

Enrollment No.....



Faculty of Science
End Sem (Odd) Examination Dec-2019
FS3EG01 Computer Science

Programme: B.Sc. (Forensic) Branch/Specialisation: Forensic

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 light sensitive device that converts drawing, printed text or images into digital form is _____ **1**
 (a) Keyboard (b) Plotter (c) Scanner (d) OMR
- ii. The basic architecture of computer was developed by _____ **1**
 (a) John Von Nuemann (b) Charles Babbage
 (c) Blaise Pascal (d) Garden Moore
- iii. 2^s complement of 11001011 is _____ **1**
 (a) 01010111 (b) 11010100 (c) 00110101 (d) 11100010
- iv. Covert $(22)_8$ into its corresponding decimal number _____ **1**
 (a) 28 (b) 18 (c) 81 (d) 82
- v. The fastest data access is provided using _____ **1**
 (a) Caches (b) DRAM (c) SRAM (d) Registers
- vi. Which of the following is not used as secondary storage? **1**
 (a) Semiconductor Memory (b) Magnetic Disk
 (c) Magnetic Drums (d) Magnetic Tapes
- vii. What is the output of the program? **1**
 void main ()
 {
 int x=10;
 float x=10;
 printf("%d", x);
 }
 (a) Compilation error (b) 10
 (c) 10000 (d) 10.10

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- viii. Which of the following is not a valid variable name declaration? **1**
 (a) float PI=3.14; (b) double PI=3.14;
 (c) int PI=3.14; (d) #define PI 3.14
- ix. What is the right way to initialize array? **1**
 (a) int num [6] = {2, 4, 12, 5, 45, 5};
 (b) int n{ }= {2, 4, 12, 5, 45, 5};
 (c) int n{6}= {2 ,4 ,12};
 (d) int n (6)= {2, 4, 12, 5, 45, 5};
- x. If two strings are identical then strcmp() function returns **1**
 (a) -1 (b) 1 (c) 0 (d) Yes
- Q.2 i. What are the basic components of the CPU of a computer system? **2**
 ii. Explain the function of Control Unit (CU) & Arithmetic Logic Unit (ALU) of a computer. **3**
 iii. Explain I / O subsystem in detail. **5**
- OR iv. What does a multiprocessor mean? Explain in detail. **5**
- Q.3 i. Why do we use octal and hexadecimal number system as shortcut notation? **2**
 ii. Explain the various arithmetic operations on binary number with suitable example? **8**
- OR iii. How do you represent a floating point? Explain in detail with example. **8**
- Q.4 i. What is secondary storage? How it differs from a primary storage? **3**
 ii. What is magnetic tape drive? Describe the main components and basic operation mechanism of a half inch magnetic tape reel drive. **7**
- OR iii. What are the commonly used types of optical disk? Write some typical uses of each type of optical disk. Write reasons why optical disks are a better storage medium for data archiving as compared to magnetic disks. **7**
- Q.5 i. What are keywords and data types? Write ten keywords used in C language. **4**
 ii. Write a program to calculate the sum of all numbers from 0 to 100 that are divisible by 4. **6**

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- OR iii. Write the declaration syntax of switch case statement. Write any program to demonstrate a switch case statement. **6**
- Q.6 Attempt any two:
- i. How to declare an array? Write a program to take five values from the user and store then in an array. **5**
- ii. What is the difference between call by value and call by reference? Write a program of swapping values of two variables using call by value and call by reference. **5**
- iii. List out any five string functions. Write a program to find the length of string. **5**

Marking Scheme
FS3EG01 Computer Science

Q.1	i.	A light sensitive device that converts drawing, printed text or images into digital form is _____ (c) Scanner	1
	ii.	The basic architecture of computer was developed by _____ (a) John Von Nuemann	1
	iii.	2's complement of 11001011 is _____ (c) 00110101	1
	iv.	Covert (22) ₈ into its corresponding decimal number _____ (b) 18	1
	v.	The fastest data access is provided using _____ (d) Registers	1
	vi.	Which of the following is not used as secondary storage? (a) Semiconductor Memory	1
	vii.	What is the output of the program? (a) Compilation error	1
	viii.	Which of the following is not a valid variable name declaration? (d) #define PI 3.14	1
	ix.	What is the right way to initialize array? (a) int num [6] = {2, 4, 12, 5, 45, 5};	1
	x.	If two strings are identical then strcmp() function returns (c) 0	1
Q.2	i.	Components of the CPU of a computer system 0.5 mark for each (0.5 mark * 4)	2
	ii.	Function of Control Unit (CU) 1.5 marks Function of Arithmetic Logic Unit (ALU) 1.5 marks	3
	iii.	I / O subsystem 1 mark for each component (1 mark * 5)	5
OR	iv.	Definition of multiprocessor 2 marks Architecture 2 marks Types 1 mark	5
Q.3	i.	Use octal number system 1 mark Use hexadecimal number system 1 mark	2
	ii.	Any four arithmetic operations 2 marks for each operation (2 marks *4)	8

OR	iii.	Floating point representation 2 marks Any three method 2 marks each (2 marks * 3)	8
Q.4	i.	Definition of secondary storage 1 mark Difference b/w secondary and primary storage 2 marks	3
	ii.	Magnetic tape drive 2 marks Main components 2 marks Basic operation of half inch magnetic tape reel drive 3 marks	7
OR	iii.	Types of optical disk 2 marks Uses of each type of optical disk 2 marks Reasons 3 marks	7
Q.5	i.	Keywords and data types 2 marks Any ten keywords used in C language 2 marks	4
	ii.	Program to calculate the sum of all numbers from 0 to 100 that are divisible by 4 Stepwise Marking	6
OR	iii.	Declaration 2 marks Program 4 marks	6
Q.6	Attempt any two:		
	i.	Declaration an array 2 marks Program 4 marks	5
	ii.	Difference between call by value and call by reference 1 mark Program for call by value 2 marks Program for call by reference 2 marks	5
	iii.	String functions 2 marks Program to find the length of string 3 marks	5
