Hall Ticket Number:

Code No. : 12035 (D)

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
B.E. (E.C.E: CBCS) II-Semester Main Examinations, January-2021
Problem Solving through Object Oriented Programming

Time: **2** hours

Max. Marks: **60**

Note: Answer any NINE questions from Part-A and any THREE from Part-B

Part-A *(9 × 2 = 18 Marks)*

Q. No.	Stem of the question	M	L	CO	PO
1.	Differentiate between static variable and instance variable with an example.	2	2	1	1

2.	What is output of the following code?
	#include<iostream.h>
	void main()
	{
	int i=0;
	i=i+1;
	cout<<i<<" ";
	i*=2;
	cout<<i;
	}
		2	4	1	1

3.	Define array and write the syntax to initialize the 1-D array.	2	1	2	1
4.	List the advantages of using functions.	2	1	2	1
5.	What is the advantage of copy constructor? Write its general syntax.	2	1	3	1
6.	Write is the significance of operator overloading and write its limitations.	2	2	3	1
7.	Write the general syntax for pure virtual function.	2	1	4	1
8.	show the diagrammatic representation of Hybrid inheritance	2	2	4	1
9.	List different keywords used in exception handling	2	1	5	1
10.	Define stack and list the applications of stack	2	1	5	1
11.	Differentiate between while and do-while loops	2	2	1	1
12.	Define stream. List the objects of I/O stream	2	1	2	1

Part-B (3 × 14 = 42 Marks)

			M	L	CO	PO
13.	a)	Explain salient features of Object Oriented Programming	7	2	1	1
	b)	Ravi joined in an Engineering college and he is allotted a rollno which is an integer. Write a program to accept the lucky digit of Ravi and count the number of occurrences of his lucky digit in his rollno.	7	3	1	1,2,3
14.	a)	Explain different parameter passing methods with suitable examples	6	2	2	1
	b)	An election is contested by five candidates. The candidates are numbered 1 to 5 and the voting is done by marking the candidate on the ballot paper. Write a program to read the ballots and count the votes cast for each candidate using an array variable count. In case a number read is outside the range 1 to 5, the ballot should be considered as a "spoilt ballot", and the program should also count the number of spoilt ballots.	8	4	2	1,2,3
15.	a)	Demonstrate runtime polymorphism with suitable example	7	2	3	1
	b)	Write a program to accept the name of a student and check if the name is palindrome or not.	7	3	3	1,2,3
16.	a)	List and explain various types of inheritances with suitable examples	7	2	4	1
	b)	Build a function template to Swap the contents of two given variables.	7	3	4	1,2
17.	a)	Construct a program to implement different stack operations using arrays	7	3	5	1,2
	b)	Write a program to accept the attendance of the student and issue the hallticket to write the exam (that is display the message that the hallticket is issued) if the attendance is greater than 75. Otherwise raise an exception and handle it appropriately.	7	3	5	1,2,3
18.	a)	Write a function to find and display the nth fibonacci number	7	3	1	1,2
	b)	Explain different access specifiers in C++ with suitable example	7	2	2	1
19.		Answer any *two* of the following:				
	a)	Demonstrate the concept of friend function with suitable example	7	2	3	1
	b)	Explain the significance of virtual base class.	7	2	4	1
	c)	Write a program to demonstrate the divide -by- zero exception	7	3	5	1,2

M: Marks;   L: Bloom's Taxonomy Level;   CO: Course Outcome;   PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	60
2	Knowledge on application and analysis (Level-3 & 4)	40
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable,)	0

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