

SUBJECT: COMPUTER

CLASS: 10th

PREPARED BY:
RAJA HAMZA KHAN

DEDICATED TO

تمام تعریفیں رب لاشریک کے لئے جس نے مجھ ناچیز کو پیدا کیا۔ اور
لاکھوں کروڑوں درود اس ذات پر جس نے ہماری بخشش کے لئے رو رو کر
دعا مانگی۔ ان نوٹس کو امت محمدیہ کی آسانی کے لئے بنایا گیا ہے۔ ان کا
ثواب رب موسیٰ و ہارون نبی آخرالزمان کی جملہ آل و اولاد اور امت کو عطا
کرے۔ آمین

راجہ حمزہ خان

DISCLAIMER

ALL RIGHTS RESERVED

No part of these notes may be reproduced in any form, by photostat, microfilm, or any other means or incorporated into any information retrieval system electronic or mechanical, without the written permission of writer or publisher.

انتباہ

یہ نوٹس مفاد عامہ کے لئے بنائے گئے ہیں۔ ان کی اشاعت باقاعدہ طور پر
ڈی سی آفس میں رجسٹرڈ ہے۔ ان کو بیچنا یا کسی بھی طور پر مالی فائدے
کے لئے آگے بھیجنا قانوناً جرم ہے۔ ایسا کرنے والوں کے خلاف قانونی
کارروائی کی جائے گی۔

COMPUTER

MOST IMPORTANT SHORT QUESTIONS

CHAPTER NO 1

PROGRAMMING TECHNIQUES

Q) Differ between problem, problem solving, candid solution and analyse problem?

ANS)

PROBLEM	PROBLEM SOLVING	CANDID SOLUTION	ANALYSE PROBLEM
A situation or matter that requires proper attention and need to resolved is called problem.	Problem-solving is a thinking process that involves identifying and solving problem. The main objective of problem-solving is to find best solution of a given problem.	When we brainstorm on a problem to find its solution, we may come across different solutions of that particular problem. These solutions are known as candid solutions.	After identifying and defining clearly, the second phase is to analyze that problem critically. This phase is all about gaining the more information and increasing the information about the defined problem.

Q) Define algorithm and write three properties of algorithm? Define flow chart and write importance of flow chart?

ANS) An algorithm is a finite number of steps that involves in solving a problem.

Properties of algorithm:

Input: The algorithm receives some input.

Output: The algorithm should produce some output.

Finiteness: The algorithm terminates after finitely steps.

A flowchart is a symbolic or graphical representation of a problem.

Flowcharts are an important tool for the improvement of processes to solve a problem.

Q) Differ between flowlines and decision symbols?

ANS)

FLOW LINES	DECISION SYMBOLS
Flow lines are used to link together all flow chart symbol. Flow lines also indicates flow of operations.	The decision symbol is used to test a conditional statement. Its result may be in form of true or false.

CHAPTER NO 2
PROGRAMMING IN C

Q) Differ between program syntax, semantic, High level language and low level language?

ANS)

PROGRAM SYNTAX	PROGRAM SEMANTIC	HIGH LEVEL LANGUAGE	LOW LEVEL LANGUAGE
The set of rules to write instructions in a specific programming language is called program syntax.	Program semantic is the meaning of program. Basically it describes how the program will execute.	High level language are more like human language. These are not dependent on a specific computer. Eg C, C++, Java etc.	Low level language are directly processed on the processor. These languages are used for writing operating system, ROM etc.

Q) Differ between machine language, assembly language, C and C++?

ANS)

MACHINE LANGUAGE	ASSEMBLY LANGUAGE	C	C++
Machine language is directly understood by computer The instructions written in machine language was in the form of 0s and 1s. It was deve-	Assembly language is bit easier than machine language. It was developed in 1950s. It uses the easy way to remember abbreviations to write	C is a unique programming Language. Being the oldest, it should be learnt first of all when you startup. Sometimes, it is also called as mother of all	C++ is more progressive than C, and utilized immensely for programming. It is an ideal selection for strong desktop software as well as for Mobile

developed in 1940s.	instructions. i.e. A for add etc.	programming languages.	applications.
---------------------	-----------------------------------	------------------------	---------------

Q) Differ between compiler, interpreter, variable and constant?

