Total No. of Questions – [3] Total No. of Printed Pages: IV

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DECEMBER 2022(INSEM+ ENDSEM) EXAM

F.Y. B. TECH. (SEMESTER - I)

COURSE NAME: Fundamentals of Programming

COURSE CODE: CS10202A

(PATTERN 2020)

Time: [2Hr] [Max. Marks: 60]

(*) Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data where ever required**
4) **Write correct syntax while writing program**

Question No.	Question Description	Marks	CO mapped	Blooms Taxonomy Level
Q.1	i. What will be the output of the statement "printf("%d %d",a++,a)"? (A) the value of (a+1) and current value of a (B) the value of (a+1) and (a-1) (C) current value of a and value of (a+1) (D) compiler error	[2]	CO1	A
	ii. Which one of the following comment is correct when MACRO definition includes arguments? (A) The opening parenthesis should immediately follow the macro name (B) There should be atleast one blank between macro name and parenthesis (C) There should be only one blank between macro name and parenthesis (D) All the above statements are wrong	[2]	CO1	A

	iii. What will be the output of following C code?
	`#include <stdio.h>`
	`int main()`
	`{`
	`int i=1;`
	`{`
	`int i=5,j=6;`
	`printf("%d%d",i,j);`
	`}`
	`printf("%d%d",i,j);`
	`return 0;`
	`}`
	(A) 5616
	(B) 1656
	(C) 5156
	(D) Compilation error
		[2]	CO1	A

	iv. How many times the following loop will get executed
	#include <stdio.h>
	int main()
	{
	int i;
	for(i=0;i<=10;i=i-1)
	{
	}
	}
	(A) 10 times
	(B) infinite times
	(C) zero
	(D) never
		[2]	CO1	A

	v. Which are the fundamental data types? 1. int 2. char 3. array 4. class (A) 1 and 2 (B) Only 3 (C) 3 and 4 (D) only 4	[2]	CO1	A
	vi. What is the name of "&" operator ? (A) Ampersand (B) Address of (C) OR (D) None of the above	[2]	CO1	A
	vii. Multiple values of the variable can b tested using --------? (A) switch (B) for (C) function (D) all of the above	[2]	CO1	A
	viii. High Level languages is a ? (A) Human Readable like language (B) Language with small program size (C) Language is very difficult to read and also interpret (D) Humans cannot use this languages	[2]	CO1	A

	ix. What will be the output of following C++ code?
	#include <iostream>
	using namespace std;
	int main()
	{
	int x = 3;
	x++;
	x++;
	if(x++ ==5)
	cout<<"FIVE "<<endl;
	else
	cout<<"SIX"<<endl;
	
	return 0;
	}
		[2]	CO2	A

	(A) No Output (B) FIVE (C) SIX (D) Compile error			
x.	C++ uses ----- and C uses ------ approach? (A) bottom-up and top-down (B) top –down and bottom-up (C) no approach (D) none of the above	[2]	CO2	A
xi.	What is the correct syntax to access an member function of an object if object is obj and void get() is member function ? (A) obj.get() (B) obj->get() (C) obj::get() (D) obj:get()	[2]	CO2	A

xii.	What will be the output of following C++ code?
	#include <iostream>
	using namespace std;
	int main()
	{
	int j= -10;
	cout<<"The value of j : "<<j++;
	return 0;
	}
	(A) The value of j : -10
	(B) The value of j : -9
	(C) The value of j : -11
	(D) Compiler Error
		[2]	CO2	A

xiii.	What is the output of the following C++ code?
	#include <iostream>
	using namespace std;
	
	int main()
	{
	}
	
	(A) Garbage
	(B) No Output
	(C) Compile Error
	(D) Run Time Error
		[2]	CO2	A

xiv.	What will be the output of following C++ code?
	#include <iostream>
	using namespace std;
	int a=21;
	int main()
	{
	int a =21;
	cout<<++a<<::a++;
	}
	(A) 2221
	(B) 2222
	(C) 2122
	(D) 2121
		[2]	CO2	A

	xv. What will happen after the execution of following C++ code?
	`#include <iostream>`
	`int main()`
	`{`
	`int a=100,b=200;`
	`int *p = &a, *q =&b;`
	`p=q;`
	`return 0;`
	`}`
	
	(A) b is assigned to a
	(B) p now points to b
	(C) a is assigned to b
	(D) q now points to a
		[2]	CO2	A

Q2	**Solve any three out of four** a) Enlist the five features of OOP. Write C++ program to create an object of a class with correct syntax and output. b) Differentiate between POP and OOP. c) Discuss the memory allocation process for an object with correct example d) Define Constructor. Enlist two types of constructor with an example.	[5] [5] [5] [5]	CO3 CO3 CO3 CO3	A A A A
Q.3	**Solve any three out of four** a) Define inheritance. Enlist the types of inheritance. Write a C++ program with correct syntax and output for 'Single inheritance'. b) State any five points of differentiation between compile time polymorphism and run time polymorphism c) Write a C++ program to display number of objects created using static member d) Write a C++ program with correct syntax and output to determine the role of Inline function in C++.	[5] [5] [5] [5]	CO4 CO4 CO4 CO4	A A A A