. Use of the mouse.
7. Opening, creating, saving, deleting and printing files in MS-WORD.
8. Editing MS-WORD documents.
9. Writing a program to demonstrate simple arithmetic operations (e.g. calculation of the area of a triangle, volume of a cylinder and speed of an object, conversion of temperature from °C to °F and vice-versa).
10. Writing a program to demonstrate the use of formatted input/output statements, (calculation of class grades for different students, selection of the largest number out of given 10 numbers without using a list).
11. Writing a program that uses iteration statements (write a program that reads 5 values from user and find the mean value and compare the mean value against an actual value of 9.8 meters/sec2).
12. Writing a program that reads 10 values into an array and after doing some arithmetic operations, prints the desired results.
13. Repeating Experiment No.3 using a sub-routine, named average and call this sub-routine in the main program.
14. Drawing a line, a circle and a rectangle using system defined built-in functions for graphics.

**RECOMMENDED REFERENCE BOOKS FOR CLASS X**

 The question papers will be syllabus oriented. However, the following books are recommended for reference and supplementary reading:

 1. Computer Science

 National Book Foundation, Islamabad.

 2. Computer Science

 Punjab Text Book Board, Lahore.

 3. Computer Science

 NWFP Textbook Board, Peshawar.

 4. Computer Science

 Baluchistan Textbook Board, Quetta.

 5. A Textbook of Computer Science for class IX-X,

 Prof. Shaukat Ayub Burki,

 Gaba Educational Book,

 Urdu Bazaar, M.A. Jinnah Road, Karachi

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| LOGO |  |
| Federal Board SSC Examination Computer Science Practical Model Question Paper  |  |

Time allowed: 2 hours Total Marks: 40

**Note:** Attempt all Sections.

**SECTION – A (Marks: 10)**

Q.1 Write down the syntax and example of the following DOS commands. Attempt one from each part: **(2+2)**

 a. i. DIR ii. DATE iii. VER

 b. i. XCOPY ii. FC iii. COMP

Q.2 Perform and write down the steps of following MS-Windows tasks (any three): **(2+2+2)**

 i. How would you change the speed of mouse pointer? (2)

 ii. How would you view system properties of your computer? (2)

 iii. How would you restore the file from recycle bin? (2)

 iv. How would you arrange icons on desktop by name? (2)

 v. How would you rename a folder? (2)

 vi. How would you hide/unhide the taskbar? (2)

**SECTION – B (Marks: 10)**

Q.3 Type the following paragraph:

 System Software

System software includes the programs which control the operation of the computer system. They direct the fundamental operations of the computer system like; displaying information on the screen, storing data on disk, sending data to the printer, interpreting the typed commands and communicate with peripheral devices.

 Page 1 of 2 Turn Over

 Note: Attempt any five parts:

i. Center align the heading and underline it.

ii. Use drop caps.

iii. Use justified alignment.

iv. Apply bold and italic to word “System Software”.

v. Add header.

vi. Adjust the paragraph line spacing to 1.5.

vii. Change the orientation of the page as landscape.

viii. Insert page number.

**SECTION – C (Marks: 10)**

**Not:** Attempt any two questions.

Q.4 Write a GWBASIC program to find the product of two numbers. **(5)**

Q.5 Write a GWBASIC program to print the table of any number. **(5)**

Q.6 Write a GWBASIC program that inputs a number and prints “even” if it is even or “odd” if it is odd. **(5)**

Q.7 Draw a rectangle in graphics mode in GW Basic. **(5)**

Viva Voce **(5)**

Note Book **(5)**

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