ANS)

COMPILER	INTERPRETER	VARIABLE	CONSTANT
A compiler is a language processor which translates source code into machine code as a whole. Programming languages like C, C++ use compiler.	Interpreter is a language processor which doesn't convert the whole program into machine code. It translates and executes statements one by one. Python, Ruby use interpreter.	A variable is a location in memory where a value is stored. The value of a variable can be changed during the execution of a program. E.g. temp, time, weather. Etc.	A constant is a value that doesn't change. The value of a constant remains the same throughout the execution of a program. E.g. value of pi, value of g. Etc.

Q) Differ between programming, programming languages, IDE and header files?

ANS)

PROGRAMMING	PROGRAMMING LANGUAGE	IDE	HEADER FILES
Programming is a process to give step by step instructions to a computer to perform a specific task.	Programming language is the means of communication between a user and a computer.	An integrated development environment (IDE) is an application that provides a software development environment.	Header files are written at the top of each program. These files include the functions of C from a library.

Q) Differ between procedural language and language processor?

ANS)

PROCEDURAL ENVIRONMENT	LANGUAGE PROCESSOR
-------------------------------	---------------------------

Procedural environment is a type of high level language that uses series of steps uses a logical structure and procedures to write a computer program. Eg BASIC, PASCAL, C etc.	A language processor is a special type of system software that translates the source code into machine code.
---	--

CHAPTER NO 3
INPUT/OUTPUT HANDLING

Q) Differ between print f(), put s(), scan f() and getch()?

ANS)

PRINT F()	PUT S()	SCAN F()	GETCH
This is one of the most frequently used function in C for output.	The C library function int puts is used to write a string but not including the null character. A new line character is appended to output.	This is the function which can be used to read an output from the command line.	The getch() function is used to get a single character input from the user during execution of a program.

Q) Differ between get char(), get s(), statement terminator and escape sequence?

ANS)

GET CHAR()	GET S()	STATEMENT TERMINATOR	ESCAPE SEQUENCE
The get char() function is used to get a single character from the user of runtime.	Get s() function adds character from standard input and stores them as a C string into str until a new line character or end-to-end file is reached.	In a C program, the semicolon is a statement terminator. In C language each individual statement must be ended with a semicolon.	Character combinations consisting of a backlash (\) followed by a letter or by a combination of digits are called escape sequence.

Q) Define operators and differ between arithmetic, assignment, relational and logical operators?

ANS) Operators are used to perform computational, mathematical and logical operations. Operators are symbols which perform specific operations on the value.

ARITHMETIC OPERATOR	ASSIGNMENT OPERATOR	RELATIONAL OPERATORS	LOGICAL OPERATORS
The operators which perform arithmetic operations are called arithmetic operators. (+,-,/,*,%)	=+,-,=*,=/,=% etc are some assignment operators which perform assignment operations.	Relational operators performs a comparison between two values. The result of this comparison is either true(1) or false(0).	Logical operators used to control program flow. Usually, you will find them as part of an if, while or some other control statement.

Q) Differ between increment, decrement, unary and binary operators?

ANS)

INCREMENT OPERATOR	DECREMENT OPERATOR	UNARY OPERATOR	BINARY OPERATOR
Increment operator is used to increment the value of current variable by adding integer 1. It can be applied to only variables. It is denoted by ++.	Decrement operator is used to decrease the current value of variable by subtracting integer 1. It can be applied to variables. It is denoted by --.	The operators which operate on single operand known as unary operators.	The operators which operate on two operands known as binary operators.

CHAPTER NO 4
CONTROL STRUCTURE

Q) Differ between control structure, statement, test expression and composition of switch statement?

ANS)

CONTROL STRUCTURE	CONTR STATEMENT	TEST EXPRESSION	COMPOSITION OF SWITCH STATEMENT
A control structure is a block of programming that analyzes that variable and chooses in direction in which to go based on given parameter.	A statement that control the execution and output of a computer program is known as control statement.	Programming, that is, to execute some code/s or ignore some code/s depending upon the test expression.	Decision making is needed, when the program encounters the situation to choose a particular statement among many statements.

