Indian Institute of Information Technology Sri City, Chittoor

Date: 24th January 2024

SCHEDULED QUIZ - 1

Name of the Subject: **CA** Duration: 15 mins Max Marks: 10

Roll Number: _____ Section:_____

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

1	2	3	4	5	6	7	8	9	10

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1. Which of the following properties does floating point operations satisfy
   A) Only distributive and monotonicity properties
   B) Only monotonicity and values of signs properties
   C) Only distributive, associative and monotonicity properties
   D) None of the above

2. Consider the following code fragment:

```
for (i = 0; i < 1000; i++)
    column_sum[i] = 0.0;
    for (j = 0; j < 1000; j++)
        column_sum[i] += b[j][i];
```

   What is an example of an access pattern that may result in poor memory system performance in the code fragment given above
   A) Sequential Access
   B) Random Access
   C) Strided Access
   D) None of the above

3. Which tool is commonly used for detecting memory-related bugs in C programs?
   A) JVM
   B) Valgrind
   C) memory_debug()
   D) None of the above

4. What technology is commonly used for implementing the L1 and L2 caches in a processor system?
   A) Dynamic Random Access Memory
   B) Flash Memory

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C) Static Random Access Memory

D) None of the above

5. The kernel is a separate process that manages all the processes in a computer system.
   a. True
   b. False
6. Who is responsible for translating the **hello.i** to **hello.s** file?
   A) Assembler
   B) Loader
   C) **Compiler**
   D) Linker

7. Select three input devices your computer uses:

   A) Mouse, Keyboard, Monitor
   B) **Mouse, Keyboard, Scanner**
   C) Mouse, Printer, CPU
   D) Mouse, Keyboard, Printer

8. In _____, I/O or time spent in running other programs are not counted.
   a) Elapsed Time
   b) CPU Time
   c) Turn Around Time
   d) All of the above

9. Suppose we enhance a machine to make all floating-point instructions run five times faster. If the execution time for some benchmark before floating point enhancement is 10 seconds, what will the speedup be if half of the 10 seconds is spent executing floating point instructions?
   a) 3
   b) 6
   c) 4.6
   d) 1.6

10. For a given architecture, what improvements can you make to a system or program in order to increase performance?
   a. reduce the number of cycles for a program
   b. reduce the clock cycle time
   c. increase the clock rate
   d. All of the above