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Enrollment No.....



Faculty of Engineering
End Sem Examination Dec-2023
CA5CO33 Advanced C Programming

Programme: MCA / 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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. A function which calls itself is called a -_____ function. **1**
(a) Self function (b) Auto function
(c) Recursive function (d) Static function
- ii. Which of the following function is more appropriate for reading in a multi-word string? **1**
(a) printf() (b) scanf() (c) gets() (d) puts()
- iii. What will be the output of following C code? **1**
#include<stdio.h>
void disp(int*);
int main()
{
int i=10,*p=&i;
disp(p++);
}
void disp(int *p)
{
printf("%d\n",*p);
}
(a) 10 (b) Some garbage value
(c) Compile time error (d) Segmentation fault
- iv. Which is known as generic pointer? **1**
(a) void pointer (b) int pointer
(c) float pointer (d) Char pointer

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- v. The size of union is determined by the size of the _____. **1**
 (a) First member in the union
 (b) Last member in the union
 (c) Biggest member in the union
 (d) Sum of the sizes of all members
- vi. Member of union are accessed as _____. **1**
 (a) Union-name.member
 (b) Union-pointer -> member
 (c) Both (a) and (b)
 (d) None of these
- vii. Which one of the following is correct syntax for opening a file **1**
 (a) FILE *fopen(const *filename, const char *mode)
 (b) FILE *fopen(const *filename)
 (c) FILE *open(const *filename, const char *mode)
 (d) FILE *open(const *filename)
- viii. Which of the following are C preprocessor? **1**
 (a) #ifdef (b) #define (c) #endif (d) All of these
- ix. What does argc and argv indicate in command line arguments respectively? **1**
 (a) argument count, argument variable
 (b) argument count, argument vector
 (c) argument control, argument variable
 (d) argument control, argument vector
- x. What is the first argument in the command line arguments? **1**
 (a) The number of command-line arguments the program was invoked with
 (b) A pointer to an array of character string that contain the argument
 (c) Nothing
 (d) None of these

- Q.2 i. Write the difference between recursion and loops. **2**
 ii. What is function? Explain its types and applications with example. **8**
- OR iii. What is string? Explain its inbuilt function with example. **8**
- Q.3 i. Define pointer with its example. **2**
 ii. What is dynamic memory allocation? Explain its syntax with program. **8**

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- OR iii. Differentiate call by value and call by reference with the help of program. **8**
- Q.4 Attempt any two:
 i. Write the difference between union and structure. **5**
 ii. What is union? Explain structure within structure with example. **5**
 iii. What is enum? Write a concept enum within structure with its example. **5**
- Q.5 i. What is File handling? Explain its operation with suitable example. **4**
 ii. Write a program to copy one file to another. **6**
- OR iii. What is pre-processor directive? Explain different type of pre-processor directives with example. **6**
- Q.6 Write short note on any two:
 i. Self-referential structure **5**
 ii. Typedef **5**
 iii. Command line arguments **5**

Marking Scheme

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Q.1	i)	(c)Recursive function	1 Mark	1
	ii)	(c)gets()	1 Mark	1
	iii)	(c)Compiler time error	1 Mark	1
	iv)	(a)void pointer	1 Mark	1
	v)	(c)Biggest member in the union	1 Mark	1
	vi)	(c)Both union-name.member and union.pointer-->member	1 Mark	1
	vii)	(a) FILE *fopen(const *filename,const char *mode)	1 Mark	1
	viii)	(d)All of the mentioned	1 Mark	1
	ix)	(b)argument count,argument vector	1 Mark	1
	x)	(a) The number of command-line arguments the program Was invoked with	1 Mark	1
Q.2	i.	Difference Recursion and Loops		2
		Difference two	1 Marks each(1*2)	
	ii.	What is function	2 Marks	8
		Function type and application with example	6 Marks	
OR	iii.	What is string	2 Marks	8
		String inbuilt function and example	6 Marks	
Q.3	i.	Define Pointer with example	2 Marks	2
	ii.	What is Dynamic memory allocation	2Marks	8
		Dynamic memory allocation function syntax and program	6Marks	
OR	iii.	Difference call by value with program	4 Marks	8

		Difference call by reference with program	4 Marks	
Q.4	i.	Five Difference Structure		5
	ii.	What is union	2.5 Marks	5
		Structure within structure and example	2.5 Marks	
OR	iii.	W hat is enum	2.5 Marks	5
		Concept of enum within structure	2.5 Marks	
Q.5	i.	Define File handling	2 Marks	4
		Operation of file handling with example	2 Marks	
	ii.	Program with output	6 Marks	6
OR	iii.	What is Pre-processor directives	2 Marks	6
		Pre-processor types and example	4 Marks	
Q.6		Short notes on		
	i.	Self referential structure	5 Marks	5
	ii.	Typedef	5 Marks	5
	iii.	Command line arguments	5 Marks	5