Q) Write the use of if statement and if-else statement?

ANS) Use of IF Statement:

We can use if statement to write Different programs. For example a program to print the number entered by a user only, if numver is negative.

Use of if-else statement:

We used if-else statement to print weather a number entered by a user is even or odd.

CHAPTER NO 5 **LOOP STRUCTURE**

Q) Define structure of for loop and write its syntax?

ANS) The for loop consists of reserved word **for** followed by an expression in parentheses (). This expression is composed of three fields separated by semicolons.

SYNTAX:

```
for(initialization statement;test expression; increment/decrement statement)
{
    statement/s to be executed;
}
```

Q) Define structure of while loop and write its syntax?

ANS) The simplest of three loops is the while loop. In common language, while has a fairly obvious meaning. The while loop has condition

SYNTAX

```
while (test expression)
{
    statements to be executed;
}
```

Q) Define do-while loop and its syntax?

ANS) In C, do-while is very similar to while loop. Only difference is that, in while loops, test expression checked at first but, in do-while code is executed at first and then the condition is checked.

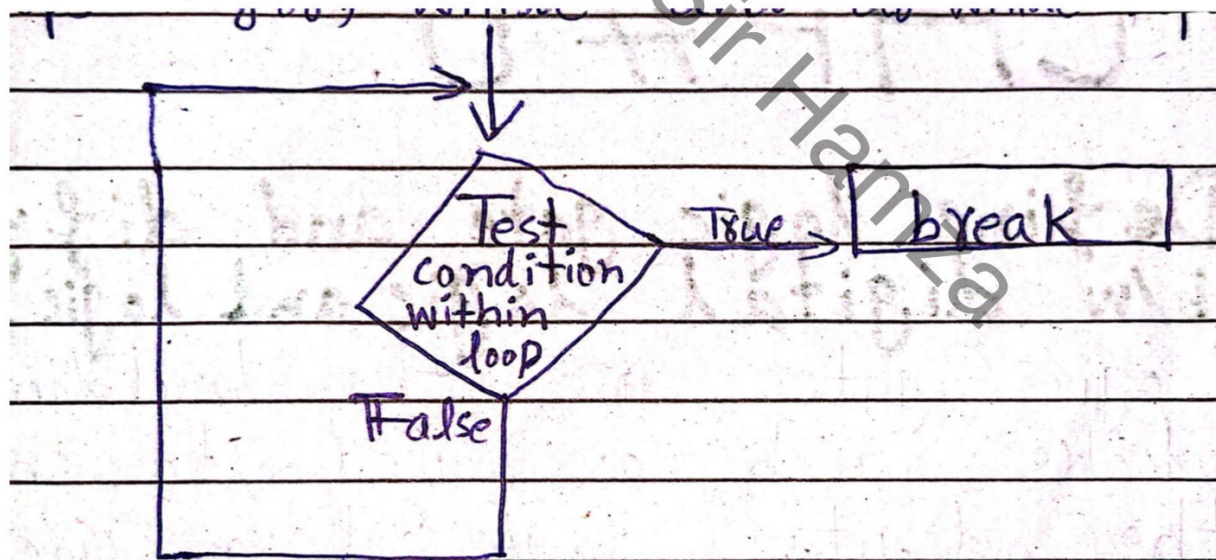
SYNTAX

```
do
{
    statement/s;
}
while(test expression);
```

Q) Write syntax of break statement?

ANS) break;

The break statement can be used to terminate all three loops for, while and do-while loop.



CS Scanned with CamScanner

Q) Differ between do-while, while, nested and for loop?

ANS)

DO-WHILE	WHILE	NESTED	FOR
The main feature of the do-while loop is that it is an exit controlled loop. This means that the statement enclosed inside do{ } will execute irrespective of condition.	We use the while loop when we do not know the number of iterations needed. It is an entry controlled loop.	A loop within a loop is known as nested loop.	The for loop is used when we know that how many times a loop will run.

CHAPTER NO 6
COMPUTER LOGIC AND GATES

Q) Define logic gates and differ between digital logic and digital logic gate?

ANS) Logic gates are the building blocks which are used to show the digital logic of circuit.

