

**DIRECTORATE OF GOVERNMENT EXAMINATIONS, CHENNAI- 6  
HIGHER SECONDARY FIRST YEAR EXAMINATION - MARCH 2024  
COMPUTER SCIENCE - KEYANSWER**

**Note:**

1. Answers written only in **BLACK** or **BLUE** should be evaluated.
2. Choose the correct answer and write the option code.
3. If one of them (option or answer) is wrong then award zero mark only.

**PART - I****Maximum Marks : 70****Answer all the questions.****15×1=15**

Q.No	Opt	Answer	Marks
1.	a)	Third generation	1
2.	d)	Abstraction	1
3.	d)	5	1
4.	b)	::	1
5.	d)	spam	1
6.	d)	*	1
7.	b)	for	1
8.	b)	Electronic Data Interchange	1
9.	d)	Encapsulation	1
10.	a)	55	1
11.	b)	F2	1
12.	a)	Copy Constructor	1
13.	a)	Word length	1
14.	d)	Graphics User Interface	1
15.	a)	Pentium III	1

## PART-II

Answer **any six** questions. Question number **24** is **compulsory****6×2=12**

Q.No	ANSWER		Marks
16.	<b>Primary Memory</b>	<b>Secondary Memory</b>	2
	The Primary memory is used to temporarily store the programs (or) It is volatile in nature.	The Secondary memory is used to store the data permanently. (or) It is non-volatile in nature.	
	Eg.RAM	Eg.Hard disk , CD or DVD	
17.	$(1324)_8 = (724)_{10}$		2
18.	It is used in computers and laptops that allow same data and applications to be accessed by multiple users at the same time.		2
19.	const is the keyword used to declare a constant. (or) const are data items whose values do not change during the execution of the program Eg: const int num=100;		2
20.	1. To indicate the function does not return a value. 2. To declare a generic pointer.		2
21.	Commercial programs that are made available to the public illegally are often called warez.		2
22.	<ul style="list-style-type: none"> <li>• Google</li> <li>• Bing</li> <li>• Yahoo</li> </ul> <p style="text-align: right;"><b>(Any Two Only)</b></p>		2
23.	An algorithm is a step – by - step sequence of statements / instructions to solve a problem.		2
24.	<b>Output:</b> 0 1 2 3 4 5 6 7		2

## PART-III

Answer **any six** questions. Question number **33** is **compulsory****6 x 3 = 18**

Q.No	Answer	Marks																		
25.	<ul style="list-style-type: none"> <li>Recycle bin is a special folder to keep the files or folders deleted by the user.</li> <li>which means we still have an opportunity to recover them.</li> </ul>	3																		
26.	<ul style="list-style-type: none"> <li>The keyword class has to be used</li> <li>The name of the derived class is to be given after the keyword class</li> <li>A single colon (:)</li> <li>The type of derivation (the visibility mode), namely private, public or protected.</li> <li>The name of the base class (parent class).</li> </ul> <p style="text-align: center;">(or)</p> <pre>class derived_class_name :visibility_mode base_class_name { // members of derivedclass };</pre>	3																		
27.	<ul style="list-style-type: none"> <li>State of a process is abstracted by a set of variables in the algorithm.</li> <li>The state at any point of execution is simply the values of the variables at that point.</li> <li>As the Values of the variable are changed the state changes.</li> </ul>	3																		
28.	<p>XOR Gate:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Input</th> <th>Output</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	Input		Output	A	B	C	0	0	0	0	1	1	1	0	1	1	1	0	3
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29.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">isupper()</th> <th style="width: 50%; text-align: center;">toupper()</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>This function is used to check the given character is uppercase</li> <li>General form isupper(char c);</li> </ul> <p style="text-align: center;">(or)</p> <p>Any One Example</p> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>This function is used to convert the given character into its uppercase.</li> <li>General form char toupper(char c);</li> </ul> <p style="text-align: center;">(or)</p> <p>Any One Example</p> </td> </tr> </tbody> </table>	isupper()	toupper()	<ul style="list-style-type: none"> <li>This function is used to check the given character is uppercase</li> <li>General form isupper(char c);</li> </ul> <p style="text-align: center;">(or)</p> <p>Any One Example</p>	<ul style="list-style-type: none"> <li>This function is used to convert the given character into its uppercase.</li> <li>General form char toupper(char c);</li> </ul> <p style="text-align: center;">(or)</p> <p>Any One Example</p>	3														
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Q.No	Answer	Marks
30.	CD	3
	<ul style="list-style-type: none"> <li>• CD stands for Compact Disc</li> <li>• Capacity : CD ROM is 700 MB</li> <li>• Polycarbonate plastic material</li> </ul>	
31.	DVD	3
	<ul style="list-style-type: none"> <li>• DVD stands for Digital Versatile Disc /Digital Video Disc</li> <li>• Capacity :4.7 GB</li> <li>• Optical Disc</li> </ul>	
31.	<ul style="list-style-type: none"> <li>• Monitor is the most commonly used output device to display the information.</li> <li>• Pictures on a monitor are formed with picture elements called pixels.</li> <li>• Types of Monitors: CRT,LCD,LED</li> </ul> <p style="text-align: right;"><b>(Any Relevant THREE Points)</b></p>	3
32.	An array is a collection of variables of the same type that are referenced by a common name. Types:	2
	<ul style="list-style-type: none"> <li>• One - dimensional arrays.</li> <li>• Two - dimensional arrays.</li> <li>• Multi - dimensional arrays.</li> </ul>	1
33.	<pre>#include&lt;iostream&gt; using namespace std; int main( ) { int n=5; do { cout&lt;&lt;n&lt;&lt;" "; n--; }while(n&gt;0); (or) while(n&gt;=1); return 0; }</pre> <p style="text-align: center;">(or)</p> <p style="text-align: right;">Any suitable program</p>	3

