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Section = B
PAPER = Introduction to Computer Programing.

Q1 Part (b)

ANSWER

ERROR:-

A error is Something you have done which is Considered to be incorrect or wrong or which should not have been done. ERROR occur during the execution of a program are listed below.

Errors

- → Syntax error
- → Run time error
- → Logical error.

②

→ SYNTAX ERROR :-

Error occur when our program Contains grammatical errors.

OR

Error that ocur when you violate the rules of writting C/C++ Syntax are known as Syntax error. This Compiler error indicates Something that must be fixed before the code can be Compiled.

Ex:

Suppose we don't put Semicolon at the end of a statement.

→ RUN TIME ERROR :-

These error occur while the programe is Runing.

If there are no syntax errors. Java may detect an error while your program is running.

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You will get an error message telling you the kind of error.

```
//C program to illustrate
//  run-time error
#include< stdio.h>
void main()
{
    int n=9 , div=0;

    // wrong logic
    // number is divided by 0,
    // So this program abnormally t
    div = n/0;

    printf("resut = %d", div);
```

Error:

```
warning: division by zero[-Wdiv-by-
zero]
    div=n/0;
```

This is e.g of run-time error.

→ LOGICAL ERROR :-

Error Such as calulation mistakes etc. On Compilation and execution of a program, desired output is not obtained when certain input values are given. These types of errors which provide incorrect output but appears to be error free are called logical error.

```
// C program to illustrate
// logical error.
int main( )
{
  int i = 0
// logical error : a semicolon
for (i=0; i < 3; i++);
{
    printf(" loop ");
        Continue;
}
```

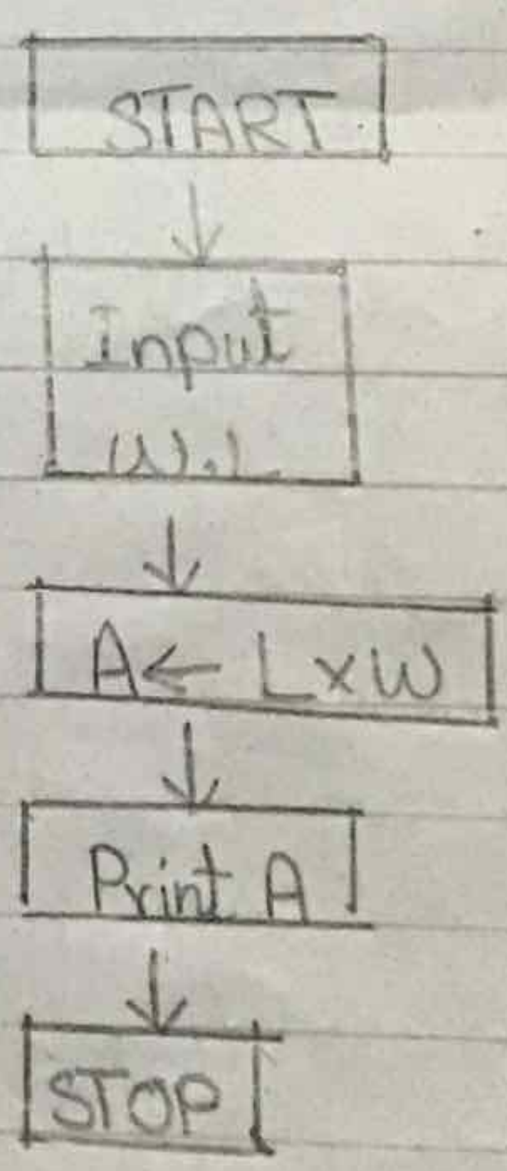
```
    getchar( );
    return 0;
}
```

No output.

Q1(a) Write an algorithm and draw a flowchart that will read the two sides of a rectangle and Calculate its area.

Algorithm

- Step 1: Input W, L
- Step 2: A ← L x W
- Step 3: Print A



Q2(a) = Why we use ...?

ANSWER :- Uses of Iostream.h and Conio.h in C++ are given below.

Iostrem.h :-

The frist include statment includes a file named iosstream.h. This file defines the input-output streams used in transferring data from or to the program, such as in Cout << " Hello " << endl; and the operator " << " is for inserting the string " Hello " in the output stream or basically on your computer monitor.

Conio.h :-

.h is a C header file used mostly by MS-DOS Compilers to provide Console input/output. It is not part of the C standard or ISO C, nor is it defined by POSIX. This header

and understand

declares several useful libra
or ISO C, nor is it definied
by POSIX. This header declares
several useful libary functions
for performing "Console input and
output" from a program.

Q2(b)

Maintain and Update the program:

Maintenance and update are the modification of a Software product after delivery to correct faults, to improve performance or other attributes, or to adapt the product to a modified environment.

Maintain and Update the program:

Types of Maintence:

(a) perspective of maintence:

Modification of a software product after delivery to improve performance or maintainability. it deals with

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updating the software according to changes in user requirements.

(b) **Preventive maintenance:**

Modification of a software product after delivery to detect and correct latent faults in the software product before they become effective faults. It deals with updating documentation and making the software more maintainable.

Q3 Differentiate between the following.

(a) **Bug & Debug**

As verbs the difference between debug and bug is that debug is (computer science) to search for and eliminate malfunctioning elements or errors is something especially a computer program or machinery while bug is (informal / transitive) to annoy;

(b) Syntax error & Logical error

Syntax Error:

In computer science, a syntax error is an error in the syntax of a sequence of characters or tokens that is intended to be written in compile-time. A program will not compile until all syntax errors are corrected.

Logical Errors:

A logical error is a mistake in a program's source code that results in incorrect or unexpected behavior. It is a type of runtime error that may simply produce the wrong output or may cause a program to crash while running. Many different types of programming mistakes can cause logic errors.

(c) Compiler and Assembler.

Compiler:

Compiler converts the source code written by the programmer to a

machine level language.

Assembler:

Assembler converts the assembly code into the machine code. Assembler input assembly language code. It converts the whole code into machine language at a time.

(d) System software & Application software:

System software is used for operating computer hardware. on other hand application software is used by user to perform specific task. system software are installed on the computer when operating system is installed. on other hand application software are installed according to users requirements.

e) Low level language & high level language:

high-level language	low level language
→ high-level languages are easy to learn and understand	low-level languages are chavenging to learn and understand.

→ They are executed slower than lower level languages because they require a translator program.	They execute with high speed.
→ They allow much more abstraction	They allow little or no abstraction
→ They don't provide many facilities at the hardware level.	They are very close to the hardware and help to write a program at the hardware level.