DIGITAL LOGIC	LOGIC GATE
Digital logic is the methodology in which signals and sequences of a digital circuit are represented through numbers.	A digital logic gate is an electronic device that makes logical decisions based on the different combinations of digital signals present on its input.

Q) Define AND gate?

ANS) The AND gate produces HIGH output only when all the inputs are HIGH. Otherwise, it produces LOW output. We can also say that the output is true only when both inputs are true otherwise it is false.

REMEMBER!
Logic Function of AND gate is $Q = A.B$

Table 6.3 Truth table of AND gate

A	B	Q
0	0	0
0	1	0
1	0	0
1	1	1

Q) Define OR gate?

ANS) The OR produces HIGH output when one or more inputs are HIGH. It only produces LOW output when both inputs are LOW.

REMEMBER!
Logic Function of OR gate is $Q = A+B$

Table 6.4 Truth table of OR gate

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	1

Q) Define NAND gate?

ANS) The NAND gate is the inversion of AND gate. It reverses the output of AND gate. It produces LOW output only when all the inputs are HIGH. Otherwise it produces HIGH output.

REMEMBER!
Logic function of NAND gate is $Q = A \cdot B$

Table 6.5 Truth table of NAND gate

A	B	Q
0	0	1
0	1	1
1	0	1
1	1	0

Q) Define NOR gate?

ANS) The NOR gate is the inversion of OR gate. It reverses the output of OR gate. It produces HIGH output only when all the inputs are LOW. Otherwise it produces LOW output.

REMEMBER!
Logic function of OR gate is $Q = A + B$

Table 6.6 Truth table of NOR gate

A	B	Q
0	0	1
0	1	0
1	0	0
1	1	0

Q) Define NOT gate?

ANS) NOT gate changes the logic of the input. It reverses 0 to 1 and 1 to 0.

Table 6.7 Truth table of NOT gate

A	Q
1	0
0	1

REMEMBER!
Logic Function of NOT gate is $Q = \bar{A}$

Q) Differ between boolean algebra, truth table, digital signal and Binary number?

ANS)

BOOLEAN ALGEBRA	TRUTH TABLE	DIGITAL SIGNALS	BINARY NUMBER
This forms the algebraic expressions showing the operation of the logic circuit for each input variable either true or false that results in a logic "1" output.	A truth table defines the function of logic gate by providing a concise list. It shows all output states in a tabular form.	Data is represented in a computer with the help of electric pulses. These pulses are known as digital signals.	A binary number is made up of elements called bits where each bit can be in one of the two possible states. We represent them with numerals 1 and 0.

Q) Write logical operation with symbols, meanings and examples?

ANS)

Table 6.11 Logical operation with its symbol, meaning and example

Operation	Symbol	Example	Meaning
NOT	(bar)	A NOT A	(complement, inversion or negation)
AND	• (dot)	A • B	A AND B
OR	+ (plus sign)	A + B	A OR B
XOR	⊕	A ⊕ B	A XOR B

CHAPTER NO 7
WORLD WIDE WEB AND HTML

Q) Differ between WWW, web page, website and web browser?

ANS)

WWW	WEB PAGE	WEB BROWSER	WEBSITE
The world wide web is a collection of web pages on the internet. It contains a variety of information that can be accessed by the people all over the world.	A webpage is a document on world wide web. It can contain text, graphics, audio, videos and links to other pages.	A web browser is a software that is used to access the world wide web.	A website is a collection of related web pages. Each website contains a number of documents and files.

Q) Differ between web server, URL, search engine and web hosting?

ANS)

WEB SERVER	URL	SEARCH ENGINE	WEB HOSTING
A computer on which a web page or website is stored is known as web server.	URL (uniform resource location) is an address of a webpage on the internet.	Search engine is a program that is used to find web pages and websites on internet.	Web hosting is the service which provides online storage space for a webpage.

Q) Differ between HTML, HTML tags, head element and body element?

