RA2211026030006

SRM Institute of Science and Technology
Department of Computer Science and Engineering
Delhi – Meerut Road, Sikri Kalan, Ghaziabad, Uttar Pradesh – 201204

SRM
DELHI-NCR CAMPUS, GHAZIABAD (U.P)

Academic Year: 2023-24 (ODD)

Test : Internal Examination I
Course Code & Title : 21CSS201T & Computer Organization & Architecture
Year & Sem : 2ND & 3RD

Date & Session : 16/08/23 & FN
Duration: 1 Hour
Max. Marks: 30

Part – A

Answer all questions **(10Q x 1M = 10 Marks)**

Q. No	Questions	Marks	BL	CO	PO
1	What is the one's complement for the binary number 011001 A. 000111 B. 100110 C. 111001 D. 110001	1	L1	1	1
2	A Group of 4 bits is called: A. Byte B. Nibble C. Word D. Binary coded number	1	L1	1	1
3	If each successive code differs from its preceding code by only single bit, then this code is called: A. BCD B. Weighted C. Binary D. Gray	1	L2	1	2
4	The parity of binary number 100110011 is A. Odd B. Even C. 4 D. 8	1	L2	1	2
5	The decimal number 6 in EXCESS 3 is written as A. 0110 B. 0011 C. 1001 D. 1101	1	L3	1	2
6	The MSB of _____ is same as the MSB of corresponding Gray code: A. Alphanumeric code B. Excess 3 C. Binary Code D. EBDIC	1	L2	1	2
7	In Direct conversion from binary to hexadecimal, if the last group does not have 4 bits then it padded with_____ to make it four bits. A. 0 B. 1 C. 4 D. 8	1	L1	1	1
8	What does the leftmost bit represent: A. Sign of a number B. Weight of a number C. Position of a number D. Magnitude of a number	1	L2	1	1
9	The smallest integer that can be represented by an 8-bit number in 2's complement form is: A. -256 B. -128 C. -127 D. 0	1	L3	1	2
10	The XOR Output is one when both the inputs are: A. Same B. Different C. Finite D. Infinite	1	L2	1	1

Part B

Answer any three questions — **3Q x 4M = 12 Marks**

11	Give the Steps to perform BCD subtraction using 9's complement method. Perform the same on 521-216.	4	L3	1	3
12	Convert a given Decimal number $(126)_{10}$ into its equivalent binary, BCD, GRAY and Excess 3 code.	4	L3	1	4
13	Perform binary multiplication on 110011.01 and 101.1	4	L3	1	2
14	Differentiate between Computer Organization and Computer Architecture.	4	L2	1	4

Part C

Answer all questions — **1Q x 8M = 8 Marks**

15.	(A) Differentiate between a logic gate and logic circuits. Elaborate on various types of gates along with their truth table and Circuit Design.	8	L3	1	4
	(OR)				
	(B) What are error detecting codes. Differentiate odd parity and even parity with the help of example.	8	L2	1	2