DIRECTORATE OF GOVERNMENT EXAMINATIONS, CHENNAI – 6 HSE SECOND YEAR EXAMINATION, MARCH-2025 COMPUTER SCIENCE ANSWER KEY - ENGLISH MEDIUM

Maximum Marks: 70

Note:

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

PART - I

Answer All the Questions

15×1=15

Q.No.	Option Code	Answer	Mark
1	(c)	Definition	1
2	(a)	Constructor	1
3	(b)	LEGB	1
4	(c)	Half-interval search	1
5	(b)	Ternary	1
6	(a)	for	1
7	(d)	return	1
8	(a)	positive or negative numbers	1
9	(a)	ecneicS retupmoC	1
10	(d)	•	1
11	(b)	Chen	1
12	(b)	SELECT	1
13	(a)	Modification	1
14	(b)	OS module	1
15	(b)	Distinct	1

Part – II

Answer Any Six questions Question No.24 is compulsory.

6×2=12

O No	Ans wer	Marks
Q.No 16	Any way of bundling two values together into one can be considered as a pair.	1
	Eg: Lists (or) Any Suitable Example.	1
	Eg : Lists (or) Any Outrable Example.	
	i and in a selled	
17	To sort items in a certain order using the methods is called Sorting	
	(or)	2
	Sorting is a process of arranging group of items in an	
	ascending or descending order.	
18	Output:	
10	5 10 15	2
	3 10 13	_
10	Clining in a substaint of a wain string using by [1 aliging	2
19	Slicing is a substring of a main string using by [] slicing	
	operator.	
20	Destructor is a special method gets execution	2
	automatically when an object exits from the scope.	
21	Create a table – DDL - Data Definition Language	1
	(CREATE)	
-	 Values can be added to the table - DML Data 	1
	Manipulation Language (INSERT)	
		,
22	To change a directory 'cd' command is used.	2
	Any Suitable Example	-
23	You can install matplotlib using pip.	
	- 100 can matan matpion Tong pip.	2
24	OUTPUT	
	False	
	Welcome	1
		1

Part - III

Answer Any SIX questions Question No.33 is compulsory.

6×3=18

0.11-	Answer	Marks
2. No 25	 The variables used inside the function may cause side effects though the functions which are not passed with any arguments. In such cases the function is called impure function. When a function depends on variables or functions outside of its definition block, you can never be sure that the function will behave the same every time it's called. Example: random() function. 	3
26	Global Variable: (i). A variable which is declared outside of all the functions in a program. (ii). Global Variable can be accessed inside or outside of all the functions in a program. (Give Suitable Example)	
27	Assignment Operator	3
28	Ceil () Returns the smallest integer greater than or equal to x. Floor () Returns the largest integer less than or equal to x.	3
29	(i). List.remove(element). (ii). List.pop(index of an element) (or) List.pop() (iii). List.clear().	1 1

30	 Cross product is a way of combining two relations. The resulting relation contains, both relations being combined. (Any Suitable Example) 	3
31	reader work with list/tuple.	
	DictReader() work with dictionary	3
32	fetchone()	
	 The fetchone() method returns the next row of a query result set 	
	 None in case there is no row left. 	
	fetchmany()	3
	Displaying specified number of records is done by using fetchmany().	
	This method returns the number of rows of the result set.	
33	OUTPUT:	
	[1,4,9,16,25]	3

Part – IV Answer all of the following Questions

5×5=25

Q. No	Ansı	wer	Marks
34 a)	 Pure Function The return value of the pure functions solely depends on its arguments passed. If you call the pure functions with the same set of arguments, you will always get the same return values. They do not have any side effects. 	 Impure Function The return value of the impure functions does not solely depend on its arguments passed. If you call the impure functions with the same set of arguments, you might get the different return values They do have any side 	5
	 This function do not modify the arguments 	 effects This function may modify the arguments 	
	(Any Suitable Example)	OR)	

