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**

<table>
<tr><th>Q.No</th><th colspan="2">ANSWER</th><th>Marks</th></tr>
<tr><td rowspan="3">16.</td><td>Primary Memory</td><td>Secondary Memory</td><td rowspan="3">2</td></tr>
<tr><td>The Primary memory is used to temporarily store the programs (or)
It is volatile in nature.</td><td>The Secondary memory is used to store the data permanently. (or)
It is non-volatile in nature.</td></tr>
<tr><td>Eg.RAM</td><td>Eg.Hard disk , CD or DVD</td></tr>
<tr><td>17.</td><td colspan="2">$(1324)_8 = (724)_{10}$</td><td>2</td></tr>
<tr><td>18.</td><td colspan="2">It is used in computers and laptops that allow same data and applications to be accessed by multiple users at the same time.</td><td>2</td></tr>
<tr><td>19.</td><td colspan="2">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;</td><td>2</td></tr>
<tr><td>20.</td><td colspan="2">1. To indicate the function does not return a value.
2. To declare a generic pointer.</td><td>2</td></tr>
<tr><td>21.</td><td colspan="2">Commercial programs that are made available to the public illegally are often called warez.</td><td>2</td></tr>
<tr><td>22.</td><td colspan="2">• Google
• Bing
• Yahoo (Any Two Only)</td><td>2</td></tr>
<tr><td>23.</td><td colspan="2">An algorithm is a step – by - step sequence of statements / instructions to solve a problem.</td><td>2</td></tr>
<tr><td>24.</td><td colspan="2">Output:
0
1
2
3
4
5
6
7</td><td>2</td></tr>
</table>

PART-III

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

<table>
<tr><th>Q.No</th><th>Answer</th><th>Marks</th></tr>
<tr><td>25.</td><td>• Recycle bin is a special folder to keep the files or folders deleted by the user.
• which means we still have an opportunity to recover them.</td><td>3</td></tr>
<tr><td>26.</td><td>• The keyword class has to be used
• The name of the derived class is to be given after the keyword class
• A single colon (:)
• The type of derivation (the visibility mode), namely private, public or protected.
• The name of the base class (parent class).
(or)
class derived_class_name :visibility_mode base_class_name
{ // members of derivedclass };</td><td>3</td></tr>
<tr><td>27.</td><td>• State of a process is abstracted by a set of variables in the algorithm.
• The state at any point of execution is simply the values of the variables at that point.
• As the Values of the variable are changed the state changes.</td><td>3</td></tr>
<tr><td>28.</td><td>XOR Gate:
<table><tr><th colspan="2">Input</th><th>Output</th></tr><tr><th>A</th><th>B</th><th>C</th></tr><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></table></td><td>3</td></tr>
<tr><td>29.</td><td>isupper()
• This function is used to check the given character is uppercase
• General form
isupper(char c);
(or)
Any One Example</td><td>toupper()
• This function is used to convert the given character into its uppercase.
• General form
char toupper(char c);
(or)
Any One Example</td><td>3</td></tr>
</table>

<table>
<tr><th>Q.No</th><th colspan="2">Answer</th><th>Marks</th></tr>
<tr><td>30.</td><td>CD</td><td>DVD</td><td rowspan="2">3</td></tr>
<tr><td></td><td>• CD stands for Compact Disc
• Capacity : CD ROM is 700 MB
• Polycarbonate plastic material</td><td>• DVD stands for Digital Versatile Disc /Digital Video Disc
• Capacity :4.7 GB
• Optical Disc</td></tr>
<tr><td>31.</td><td colspan="2">• Monitor is the most commonly used output device to display the information.
• Pictures on a monitor are formed with picture elements called pixels.
• Types of Monitors: CRT,LCD,LED
(Any Relevant THREE Points)</td><td>3</td></tr>
<tr><td>32.</td><td colspan="2">An array is a collection of variables of the same type that are referenced by a common name.
Types:
• One - dimensional arrays.
• Two - dimensional arrays.
• Multi - dimensional arrays.</td><td>2

1</td></tr>
<tr><td>33.</td><td colspan="2">#include<iostream>
using namespace std;
int main( )
{
int n=5;
do
{
cout<<n<<",";
n--;
}while(n>0); (or) while(n>=1);
return 0;
}
(or)
Any suitable program</td><td>3</td></tr>
</table>

PART – IV

Answer all the questions. **5×5=25**

<table>
<tr><th>Q.No</th><th>Answer</th><th colspan="2">Marks</th></tr>
<tr><td>34.(a)</td><td>Components of computer with a Diagram
Components:
1. Input Unit
2. Central Processing Unit
3. Output Unit
4. Memory Unit (with Explanation)</td><td>2