## PART – IV

Answer all the questions.

5×5=25

Q.No	Answer	Marks
34.(a)	Components of computer with a Diagram	2
	<p><b>Components:</b></p> <ol style="list-style-type: none"> <li>1. Input Unit</li> <li>2. Central Processing Unit</li> <li>3. Output Unit</li> <li>4. Memory Unit (with Explanation)</li> </ol>	3
(or)		

Q.No	Answer	Marks	
34 (b)	The Distributed operating system is used to access shared data and files that reside in any machine around the world using internet/ Intranet. <b>Advantages</b> <ul style="list-style-type: none"> <li>A user at one location can make use of all the resources available at another location over the network.</li> <li>Many computer resources can be added easily in the network.</li> <li>Improves the interaction with the customers and clients.</li> <li>Reduces the load on the host computer.</li> </ul>	2  3	5
35. (a)	i. $(11110000)_2$ ii. $(10000011)_2$ (or) $(0000011)_2$	2½ 2½	5
<b>(or)</b>			
(b)	The ability of the function to process the message or data in more than one form is called as function overloading. <b>Rules:</b> <ul style="list-style-type: none"> <li>The overloaded function must differ in the number of its arguments or data types.</li> <li>The return type of overloaded functions are not considered for overloading same data type.</li> <li>The default arguments of overloaded functions are not considered as part of the parameter list in function overloading.</li> </ul>	2  3	5
36. (a)	<b>Types of ROM :</b> ROM - Read only memory PROM - Programmable read only memory EPROM - Erasable Programmable read only memory EEPROM - Electrically Erasable Programmable read only memory ( With Explanation )	2  3	5
<b>(or)</b>			
(b)	<b>if...else</b>	<b>switch</b>	
	<ol style="list-style-type: none"> <li>Expression inside if statement decide whether to execute the if block or under else block.</li> <li>An if...else statement uses multiple statements for multiple choices.</li> <li>if...else statement checks for equality as well as for logical expression.</li> <li>The if statement evaluates integer, character, pointer or floating-point or Boolean type.</li> <li>If the condition is false the else block statements will be executed.</li> </ol>	<ol style="list-style-type: none"> <li>Expression inside switch statement decide which case to execute.</li> <li>Switch statement uses single expression for multiple choices.</li> <li>Switch checks only for equality.</li> <li>Switch statement evaluates only character or a integer data type.</li> <li>If the condition is false then default statements are executed.</li> </ol>	5

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37. (a)	<b>Output:</b> An output unit is any hardware component that conveys information to users in an understandable form <b>Output Devices :</b> <ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Printer</li> <li>3. Speakers</li> <li>4. Multimedia Projectors</li> <li>5. Plotter</li> </ol>	2	5																																																																
		(Note: Any THREE with Explanation)		3																																																															
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(b)	Constructor Roll no: 14 Marks : 100 Back to Main		5																																																																
38. (a)	<b>Types of Inheritance:</b> <ul style="list-style-type: none"> <li>• Single Inheritance</li> <li>• Multiple Inheritance</li> <li>• Multilevel Inheritance</li> <li>• Hierarchical Inheritance</li> <li>• Hybrid Inheritance</li> </ul>	2	5																																																																
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