

**SCHEDULED QUIZ - II**

Name of the Subject: **CA**

Duration: 15 mins

Max Marks: 10

Roll Number: \_\_\_\_\_

Section: \_\_\_\_\_

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**Answers(enter the options in the given table) :Q1**

1	2	3	4	5	6	7	8	9	10

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1. What will be the true sum of unsigned addition for w bits operands?
  - a. w-1 bits
  - b. **w+1 bits**
  - c. w+2 bits
  - d. All of the above
2. What will be the true product of unsigned multiplication for w bits operands?
  - a. w+1 bits
  - b. 4\*w bits
  - c. **2\*w bits**
  - d. None of the above
3. What will be the modulo of 4 bits number of unsigned addition with modular arithmetic?
  - a. 4
  - b. 8
  - c. **16**
  - d. 32
4. The behavior of the instruction pushq %rbp is equivalent to that of the pair of instructions
  - a. **subq \$8,%rsp followed by movq %rbp,(%rsp)**
  - b. movq %rbp,(%rsp) followed by subq \$8,%rsp
  - c. movq %rbp,(%rsp) followed by addq \$8,%rsp
  - d. addq \$8,%rsp followed by movq %rbp,(%rsp)
5. Which of the following codes generates error message when an assembler is invoked
  - a. movb (%rsp,%rdx,4), %dl
  - b. movq (%rdx), %rax
  - c. movb \$0xFF, %bl
  - d. movw (%rax),4(%rsp)**

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6. Identify the correct size (in bits) and assembly-code suffix for double precision data type.

- a) 8, d
- b) 64, d
- c) 64, q
- d) 64, l**

7. How does x86 assembly store the return value when a function is finished?

- a) The ret instruction stores it in a special retval register.
- b) By convention, it is always in %eax.**
- c) It is stored on the stack just above the (%ebp) of the callee.
- d) It is stored on the stack just above all the arguments to the function.

8. Consider the following C expression:  $((x >> 1) << 1) \leq x$  where x is a 32-bit signed integer. We generate arbitrary values for x. The machine's characteristics are defined as follows:

- Values of type int are 32 bits and represented in two's complement.
- Right shifts for signed integers are arithmetic right shifts.
- Values of type unsigned are 32 bits.

Does the expression always yield true?

- a) Yes
- b) No**

9. Consider the binary number 0111 1110 represented in IEEE floating-point format with 1 sign bit (S), 3 exponent bits (E), and 4 fraction bits (F). What is the value of the given binary number?

- a)  $(1.5)_{10}$
- b)  $(2.75)_{10}$
- c)  $(3.75)_{10}$
- d) None of the above**

10. Consider the following representation of a number in IEEE 754 single-precision floating point format with a bias of 127. S : 1 E : 10000001 F : 111100000000000000000000. The decimal value corresponding to the above representation (rounded to 2 decimal places) is

- a) -7.75**
- b) +7.75
- c) -5.57
- d) None of the above