3</td><td>5</td></tr>
<tr><td colspan="4">(or)</td></tr>
</table>

<table>
<tr><th>Q.No</th><th>Answer</th><th colspan="2">Marks</th></tr>
<tr><td>34
(b)</td><td>The Distributed operating system is used to access shared data and files that reside in any machine around the world using internet/ Intranet.
Advantages
• A user at one location can make use of all the resources available at another location over the network.
• Many computer resources can be added easily in the network.
• Improves the interaction with the customers and clients.
• Reduces the load on the host computer.</td><td>2

3</td><td>5</td></tr>
<tr><td>35.
(a)</td><td>i. $(11110000)_2$
ii. $(100000011)_2$ (or) $(00000011)_2$</td><td>2½
2½</td><td>5</td></tr>
<tr><td colspan="4">(or)</td></tr>
<tr><td>(b)</td><td>The ability of the function to process the message or data in more than one form is called as function overloading.
Rules:
• The overloaded function must differ in the number of its arguments or data types.
• The return type of overloaded functions are not considered for overloading same data type.
• The default arguments of overloaded functions are not considered as part of the parameter list in function overloading.</td><td>2

3</td><td>5</td></tr>
<tr><td>36.
(a)</td><td>Types of ROM :
ROM - Read only memory
PROM - Programmable read only memory
EPROM - Erasable Programmable read only memory
EEPROM - Electrically Erasable Programmable read only memory
(With Explanation)</td><td>2

3</td><td>5</td></tr>
<tr><td colspan="4">(or)</td></tr>
<tr><td>(b)</td><td><table><tr><th>if…else</th><th>switch</th></tr><tr><td>1. Expression inside if statement decide whether to execute the if block or under else block.
2. An if…else statement uses multiple statements for multiple choices.
3. if…else statement checks for equality as well as for logical expression.
4. The if statement evaluates integer, character, pointer or floating-point or Boolean type.
5. If the condition is false the else block statements will be executed.</td><td>1. Expression inside switch statement decide which case to execute.
2. Switch statement uses single expression for multiple choices.
3. Switch checks only for equality.
4. Switch statement evaluates only character or a integer data type.
5. If the condition is false then default statements are executed.</td></tr></table></td><td></td><td>5</td></tr>
</table>

<table>
<tr><th>Q.No</th><th>Answer</th><th colspan="2">Marks</th></tr>
<tr><td>37.
(a)</td><td>Output:
An output unit is any hardware component that conveys information to users in an understandable form
Output Devices :
1. Monitor
2. Printer
3. Speakers
4. Multimedia Projectors
5. Plotter
(Note: Any THREE with Explanation)</td><td>2

3</td><td>5</td></tr>
<tr><td colspan="4">(or)</td></tr>
<tr><td>(b)</td><td>Constructor
Roll no: 14
Marks : 100
Back to Main</td><td></td><td>5</td></tr>
<tr><td>38.
(a)</td><td>Types of Inheritance:
• Single Inheritance
• Multiple Inheritance
• Multilevel Inheritance
• Hierarchical Inheritance
• Hybrid Inheritance (Explanation)</td><td>2

3</td><td>5</td></tr>
<tr><td colspan="4">(or)</td></tr>
<tr><td>(b)</td><td colspan="2">
<table>
<tr><th>Line No</th><th>Error</th><th>Corrected</th></tr>
<tr><td>1</td><td>%include<iostream></td><td>#include<iostream></td></tr>
<tr><td>2</td><td>using namespace std:</td><td>using namespace std;</td></tr>
<tr><td>3</td><td>CLASS Shape</td><td>class Shape</td></tr>
<tr><td>5</td><td>Private()</td><td>private:</td></tr>
<tr><td>6</td><td>int count</td><td>int count;</td></tr>
<tr><td>7</td><td>Protected;</td><td>protected:</td></tr>
<tr><td>10</td><td>PUBLIC;</td><td>public:</td></tr>
<tr><td>11</td><td>Void setwidth [int w]</td><td>void setwidth(int w)</td></tr>
<tr><td>14</td><td>};</td><td>}</td></tr>
<tr><td>19</td><td>}</td><td>};</td></tr>
<tr><td>20</td><td>Class rectangle :: Public Shape</td><td>class rectangle : public Shape</td></tr>
<tr><td>22</td><td>Public</td><td>public:</td></tr>
<tr><td>23</td><td>int getarea[]</td><td>int getarea()</td></tr>
<tr><td>26</td><td>};</td><td>}</td></tr>
<tr><td>27</td><td>}</td><td>};</td></tr>
<tr><td>28</td><td>int MAIN()</td><td>int main()</td></tr>
<tr><td>30</td><td>rectangle rect:</td><td>rectangle rect;</td></tr>
<tr><td>31</td><td>rect. setwidth(5);</td><td>rect.setwidth(5);</td></tr>
<tr><td>33</td><td>cout>>”Total area:” <<rect.getarea()<<endl;</td><td>cout<<”Total area:” <<rect.getarea()<<endl;</td></tr>
<tr><td>35</td><td>};</td><td>}</td></tr>
</table>
(Any TEN Errors)
</td><td>5</td></tr>
</table>