

**CHRIST THE KING BOYS MATRIC HR. SEC. SCHOOL,
KUMBAKONAM – 612 001**

XI STD HALF – YEARLY COMPUTER SCIENCE ANSWER KEY 2023

SECTION – I

I. CHOOSE THE CORRECT ANSWER:

1. b) Second
2. a) Intel P6
3. d) IOS
4. b) Abstraction
5. d) 5
6. b) Loop Invariant
7. a) >>>
8. c) endl
9. d) main()
10. c) 0
11. a) struct
12. a) Inheritance
13. c) dispchar();
14. b) Constructor
15. d) Cookies

SECTION – II

Q. NO.	ANSWER	MARK ALLOTMENT
16.	☞ NAND, NOR, XOR and XNOR are derived gates which are derived from the fundamental gates.	2 marks
17.	<ul style="list-style-type: none"> ☛ GUI (Graphical User Interface) ☛ The GUI is a window based system with a pointing device to direct I/O, choose from menus, and make selections and a keyboard to enter text. ☛ Its vibrant colours attract the user very easily. ☛ Beginners are impressed by the help and pop up window message boxes. 	1 mark 1 mark
18.	<ul style="list-style-type: none"> ☞ It is an electronic device that processes the input according to the set of instructions provided to it and gives the desired output at a very fast rate. ☞ Computers have revolutionized our lives with their accuracy and speed of performing a job, it is truly remarkable. 	1 mark 1 mark
19.	<ul style="list-style-type: none"> ♣ Sequential Statement ♣ Selection Statement ♣ Iteration Statement 	2 marks
20.	<ul style="list-style-type: none"> ❖ Keywords are the reserved words which convey specific meaning to the C++ compiler. ❖ They are the essential elements to construct C++ programs. ❖ The keywords are common to C, C++ and Java. ❖ C++ is a case sensitive programming language so, all the keywords must be in lowercase. ❖ Eg: auto, local ❖ No, Keywords cannot be used as identifiers. 	1 mark 1 mark
21.	<ul style="list-style-type: none"> ◆ Arguments or parameters are the means to pass values from the calling function to the called function. ◆ The variables used in the function definition as parameters are known as Formal Parameters. ◆ The constants, variables or expressions used in the function call are known as 	1 mark 1 mark

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	Actual Parameters.	
22.	☆ Number of Elements=5 characters ☆ Memory allocation= 5 bytes	1 mark 1 mark
23.	⊕ Polymorphism is the ability of a message or function to be displayed in more than one form.	2 marks
24.	⊕ The purpose of the destructor is to free the resources that the object may have acquired during its lifetime.	1 mark
	⊕ A destructor function removes the memory of an object which was allocated by the constructor at the time of creating an object.	1 mark

SECTION – III

Q. NO.	ANSWER	MARK ALLOTMENT	
25.	⊗ Binary: 10100100 ⊗ Octal: 530 ⊗ Hexadecimal: 154	1 mark 1 mark 1 mark	
26.	CD	DVD	3 marks
	<input checked="" type="checkbox"/> CD means Compact Disc	<input checked="" type="checkbox"/> DVD means Digital Versatile Disc	
	<input checked="" type="checkbox"/> A CD or CD-ROM is made from 1.2 millimeters thickness.	<input checked="" type="checkbox"/> DVD is around 0.6 mm thickness.	
	<input checked="" type="checkbox"/> Capacity of CD is 700 MB	<input checked="" type="checkbox"/> Capacity of DVD is 4.7 GB	
	<input checked="" type="checkbox"/> Single-layered sides are usually silver-coloured.	<input checked="" type="checkbox"/> Double-layered sides are usually gold-coloured.	
	<input checked="" type="checkbox"/> CD has a single pit layer	<input checked="" type="checkbox"/> DVD has a double layer of pits.	
27.	<input checked="" type="checkbox"/> Cortana voice activated personal assistant.	3 marks	
28.	✧ Flowchart is a diagrammatic notation for representing algorithms. They give a visual intuition of the flow of control, when the algorithm is executed.	1 mark	
	✧ Pseudo code is a notation similar to programming languages. Algorithms expressed in pseudo code are not intended to be executed by computers, but for communication among people.	1 mark	
	✧ A programming language is a notation for expressing algorithms to be executed by computers.	1 mark	
29.	✓ The mechanism of giving special meaning to an operator is known as operator overloading. The following are the operators that cannot be overloaded	1 mark	
	✓ scope operator ::	2 marks	
	✓ sizeof		
	✓ member selector .		
	✓ member pointer selector *		
✓ ternary operator ?:			
30.	isupper()	toupper()	3 marks
	☛ This function is used to check whether a character is in upper case (capital letter) or not.	☛ This function is used to convert the given character into its uppercase.	
	☛ This function return a non-zero value, if the given character is a upper case alphabet, else it returns 0.	☛ This function will return the upper case equivalent of the given character.	
		☛ If the given character itself is in upper case, the output will be the same.	

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	<ul style="list-style-type: none"> ☛ Syntax: isupper(char c); ☛ Example: int n = isupper('a'); //the value of n is zero. int r = isupper('A'); //the value of r is non – zero value. 	<ul style="list-style-type: none"> ☛ Syntax: toupper(char c); ☛ Example: char c = toupper('k'); //the character K is assigned to c 	
31.	<ul style="list-style-type: none"> ♣ Emphasis on algorithm rather than data ♣ Programs are divided into individual modules ♣ Each module is independent of each other and have their own local data ♣ Modules can work with its own data as well as with the data passed to it. ♣ Example: Pascal and C 		3 marks
32.	<ul style="list-style-type: none"> ☒ Inside the Class Definition ☒ Outside the Class Definition with Syntax and Example 		1 mark 2 marks
33.	<pre>#include<iostream> using namespace std; int main() { int n=75,i=1; while(i<=n) { cout<<i<<"\t"; i=i+2; } }</pre>		3 marks

SECTION - IV

Q. NO.	ANSWER	MARK ALLOTMENT
34. a)	First Generation of Computer Second Generation of Computer Third Generation of Computer Fourth Generation of Computer Fifth Generation of Computer & Sixth Generation of Computer	1 mark 1 mark 1 mark 1 mark 1 mark
b)	Characteristics of a Microprocessor Clock Speed Instruction Set Word Size	1 mark 1 mark 2 mark 1 mark
35. a)	Local Scope Function Scope File Scope Class Scope Example	1 mark 1 mark 1 mark 1 mark 1 mark
b)	Types of Errors Syntax Error Semantic Error Run Time Error	1 mark 2 mark 1 mark 1 mark
36. a)	Entry Controlled Loop Definition Syntax Example	1 mark 1 mark 1 mark 2 mark

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b)	Program	5 marks
37. a)	Single Inheritance	1 mark
	Multiple Inheritance	1 mark
	Multi – level Inheritance	1 mark
	Hierarchical Inheritance	1 mark
	Hybrid Inheritance	1 mark
b)	Malware	1 mark
	Phishing	1 ½ marks
	Pharming	1 ½ marks
	MITM	1 mark
38. a)	Any 5 differences	5 marks (each 1 mark)
b)	Program is not given fully.	5 marks