(b)	Types of a Data Model 1. Hierarchical Model 2. Relational Model	2
	3. Network Database Model	
	4. Entity Relationship Model	
	5. Object Model	
	Explanation	3
35	Types of Operator	2
(a)	1. Arithmetic operators	_
•	2. Relational or Comparative operators	
	3. Logical operators	
	4. Assignment operators	
	5. Conditional operator	
	Explanation	3
	(OR)	
(b)	UNIQUE Constraint - No two rows have the same value in the specified columns. PRIMARY KEY Constraint - Primary key which helps to uniquely identify a record. DEFAULT Constraint - To assign a default value for the field. CHECK Constraint - To set a limit value placed for a field. Explanation	5
36	while loop (Syntax)	2
(a)	while <condition>:</condition>	
	statements block 1	
	[else:	
	statements block2]	
	Explanation	2
	Any Suitable Example	1
	Any Oullable Example	1
(b)	(OR) Python File Modes	
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(b)	(OR) Python File Modes • 'r' - Open a file for reading. (default)	
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(b)	(OR) Python File Modes • 'r' - Open a file for reading. (default) • 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists.	
(b)	 (OR) Python File Modes 'r' - Open a file for reading. (default) 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. 'x' - Open a file for exclusive creation. If the file already 	5
(b)	(OR) Python File Modes • 'r' - Open a file for reading. (default) • 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. • 'x' - Open a file for exclusive creation. If the file already exists, the operation fails.	5
(b)	 (OR) Python File Modes 'r' - Open a file for reading. (default) 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. 'x' - Open a file for exclusive creation. If the file already exists, the operation fails. 'a' - Open for appending at the end of the file without 	5
(b)	Python File Modes • 'r' - Open a file for reading. (default) • 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. • 'x' - Open a file for exclusive creation. If the file already exists, the operation fails. • 'a' - Open for appending at the end of the file without truncating it. Creates a new file if it does not exist.	5
(b)	 (OR) Python File Modes 'r' - Open a file for reading. (default) 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. 'x' - Open a file for exclusive creation. If the file already exists, the operation fails. 'a' - Open for appending at the end of the file without truncating it. Creates a new file if it does not exist. 't' - Open in text mode. (default) 	5
(b)	Python File Modes • 'r' - Open a file for reading. (default) • 'w' - Open a file for writing. Creates a new file if it does not exist or truncates the file if it exists. • 'x' - Open a file for exclusive creation. If the file already exists, the operation fails. • 'a' - Open for appending at the end of the file without truncating it. Creates a new file if it does not exist.	5

	recursive. Recursion works	2
37 (a)	Functions that calls itself is known as recursive. Recursion works like loop but sometimes it makes more sense to use recursion than loop.	
	Overview of how recursive function works:	
	Recursive function is called by some external code. Recursive function is called by some external code. The program gives	
	If the base condition is met then the program gives	2
	meaningful output and exits.	
	Otherwise, function does some required processing and then	
	calls itself to continue recursion.	
	Any Suitable Example	1
	(OR)	
(b)	sys Module:	
	 This Module provides access to built-in varibales used by the interpretor 	
	sys.argv is the list of command-line arguments passed to the	
	Python program.	
	 The first argument, sys.argv[0] contains the name of the python 	
	Program	
	 sys.argv [1]is the next argument passed to the program (here it 	
	is the C++ file), which will be the argument passed through	
	main ().	
		11
-	os Module :	
	The os module in Python provides a way of using operating system dependent functionality.	5
	 The functions that the os module allows you to interface with the Windows operating system. 	
ul .		
	os.system ('g++ ' + <variable_name1> +' -<mode> ' +</mode></variable_name1>	
	<variable_name2>)</variable_name2>	
	getopt module :	
	The getopt module of Python helps you to parse (split) command-line options and arguments.	
	This module provides getopt() method to enable command- line	
	argument parsing. Syntax :	
	<pre><opts>,<args>=getopt.getopt(argv, options, [long_options])</args></opts></pre>	
	, algo getopitalgy, options, [long_options])	

38 (a)	Output {1, 2, 3, 4, 5, 6, 7, 8} {4, 5} {1, 2, 3} {6, 7, 8} {1,2,3,6,7,8} (OR)	1 1 1 1
(b)	Aggregate Function :	
	I、 AVG() - Finds the average	1
	II. COUNT() - Function returns the number of rows in a table	1
	III. SUM()- Finds the sum	1
	IV. MAX() - The largest value of the selected column.	1
	V. MIN() - The smallest value of the selected column.	1