

Enrollment No.....



Faculty of Engineering  
End Sem (Odd) Examination Dec-2019  
EN3ES09 Fundamentals of Computer Science

Programme: B.Tech.

Branch/Specialisation: CSBS

**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. Which of the following is not a data type? **1**  
(a) Symbolic Data (b) Alphanumeric Data  
(c) Numeric Data (d) Alphabetic Data
- iii. Which of these have highest precedence? **1**  
(a) () (b) ++ (c) \* (d) >>
- iv. Which type of conversion is NOT accepted? **1**  
(a) From char to int (b) From float to char pointer  
(c) From negative int to char (d) From double to char
- v. What is storage class for variable A in below code? **1**  

```
int main() {
    int A;
    A = 10;
    printf("%d", A);
    return 0;
}
```

 (a) Extern (b) Auto (c) Register (d) Static
- vi. Output will be: **1**  

```
#include <stdio.h>
void main() {
    m();
    void m() {
        printf ("hi");
    }
}
```

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- (a) hi (b) Compile time error  
(c) Nothing (d) Varies
- vii. `int main() {` **1**  
`int i = 10;`  
`void *p = &i;`  
`printf("%d\n", (int)*p);`  
`return 0;`  
`}`
- (a) Compile time error (b) Segmentation fault/runtime crash  
(c) 10 (d) Undefined behaviour
- viii. The default parameter passing mechanism is **1**  
(a) Call by value (b) Call by reference  
(c) Call by value result (d) None of these
- ix. FILE reserved word is? **1**  
(a) Structure tag declared in stdio.h  
(b) One of the basic datatypes in c  
(c) Pointer to the structure defined in stdio.h  
(d) It is a type name defined in stdio.h
- x. Which of the following true about FILE \*fp **1**  
(a) FILE is a keyword in C for representing files and fp is a variable of FILE type.  
(b) FILE is a structure and fp is a pointer to the structure of FILE type  
(c) FILE is a stream  
(d) FILE is buffered System
- Q.2 i. What are data types? Explain with example int **2**  
ii. What are constants? How it is used in C code? **3**  
iii. What do you understand by Little Endian Big Endian? Where these are used? **5**
- OR iv. Define Algorithm and its characteristics. **5**
- Q.3 i. Write c code for type conversion. **2**  
ii. Write a code using Switch case to know the color of entered fruit name. **8**
- OR iii. What are binary operators? Explain with examples use of Binary Operators. **8**

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- Q.4 i. What is recursion? How it used in code? **3**  
ii. Define function. How is it declared? Write a code defining and declaring a function. **7**
- OR iii. Explain with examples 4 main types of preprocessor directives. **7**
- Q.5 i. Define Array and its types. **4**  
ii. What is use of pointers in C? Explain with example. **6**
- OR iii. Write C program to find the sum marks of n students using arrays **6**
- Q.6 Attempt any two:  
i. Make a program by using Standard Input and Output (scanf & printf) **5**  
ii. What is file handling in c? Explain use of fopen, fclose, stdin, stdout. **5**  
iii. What is header? Can we make our own header file? Give user defined header file example. **5**

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## Marking Scheme

### EN3ES09 Fundamentals of Computer Science

Q.1	i.	Actual instructions in flowcharting are represented in _____. (b) Boxes	1
	ii.	Which of the following is not a data type? (a) Symbolic Data	1
	iii.	Which of these have highest precedence? (a) ()	1
	iv.	Which type of conversion is NOT accepted? (b) From float to char pointer	1
	v.	What is storage class for variable A in below code? (b) Auto	1
	vi.	Output will be: (b) Compile time error	1
	vii.	int main() { (a) Compile time error	1
	viii.	The default parameter passing mechanism is (a) Call by value	1
	ix.	FILE reserved word is? (d) It is a type name defined in stdio.h	1
	x.	Which of the following true about FILE *fp (b) FILE is a structure and fp is a pointer to the structure of FILE type	1
Q.2	i.	Data types Example int	2
	ii.	Constants Used in C code	3
	iii.	Little Endian Big Endian and where these are used?	5
	OR iv.	Algorithm Its characteristics	5
Q.3	i.	C code for type conversion.	2
	ii.	Code using Switch case to know the color of entered fruit name Stepwise marking	8
OR	iii.	Binary operators Explanation Examples	8

Q.4	i.	Recursion	1 mark	3
		It used in code	2 marks	
	ii.	Definition of function	1 mark	7
		It declared	2 marks	
		Code defining and declaring a function	4 marks	
OR	iii.	Explain with examples 4 main types of preprocessor directives.		7
		0.5 mark for each type name (0.5 mark * 4)	2 marks	
		1.25 for explanation of each (1.25 mark * 4)	5 marks	
Q.5	i.	Definition of Array	1 mark	4
		Its types	3 marks	
	ii.	Use of pointers in C	3 marks	6
		Example	3 marks	
OR	iii.	C program to find the sum marks of n students using arrays		6
		Stepwise marking		
Q.6				
		Attempt any two:		
	i.	Program by using Standard Input and Output (scanf & printf)		5
		Stepwise marking		
	ii.	File handling in c	1 mark	5
		Use of fopen, fclose, stdin, stdout		
		1 mark for each (1 mark * 4)	4 marks	
	iii.	Header	1 mark	5
		Can we make our own header file	1 mark	
		User defined header file example	3 marks	