HIGHER SECONDARY FIRST YEAR

PUBLIC EXAMINATION – MAY 2022

COMPUTER SCIENCE KEY ANSWERS

PART-I

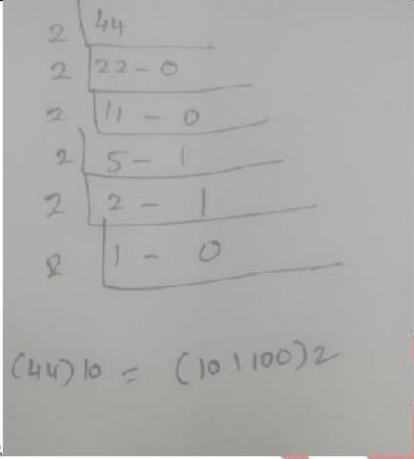**Answer All the Questions**   **15 x 1=15**

Q. NO	OPTION	ANSWER	Mark
1	a	Third	1
2	b	D	1
3	a	Cache Memory	1
4	b	MS-DOS	1
5	a	Edit –> Paste	1
6	a	S2	1
7	c	Bjarne Stroustrup	1
8	a	3	1
9	b	9	1
10	d	10	1
11	a	array	1
12	d	Reusability	1
13	c	Member functions	1
14	b	Computer ethics	1
15	a	Android	1

PART-II

Answer any six questions. Question no 24 is compulsory   6x2=12

Q. NO	ANSWER	Mark
16.	➤ UNIX ➤ Microsoft Windows ➤ Linux ➤ iOS ➤ Android	2
17.	 $(44)_{10} = (101100)_2$	2
18.	The icons which are available on desktop by default while installing Windows OS are called standard icons.	2
19.	An algorithm is a sequence of instructions to accomplish a task or solve a problem (or) An algorithm is a step by step sequence of statements intended to solve a problem.	2
20.	The declaration of a 2-D array is data-type array_name[row-size][col-size];	2
21.	The ability of the function to process the message or data in more than one form is called as function overloading	2
22.	• The derived class inherits all the properties of the base class. • It is a power packed class, as it can add additional attributes and methods and thus enhance its functionality	1 1
23.	❖ TSCII (Tamil Script Code for Information Interchange) is the first coding system to handle our Tamil language ❖ This encoding scheme was registered in IANA (Internet Assigned Numbers Authority) a unit of ICANN.	2
24.	➤ To indicate the function does not return a value	2

	➤ To declare a generic pointer.	

PART-III

Answer any six questions. Question no 33 is compulsory   6x3=18

25.	The microprocessors can be classified as follows: • 8-bit microprocessor • 16-bit microprocessor • 32-bit microprocessor • 64-bit microprocessor	3
26.	➤ Sixth Generation, computers could be defined as the era of intelligent computers, based on Artificial Neural Networks. ➤ One of the most dramatic changes in the sixth generation will be the explosive growth of Wide Area Networking. ➤ Natural Language Processing (NLP) is a component of Artificial Intelligence (AI). ➤ It provides the ability to develop the computer program to understand human language.	3
27.	• Case analysis statement generalizes it to multiple cases. • Case analysis splits the problem into an exhaustive set of disjoint cases. **Example:** 1. case C1 2. S1 3. case C2 4. S2 5. case C3 6. S3 7. else 8. S4	2 1
28.	Yes C+– is a case sensitive C++ is case sensitive as it treats upper and lower-case characters differently	1 2

29.	**Null statement :**
	➤ The **"null** or **empty statement"** is a statement containing only a semicolon.
	➤ It takes the flowing form:
	; // it is a null statement
	➤ Null statements are commonly used as placeholders in iteration statements or as statements on which to place
		1 ½

	labels at the end of compound statements or functions
	Compound statement:
	 ➤ C++ allows a group of statements enclosed by pair of braces {}. This group of statements is called as a compound statement or a block.
	
