Model Question Paper C-PROGRAMMING FOR PROBLEM SOLVING (18CPS13/23) Time: 3 hrs. Max. Marks: 100 Note: Answer any FIVE full questions, choosing one full question from each module. MODULE 1 1 an Explain different types of computer. (6Marks)

1) Explain different types of computer.

[**There are different types of computers based on various criteria, such as1**](https://history-computer.com/the-4-different-types-of-computers-with-examples/)[**2**](https://computer.howstuffworks.com/10-types-of-computers.htm)[**3**](https://www.partitionwizard.com/partitionmanager/types-of-computers.html):

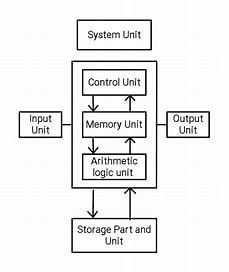
* Use: general purpose, special purpose/embedded
* Size/power: supercomputers, mainframe computers, minicomputers, microcomputers
* Handling capabilities: analog, digital, hybrid
* Form factor: desktops, laptops, tablets, hand-held computers, wearable computers
* Function: servers, workstations, personal computers

2) What is Software? Explain different types of software.

[**Software is a set of programs that enables the hardware to perform a specific task1**](https://www.javatpoint.com/software)[**2**](https://www.businessinsider.com/guides/tech/what-is-software)[**3**](https://www.futurelearn.com/info/courses/computer-systems/0/steps/53500). There are three types of software:

* [System software: This software is responsible for managing the computer's resources, such as memory and processing power. Examples include operating systems like Windows and macOS**1**](https://www.javatpoint.com/software)[**3**](https://www.futurelearn.com/info/courses/computer-systems/0/steps/53500).
* [Application software: This software is designed to perform specific tasks, such as word processing or photo editing. Examples include Microsoft Word and Adobe Photoshop**1**](https://www.javatpoint.com/software)[**3**](https://www.futurelearn.com/info/courses/computer-systems/0/steps/53500).
* [Programming software: This software is used to create other software programs. Examples include compilers and debuggers**1**](https://www.javatpoint.com/software).

3) With a neat diagram explain the basic structure of a computer?



4) Explain a general structure of C program with an example

// Documentation

/\*\*

\* file: sum.c

\* author: you

\* description: program to find sum.

\*/

// Link

#include <stdio.h>

// Definition

#define X 20

// Global Declaration

int sum(int y);

// Main() Function

int main(void)

{

int y = 55;

printf("Sum: %d", sum(y));

return 0;

}

// Subprogram

int sum(int y)

{

return y + X;

}

5) What is a token? What are different types of tokens available in C language? Explain?

Tokens are the smallest elements of a program, which are meaningful to the compiler.

The following are the types of tokens: Keywords, Identifiers, Constant, Strings, Operators, etc.

Let us begin with Keywords.

The various types of tokens in C are as follows −

* **Identifiers** − This refers to the name of the functions, variables, arrays, structures, etc.
* **Operators** − These are the symbols that tells to the C compiler to perform some logical, mathematical, or relational operations.
* **Special Characters** − All characters except alphabets and digits are called special characters.
* **Constants** − Some fixed values that cannot be changed during the program execution are known as constant terms
* **Keywords/Reserved Names** − These are Predefined words with some special meanings that cannot be used as variable names.

OR

6) Evaluate the following expressions:

i) 22 + 3 < 6 && !5 || 22 = =7 && 22 – 2 > +5

ii) a + 2 > b || !c && a = = d \*a – 2 < = e Where a=11, b=6, c=0, d = 7 and e=5.