DIRECTORATE OF GOVERNMENT EXAMINATIONS, CHENNAI – 6

HSE (FIRST YEAR) EXAMINATION, MARCH-2025

COMPUTER SCIENCE ANSWER KEY - ENGLISH MEDIUM

Note :

1. Only Answers written in Blue or Black ink should be evaluated
2. Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

Maximum Marks : 70

PART – I

Answer All the Questions : **15×1=15**

QNO.	OPTION	ANSWER	MARK
1	**(a)**	RAM	1
2	**(b)**	A	1
3	**(a)**	MS-DOS	1
4	**(d)**	4	1
5	**(b)**	S1 ; S3	1
6	**(d)**	Int	1
7	**(d)**	10	1
8	**(a)**	main()	1
9	**(c)**	t.seconds	1
10	**(b)**	Class	1
11	**(a)**	. (dot)	1
12	**(b)**	Function overloading	1
13	**(b)**	Base class	1
14	**(d)**	Warez	1
15	**(b)**	Tamil Script Code for Information Interchange	1

Part – II

Answer **Any Six** questions **Question No.24** is compulsory. **6×2=12**

Q. NO	ANSWER	MARKS
16	1.Control Unit 2. Arithmetic and Logic Unit 3. Memory Unit	2
17	The program counter(PC) is a special register in the CPU which always keeps the address of the next instruction to be executed	2
18	Standard icons are available on desktop by default while installing windows OS.	2
19	i) Sequential control flow ii) Alternative control flow (or) Selection Control iii) Iterative control flow	2
20	setw Manipulator sets the width of the field assigned for the output	2
21	Polymorphism is the ability of a message or function to be displayed in more than one form	2
22	i) Scope Operator(::) ii) size of iii) Member Selector(.) iv) Member Pointer Selector(*) v) Ternary Operator(? :) **(Any Two)**	2
23	Phishing is a type of computer crime used to attack, steal user data including login name, password and credit card numbers.	2
24	**Mere Attempt**	2

Part – III

Answer **Any SIX** questions **Question No.33** is compulsory. **6×3=18**

Q.NO	ANSWER	Marks
25	Binary to octal - $(101110101)_2 = (565)_8$ Binary to hexadecimal - $(101110101)_2=(175)_{16}$	3
26	1. User Interface 2. Memory Management 3. Process Management 4. Security Management 5. Fault Tolerance 6. File Management **(Any Three)**	3
27	Ignoring or Hiding unnecessary details and modeling and entity only by its essential properties is known as abstraction	3
28	• Recursion is an algorithm design technique. using recursion, we can solve a problem with a given input, by solving the instances of the problem with a part of the input. (OR) • A function that calls itself is known as recursive function. This technique is known as recursion.	3
29	1. An array of strings is a two dimensional character array 2. The first index denotes number of strings and second index denotes the length of the string	3
30	• Constructor without parameters (or) Default Constructors • Parameterized Constructor • Copy Constructor	3
31	**Private Visibility Mode :** The Public and Protected members of the base class become 'private" members of the derived class. **Protected Visibility Mode:** The protected and public members of the base class become 'protected' members of the derived class. **Public Visibility Mode:** • The protected members of the base class will be inherited as protected members of the derived class • The public members of the base class will be inherited as public members of the derived class.	3

	(or) • **Private** : It cannot be accessed from outside the class. • **Public** : Accessible from anywhere outside the class but within a program • **Protected** : It is similar to Private member, but it can be accessed in child classes	
32	• Tamil Virtual Academy is used for spreading Tamil to the entire world through internet • It was established by the Government of Tamilnadu on 17th February 2001 • It offers different courses in Tamil language, Culture, heritage etc	3

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

Part – IV

Answer all of the following Questions **5×5=25**

34 (a)	**Inkjet printers** • It use colour cartridges to create color tones • It work by spraying ionised ink • The speed → 1 – 20 PPM	2
	Multimedia Projector • It is used to produce output on a big screen • It display presentations in meeting halls and class rooms	2
	Barcode reader • It is a pattern printed in lines of different thickness • It scans the information and transmits to the computer (or) **QR code Reader** • It is a two dimensional barcode which can be read by a camera	1

	(OR)	
34 (b)	**Specifications :** 1. Circulate (A,B,C) 2. -- inputs: A,B,C all are real numbers 3. --outputs: A,B,C all are real numbers T:=C C:=B B:=A A:=T **Algorithm :** 1. Circulate (A,B,C) 2. T:=C 3. C:=B 4. B:=A 5. A:=T (or) (Any related Specification and Algorithm)	3 2
35 (a)	**Characteristics of a microprocessor** a) Clock speed b) Instruction set c) word size **Explanation** **(OR)**	2 3
35 (b)	**Definiton - Entry Control Loop –** The test expression is evaluated before the entering into a loop **Explain Anyone loop** (for or while)	2 3
36 (a)	**Add** : $1101010_2 + 101101_2 = 10010111_2$ **Subtract** : $11011011_2 - 111010_2 = 110001_2$ **(OR)**	5
36 (b)	• It copies the value of an actual parameter into the formal parameter • Changes made to the formal parameter will have no effect on the actual parameter Any suitable example	3 2

<table>
<tr><td>37
(a)</td><td>* Creating source code
* Saving source code with extension of .cpp
* Compilation
* Execution
Explanation
(OR)</td><td>2

3</td></tr>
<tr><td>37
(b)</td><td>Advantages of OOPS:
Re-usability
Redundancy
Easy Maintenance
Security
Explanation</td><td>

2

3</td></tr>
<tr><td>38
(a)</td><td><table><tr><th>L.No</th><th>Error code</th><th>Correct code</th></tr><tr><td>1</td><td>~ INCLUDE(iostream)</td><td>#include<iostream></td></tr><tr><td>2</td><td>~include<string.h></td><td>#include<string.h></td></tr><tr><td>6</td><td>PUBLIC:</td><td>public:</td></tr><tr><td>8</td><td>VIOD getstrings(char str[ ]):</td><td>void getstrings(char str[ ]):</td></tr><tr><td>10</td><td>strcpy(s,str):</td><td>strcpy(s,str);</td></tr><tr><td>13</td><td>}:</td><td>};</td></tr><tr><td>16</td><td>strcat(s:ob:s);</td><td>strcat(s,ob.s);</td></tr><tr><td>17</td><td>cout>>”\n concatenated string is:”<<s;</td><td>cout<<”\n concatenated string is:”<<s;</td></tr><tr><td>19</td><td>Int main[ ]</td><td>int main( )</td></tr><tr><td>21</td><td>string ob1,ob2;</td><td>strings ob1,ob2;</td></tr><tr><td>23</td><td>cout>> “\n Enter First String:”;</td><td>cout<< “\n Enter First String:”;</td></tr><tr><td>24</td><td>cin<<string1;</td><td>cin>>string1;</td></tr><tr><td>27</td><td>cin<<string2;</td><td>cin>>string2;</td></tr><tr><td>31</td><td>};</td><td>}</td></tr></table>(Any Ten Errors)</td><td>10×½=5</td></tr>
<tr><td>38(b)</td><td>Enter the age :
20
Enter the height :
153.5
Enter the weight :
45.6
The Values entered
20 153.5 45.6
(Or)
Error</td><td>5</td></tr>
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