	The general format of compound statement is:
	{
	statement1;
	statement2;
	statement3;
	}
		1 ½

30.	The switch statement is a multi-way branch statement.
	It provides an easy way to dispatch execution to different parts of code based on the value of the expression.
	The switch statement replaces multiple if-else sequence.
	 Syntax:
	
	switch(expression)
	{
	case constant 1:
	statement(s);
	break;
	case constant 2:
	statement(s);
	break;
	.
	.
	.
	.
	default:
	statement(s);
	}
		1 ½
		
		1 ½

31.	- We can also define new functions to perform a specific task. - These are called as **user-defined functions**. - User-defined functions are created by the user. - A function can optionally define input parameters that enable callers to pass arguments into the function. - A function can also optionally return a value as output	3
32.	➤ An Ethical issue is a problem or issue that requires a person or organization to choose between alternatives that must be evaluated as right (ethical) or wrong (unethical). ➤ These issues must be addressed and resolved to have a	1 ½

	positive influence in society ➢ Some of the common ethical issues are listed below: ▪ Cyber crime ▪ Software Piracy ▪ Unauthorized Access ▪ Hacking ▪ Use of computers to commit fraud ▪ Sabotage in the form of viruses ▪ Making false claims using computers Write any 3 ethical issues	1 ½

33.	```cpp
	#include <iostream>
	using namespace std;
	int main ()
	{
	int i=1,sum=0;
	while(i< 10)
	{
	sum=sum+i;
	i++;
	}
	cout<<"The sum of 1 to 10 is "<<sum;
	return 0;
	}
	``
	Output
	The sum of 1 to 10 is 55
		3

PART-IV

Answer all questions.   5x5=25

| 34.a) | **Data:**
Data is defined as an un- processed collection of raw facts, suitable for communication, interpretation or processing.
Example:
134, 16 'Kavitha', 'C' (OR) **Any Suitable Example**
Information:
Information is a collection of facts from | 3 |

	which conclusions may be drawn. Example: Kavitha is 16 years old.(OR) **Any Suitable Example** **Diagram** **Computer definition**		1

1 |
| b) | ➢ Read Only Memory refers to special memory in a computer with pre-recorded data at manufacturing time which cannot be modified
 ➢ Once the data has been written onto a ROM chip, it cannot be modified or removed and can only be read.
 ➢ ROM is called as a non-volatile memory
 PROM,EPROM,EEPROM Explanation | | 1½

3 |
35.a	Not in reduced syllabus		
b)	square_root (x) -- inputs: x is a real number , x ≥ 0 -- outputs: y is a real number such that y2=x		5

36.a)	Explain Error details
	     Syntax Error
	     Semantic Error
	     Run time error
			5

b)	The switch statement is a multi-way branch statement. It provides an easy way to dispatch execution to different parts of code based on the value of the expression. The switch statement replaces multiple if-else sequence.
	  Syntax:
	
	 switch(expression)
	 {
	 case constant 1:
	 statement(s);
	 break;
	 case constant 2:
	 statement(s):
			3

	break;
	.
	.
	.
	.
	default:
	statement(s);
	}
	
	Any Suitable Example
			2

37.a)	Explain Part of loop
	
	  ➢ Every loop has four elements that are used for different purposes.
	  ➢ These elements are
	    • Initialization expression
	    • Test expression
	    • Update expression
	    • The body of the loop
			5

b)	Enter Number 1 78 Enter Number 2– 51 Enter Number 3= 32 Enter Number 4= 66 Enter Number 5= 41 Enter Number 6 68 Enter Number 7 27 Enter Number 8= 65 Enter Number 9= 28 Enter Number 10= 94 There are 6 Even Numbers There are 4 Odd Numbers (or) Write any input and output		5
38 b)	Advantages of object oriented programming **Re-usability:** "Write once and use it multiple times" you can achieve this by using class. **Redundancy:**		5

	Inheritance is the good feature for data redundancy. If you need a same functionality in multiple class you can write a common class for the same functionality and inherit that class to sub class.	
	Easy Maintenance:	
	It is easy to maintain and modify existing code as new objects can be created with small differences to existing ones.	
	Security:	
	Using data hiding and abstraction only necessary data will be provided thus maintains the security of data	

38) a)

Line No	Error Coding	Corrected Coding
1	%include(iostream.h)	#include<iostream>
3	Class A	class A
5	public;	public:
6	int a1,a2:a3;	int a1,a2,a3;
7	Void getdata[ ]	void getdata( )
10	a2−13;a3−13;	a2−14;a3−13
12	}	};
13	class B::public A( )	class B:public A
15	PUBLIC	public:
16	voidfunc( )	void func( )
18	int b1:b2:b3	int b1,b2,b3
19	A::getdata[ ];	A::getdata( )
23	cout<<b1<<'\ t'<<b2<<'t\'<<b3	cout<<b1<<'\ t'<<b2<<'\t'<<b3
		};
29	dcr1:func( );	dcr.func( );