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Enrollment No.....



Faculty of Science / Engineering
End Sem (Odd) Examination Dec-2019
CA3CO01 Problem Solving and Programming

Programme: BCA / BCA- Branch/Specialisation: Computer
MCA (Integrated) Application

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. A box that represent two different conditions- **1**
 (a) Rectangle (b) Diamond (c) Circle (d) Parallelogram
- ii. The linker – **1**
 (a) Is similar to interpreter
 (b) Uses source code as its input
 (c) Is required to create a load module
 (d) None of these
- iii. Which of the following data type will throw an error on modulus **1**
 operation?
 (a) Char (b) Short (c) Float (d) Int
- iv. What is the output of C program? **1**
 int main()
 {
 int a=5;
 while(a=123)
 {
 printf("hello");
 break; }
 printf("welcome");
 return 0;
 }
 (a) Hello (b) Welcome
 (c) Compiler error (d) Hello welcome

P.T.O.

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- v. If the size of an array is less than the number of initializer then- **1**
 (a) Extra values are being ignored.
 (b) Size of array is increased.
 (c) Generates an error message.
 (d) Size is neglected when values are given.
- vi. In C, if you pass an array as an argument to a function, what actually gets passed- **1**
 (a) First element of the array.
 (b) Value of element in an array.
 (c) Address of the last element of array.
 (d) Base address of an array
- vii. A union is-
 (a) Memory screen (b) Memory location.
 (c) Memory Store. (d) None of these.
- viii. Choose a correct statement about Structures- **1**
 (a) Structure elements can be initialized at the time of declaration.
 (b) Structure members cannot initialize at the time of declaration.
 (c) Only integer members of structure can be initialized at the time of declaration.
 (d) None of these
- ix. Consider the following statements- **1**
 Char *ptr;
 Ptr="abcd";
 Putchar(*ptr);
 What will be printed?
 (a) First letter (b) Entire string
 (c) It is a syntax error (d) Last letter
- x. What is meant by 'a' in the following C operation?
 Fp = fopen("Random.txt", "a");
 (a) Attach (b) Append (c) Apprehend (d) Add **1**
- Q.2 i. Define Algorithm and characteristics of algorithm? **3**
 ii. Design a flowchart for find to largest numbers among three numbers. **7**
 OR iii. Explain generation of programming languages. **7**

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- Q.3 i. What are the concepts of variable and rules of variable declaration? **2**
 ii. What is goto statement? Construct program to find whether given number is even or odd using goto statement. **8**
 OR iii. Compare between – **8**
 (a) gets() and puts()
 (b) getchar() and putchar() [with suitable examples.]
- Q.4 i. What is the memory representation of 1d & 2d array? **3**
 ii. Write a program to find length of string without using string function.? **7**
 OR iii. What are actual and formal parameters? What are most popular ways to pass parameters? Explain with examples. **7**
- Q.5 i. What is the use of Structure in C? **2**
 ii. How structure elements are stored? Explain with suitable example. **8**
 OR iii. Write about use structure within union in C? explain with suitable example? **8**
- Q.6 Attempt any two:
 i. Explain pointers as function argument with example? **5**
 ii. What is the difference between Null character and Uninitialized pointer? Explain using example. **5**
 iii. Write a program for File open(), File write(), File Close(). **5**

Marking Scheme
CA3CO01 Problem Solving and Programming

Q.1	i.	A box that represent two different conditions- (b) Diamond	1
	ii.	The linker – (c) Is required to create a load module	1
	iii.	Which of the following data type will throw an error on modulus operation? (c) Float	1
	iv.	What is the output of C program? (d) Hello welcome	1
	v.	If the size of an array is less than the number of initializer then- (a) Extra values are being ignored.	1
	vi.	In C, if you pass an array as an argument to a function, what actually gets passed- (d) Base address of an array	1
	vii.	A union is- (c) Memory Store	
	viii.	Choose a correct statement about Structures (b) Structure members cannot initialize at the time of declaration.	1
	ix.	Consider the following statements- (c) It is a syntax error	1
	x.	What is meant by ‘a’ in the following C operation? Fp = fopen(“Random.txt”,“a”); (b) Append	1
Q.2	i.	Define Algorithm Characteristics of algorithm	1 marks 2 marks
	ii.	Design a flowchart for find to largest numbers among three numbers. Stepwise marking	7
OR	iii.	Any five generation of programming languages	7
Q.3	i.	Concepts of variable Rules of variable declaration	1 mark 1 mark
	ii.	Explanation of goto statement Construct program	3 marks 5 marks
			8

OR	iii.	Compare between – (a) gets() and puts() (b) getchar() and putchar()	4 marks 4 marks	8
Q.4	i.	Memory representation of 1D array 2D array	1.5 marks 1.5 marks	3
	ii.	Program to find length of string without using string function. Stepwise marking		7
OR	iii.	Definition of actual parameters Definition of formal parameters Ways to pass parameters Example	2 marks 2 marks 3 marks 1 mark	7
Q.5	i.	Use of Structure in C		2
	ii.	Memory representation Examples	5 marks 3 marks	8
OR	iii.	Structure within union in C Use Example	2 marks 3 marks 3 marks	8
Q.6		Attempt any two:		
	i.	Pointers as function argument Explanation Example	3 marks 2 marks	5
	ii.	Difference b/w Null character and Uninitialized pointer 1 mark for each difference (1 mark * 5)		5
	iii.	Program for File open(), File write(), File Close(). Stepwise marking		5
