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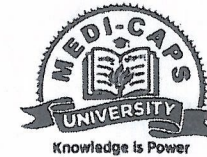
- Q.4 i. Give any two differences between call by value and call by reference with suitable example? 3
- ii. Write a program to concatenate two strings without using two standard library function. Use dynamic memory allocation for accepting of string. 7
- OR iii. Write a function which receives two integer arrays and creates a third array by multiplying corresponding elements (elements with same index) and returns it to main program. 7
- Q.5 i. What is pointer data type? What is the difference between array of pointers and pointer to an array? 4
- ii. What is meant by dynamic memory allocation? What functions are used for dynamic memory allocation in C language? 6
- OR iii. What is difference between structure and union? Define and declare a structure to store date, which including day, month and year. 6
- Q.6 Attempt any two:
- i. Write a program to accept student information (Rollno, Name, Percentage of Marks) for n students. Store this in file and display it in well format(Use of structure and fwrite() and fread() functions are expected. 5
- ii. Write a C program to create a file of integers. The file name is given by the user. The second input to the program is the number n of positive integers to be written into the file starting from 1 with proper validation. 5
- iii. Write a program to Replace a specified Line in a Text File using file handling. 5

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Total No. of Questions: 6

Total No. of Printed Pages:4

Enrollment No.....



Faculty of Engineering  
End Sem (Even) Examination May-2019  
EN3ES06 Computer Programming

Programme: B.Tech.

Branch/Specialisation: All

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. Actual instructions in flowcharting are represented in \_\_\_\_\_ 1  
(a) Circles (b) Boxes (c) Arrows (d) Lines
- ii. When an algorithm is written in the form of a programming language, it becomes a \_\_\_\_\_ 1  
(a) Flowchart (b) Program  
(c) Pseudo code (d) Syntax
- iii. How to round-off a value "5.77" to 6.0? 1  
(a) ceil (5.77) (b) round-off (5.77)  
(c) round-up (5.77) (d) floor (5.77)
- iv. What is the output of the following statement? 1  
void main()  
{  
    char s[]="man";  
    int i;  
    for(i=0; s[i]; i++)  
        printf("%c%c%c%c%c ", s[i], \*(s+i), \*(i+s), i[s]);  
}
- (a) mmm nnn aaa (b) mmmm nnnn aaaa  
(c) Compiler error (d) None of These
- v. Which of the following is not possible statically in C? 1  
(a) Jagged Array (b) Rectangular Array  
(c) Cuboidal Array (d) Multidimensional Array

P.T.O.



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vi. Correct syntax to pass a Function Pointer as an argument 1

- (a) void pass(int (\*fptr)(int, float, char)){}
  - (b) void pass(\*fptr(int, float, char)){}
    - (c) void pass(int (\*fptr)){}
      - (d) void pass(\*fptr){}

vii. Which of the following is a correct format for declaration of function? 1

- (a) return-type function-name(argument type);
  - (b) return-type function-name(argument type){}
    - (c) return-type (argument type)function-name;
      - (d) All of these

viii. What will be the output of the following C code? 1

```
#include <stdio.h>
int main()
{
    int a = 1, b = 2, c = 3;
    int *ptr1 = &a, *ptr2 = &b, *ptr3 = &c;
    int **sptr = &ptr1; // -Ref
    *sptr = ptr2;
}
```

- (a) ptr1 points to a
  - (b) ptr1 points to b
    - (c) sptr points to ptr2
      - (d) None of these

ix. Comment on the output of this C code? 1

```
#include <stdio.h>
int main()
{
    char c;
    int i = 0;
    FILE *file;
    file = fopen("test.txt", "w+");
    fprintf(file, "%c", 'a');
    fprintf(file, "%c", -1);
    fprintf(file, "%c", 'b');
    fclose(file);
    file = fopen("test.txt", "r");
```

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```
while ((c = fgetc(file)) != -1)
    printf("%c", (c));
return 0; }
```

- (a) a
  - (b) Infinite loop
    - (c) Depends on what fgetc returns
      - (d) Depends on the compiler

x. What are the first and second arguments of fopen? 1

- (a) A character string containing the name of the file & the second argument is the mode
  - (b) A character string containing the name of the user & the second argument is the mode
    - (c) A character string containing file pointer & the second argument is the mode
      - (d) None of these

Q.2 i. What are the advantages of high-level languages over machine language? 2

ii. Explain the concept of structured programming in detail. 3

iii. Write a flowchart and algorithm to find factorial of a given no. 5

OR iv. Write a flowchart and algorithm to check whether given number is a prime number or Not? 5

Q.3 i. Define Auto and Register variables in context of C. What is the basic difference between these variables? 2

ii. Write and explain the action of WHILE statement. Develop a program in C language to compute the average of every third integer number lying between 1 and 100. Include appropriate documentation. 8

OR iii. Write a program which asks for a integer from the user. It reverses the integer and prints same if after reversal the number is same as old number otherwise it prints not same. 8

P.T.O.

## Marking Scheme

### EN3ES06 Computer Programming

Q.1	i.	Actual instructions in flowcharting are represented in _____ (b) Boxes	1
	ii.	When an algorithm is written in the form of a programming language, it becomes a _____ (b) Program	1
	iii.	How to round-off a value “5.77” to 6.0? (a) ceil(5.77)	1
	iv.	What is the output of the following statement? (d) None of these	1
	v.	Which of the following is not possible statically in C? (a) Jagged Array	1
	vi.	Correct syntax to pass a Function Pointer as an argument (a) void pass(int (*fptr)(int, float, char)) { }	1
	vii.	Which of the following is a correct format for declaration of function? (a) return-type function-name(argument type);	1
	viii.	What will be the output of the following C code? (b) ptr1 points to b	1
	ix.	Comment on the output of this C code? (a) a	1
	x.	What are the first and second arguments of fopen? (a) a character string containing the name of the file & the second argument is the mode.	1
Q.2	i.	At least two advantages of high level languages 1 mark for each (1 mark * 2)	2
	ii.	concept of structured programming Definition 1 mark Concept 2 marks	3
	iii.	To find factorial of a given no Flowchart 2.5 marks Algorithm 2.5 marks	5
	OR iv.	To check whether given number Flowchart 2.5 marks Algorithm 2.5 marks	5

Q.3	i.	Auto and Register variables in context of C	4
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		Definition	1 mark	
		Difference between these variables	1 mark	
	ii.	Action of WHILE statement		8
		Explanation with syntax	3 marks	
		Program	4 marks	
		Document note	1 mark	
OR	iii.	Program which asks for a integer from the user		8
		Stepwise marking		
Q.4	i.	Two differences between call by value and call by reference		3
			2 marks	
		Example	1 mark	
	ii.	Program to concatenate two strings without using two standard library function		7
		Stepwise marking		
OR	iii.	Function which receives two integer arrays and creates a third array by multiplying corresponding elements		7
		Stepwise marking		
Q.5	i.	Pointer data type definition	2 marks	4
		Two difference b/w array of pointers and pointer to an array	2 marks	
	ii.	Definition of dynamic memory allocation	2 marks	6
		Functions used	4 marks	
OR	iii.	Difference b/w structure and union	2 marks	6
		Definition and declaration	4 marks	
Q.6		Attempt any two:		4
	i.	Program to accept student information		
		Stepwise marking		
	ii.	C program to create a file of integers		6
		Stepwise marking		
	iii.	Program to Replace a specified Line in a Text File using file handling		6
		Stepwise marking		

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