ANS)

HTML	HTML TAGS	HEAD ELEMENT	BODY ELEMENT
HTML (Hyper text markup language) is a markup language which is used to create electronic documents on the	HTML tags are keywords which denote Different elements in an HTML document. HTML tags are enclosed in a pair	Head elements contains the information about the document.	Body elements defines the documents body. This element comes after the head element.

internet.	of angular brackets. <>		
-----------	-------------------------	--	--

Q) Define frames? Differ between hyperlink and anchor?

ANS) Frames allow you to divide the webpage into several independent parts or panes.

HYPERLINK	ANCHOR
A hyperlink is an icon, graphic or text in a document that links to another file or object.	An anchor is a piece of text which marks the beginning and/or the end of hypertext link.

SOME IMPORTANT SHORT QUESTIONS FROM ALL CHAPTERS

Q) Differ between ANSI, continue statement, educational website and karnaugh map?

ANS)

ANSI	CONTINUE STATEMENT	EDUCATIONAL WEBSITE	KARNAUGH MAP
ANSI is the acronym for the American national standards institute. It was found in 1918. ANSI is a voluntary organization that creates standards for the computer industry.	It is sometimes desirable to skip some statements inside the loop. In such cases continue statement is used.	Educational websites allow user to solve Different educational problem on the internet.	The karnaugh map provides a simple and straight forward method of minimizing boolean expression.

Q) Define object oriented language? Differ between order of precedence, web portal, plan a situation and structured language?

ANS) Object oriented language uses objects and classes to control the coding of a program.

ORDER OF PRECEDENCE	WEB PORTAL	PLAN A SITUATION	STRUCTURED LANGUAGE
The order in which arithmetic operations are performed to evaluate an expression is called order of precedence.	A portal is a website that provides a broad array of services such as email, forums, online shopping etc.	After defining and analyzing the problem, we should plan the situation. In this phase, we access how can we get the solution of the particular problem	Structured language uses a logical structure to the coding of a program that makes it easier to understand and follow.

MOST PROBABLE LONG QUESTION PAIRING SCHEME

LONG NUMBER 1

CHAPTER NO 1 (PROGRAMMING TECHNIQUES)

LONG NUMBER 2

CHAPTER NUMBER	CHAPTER NAME
CHAPTER NO 4	CONTROL STRUCTURE
CHAPTER NO 5	LOOP STRUCTURE

LONG NUMBER 3

CHAPTER NUMBER	CHAPTER NAME
CHAPTER NO 6	COMPUTER LOGIC AND GATES
CHAPTER NO 7	WORLD WIDE WEB AND HTML

MOST IMPORTANT LONG QUESTIONS

CHAPTER NO 1 (PROGRAMMING TECHNIQUES):

Describe flowchart with standard flowchart symbols

And construct by following flowcharts

A flowchart to find the sum, product and average of given five number

A flowchart to find the acceleration of a moving object with given mass and the force applied

A flowchart to find the volume of a cube

A flowchart to find the volume of a cylinder

A flowchart to find the area of triangle

A flowchart to find the area of trapezium

A flowchart to find the simple interest on an amount

A flowchart to convert temperature from Celsius to Fahrenheit and vice versa

A flowchart to calculate GCD of two given numbers

Describe algorithm and write the following algorithms

Algorithm to find out sum, product and average of given five number

Algorithm to find acceleration of a moving object with given mass and the force applied

Algorithm to find percentage of obtained marks

Algorithm to find the volume of a cylinder

Algorithm to find the area of triangle

Algorithm to find the area of parallelogram

CHAPTER NO 4 (CONTROL STRUCTURES):

Structure and use of following statements

IF Statement

IF-ELSE Statement

IF-ELSE-IF Statement

Composition of switch statement

Write the following programs

C program to find the sum, product and average of given five number

C program to find largest number using nested if statement

C program to find the acceleration of a moving object with given mass and force applied

C program to find the positive and negative number

C program to find the simple interest on an amount

CHAPTER NO 5 (LOOP STRUCTURE):

C program to calculate the exponent of a number

C program determine whether a given number is prime or not

While loop

Do-While loop

CHAPTER NO 6 (COMPUTER LOGIC AND GATES):

All logic gates with their truth table

Simplification using K-Map

CHAPTER NO 7 (WORLD WIDE WEB AND HTML):

Introduction to HTML

All practicals about HTML