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G.R. No.	
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PAPER CODE	U113-2023 (C) 117
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Dec 2023 (Backlog) EXAM

F.Y. B. TECH. (PATTERN 2018)

COURSE NAME: Computer Fundamentals (CB)**COURSE CODE: CS10181B-CB**

Time: [2Hr]

[Max. Marks: 60]

(*) Instructions to candidates:

- 1) Use of scientific calculator is allowed
- 2) Use suitable data where ever required
- 3) All questions are compulsory

Que. No.	Question Description	Max. Marks	CO mapped	BT Level
Q1.	Choose the Correct options			
	A. C is a. An assembly language b. A third generation high level language c. A machine language d. None of the above	[2]	1	Understand
	B. Who invented the high level language "C"? a. Dennis M. Ritchie b. Niklaus Writh c. Seymour Papert d. Donald Kunth	[2]	1,2	Understand
	C. Find out on which line number you will get an error? a. Line 1: void main () b. Line 2: { c. Line 3: print("\n Hello World") d. Line 4: }	[2]	1,2	Apply
	D. Which of the following is invalid? a. " b. "" c. 'a' d. 'abc'	[2]	1	Understand
	E. Declarations float a,b; occupies ____ of memory a. 1 byte b. 4 bytes c. 8 bytes d. 16 bytes	[2]	1,2	Understand
	F. All keywords in C are in a. LowerCase letters b. UpperCase letters c. CamelCase letters d. None of the mentioned	[2]	1	Understand
	G. Find Out of program #include <stdio.h> int main() {	[2]	1,2	Apply

	<pre>printf("Hello World! %d \n", x); return 0; } a. Hello World! x; b. Hello World! followed by a junk value c. Compile time error d. Hello World!</pre>			
	<p>H. The format identifier '%d' is used for _____ data type?</p> <p>a. char b. int c. float d. double</p>	[2]	1,2	Understand
	<p>I. What is the output of below program?</p> <pre>#include <stdio.h> int main() { float x = 'a'; printf("%f", x); return 0; }</pre> <p>a. a b. run time error c. a.0000000 d. 97.000000</p>	[2]	2	Apply
	<p>J. Which among the following is NOT a relational operator?</p> <p>a. && b. == c. < d. =</p>	[2]	2	Understand
	<p>K. Which of the following sorting algorithms has the lowest worst-case complexity?</p> <p>a. Merge Sort b. Bubble Sort c. Quick Sort d. Selection Sort</p>	[2]	1,2	Apply
	<p>L. What is the worst case complexity of bubble sort?</p> <p>a. $O(n \log n)$ b. $O(\log n)$ c. $O(n)$ d. $O(n^2)$</p>	[2]	2	Apply
	<p>M. The given array is $arr = \{1, 2, 4, 3\}$. Bubble sort is used to sort the array elements. How many iterations will be done to sort the array?</p> <p>a. 4 b. 2 c. 1 d. 0</p>	[2]	1,2	Apply
	<p>N. Linear Search is best for ... ?</p> <p>a. Large arrays b. Small or Large, but unsorted arrays c. Small arrays</p>	[2]	1,2	Understand

	d. Small or Large, but sorted arrays			
	O. The number of interchanges required to sort 5, 1, 6, 2 4 in ascending order using Bubble Sort is a. 6 b. 7 c. 5 d. 8	[2]	2	Apply
Q.2	a) Write C program to swap two numbers using call by Value?	[4]	3	Apply
	b) Create own function for performing following operation on string: (a) copying one string to another (b) Adding a string to the end of another string.	[6]	2,3	Understand
	OR			
	c) Write C program to find out factorial using recursion function?	[6]	2,3	Apply
Q.3	a) Define Object-oriented programming and Give Examples of OOP languages	[4]	2,4	Understand
	b) Compare between Procedure oriented programming and Object oriented programming	[6]	2,4	Understand
	OR			
	c) Explain Constructor and Destructor with example	[6]	2,4	Understand
Q.4	a) Compare function and inline function.	[4]	2,4	Understand
	b) Define an embedded system? Write characteristics of embedded system	[6]	2,4	Understand
	OR			
	c) Explain Virtual function with example.	[6]	2,4	Understand