1. Which of them might be used as a benchmark?

   I. Kernels

   II. Toy programs

   III. Synthetic benchmarks

   a) I, III

   b) II, III

   c) I, II, III

   d) III

2. Choose the right formula for the cost of integrated circuit:

   a) Cost of integrated circuit = $\frac{(Cost\ of\ die\ +\ Cost\ of\ testing\ die)}{Final\ test\ yield}$

   b) Cost of integrated circuit = $\frac{(Cost\ of\ die\ +\ Cost\ of\ testing\ die\ +\ Cost\ of\ final\ tests\ and\ packaging)}{Final\ test\ yield}$

   c) Cost of integrated circuit = $\frac{(Cost\ of\ die\ +\ Cost\ of\ final\ tests\ and\ packaging)}{Final\ test\ yield}$

3. Choose the right formulas for CPU time:

   I. CPU Time = $Instruction\ Count * Cycles\ per\ instruction * Clock\ cycle\ time$

   II. CPU Time = $\frac{Instruction\ Count\ *\ Cycles\ per\ instruction}{Clock\ cycle\ rate}$

   III. CPU Time = $Instruction\ Count * Cycles\ per\ instruction * Clock\ cycle\ rate$

   a) I, II

   b) I

   c) II

   d) I, III

4. How many Instruction Set formats do exist in MIPS?

   a) 1

   b) 2

   c) 3

   d) 4

5. Which of them is the instruction describing Register Addressing Mode?

   a) lw $v0, 2

   b) add $t3, $t1, $t2

   c) mov $t3, ($t4)

6. Which of them is the instruction describing Immediate Addressing Mode?

a) lw $v0, 2

b) add $t3, $t1, $t2

c) mov $t3, ($t4)

7. Which of them is the instruction describing Addressing Mode with a Displacement?

a) lw $v0, 2

b) add $t3, $t1, $t2

c) mov $t3, 16($t4)

8. Choose the right formula for the cost of die:

a. Cost of die = $\frac{Cost\ of\ wafer}{Die\ yield * Die\ per\ wafer}$

b. Cost of die = $\frac{Cost\ of\ wafer * Die\ yield}{Die\ per\ wafer}$

c. Cost of die = $\frac{Cost\ of\ wafer * Die\ per\ wafer}{Die\ yield}$

9. Choose the right formula for the number of die per yield:

a. Die per wafer = $\frac{Wafer\ area}{Die\ area} = \frac{\pi * Wafer\ Radius^2}{4 * Die\ Area} - \frac{\pi * Wafer\ Diameter}{sqrt2 * Die\ Area}$

b. Die per wafer = $\frac{Wafer\ area}{Die\ area} = \frac{\pi * Wafer\ Diameter^2}{4 * Die\ Area}$

c. Die per wafer = $\frac{Wafer\ area}{Die\ area} = \frac{\pi * Wafer\ Diameter^2}{4 * Die\ Area} - \frac{\pi * Wafer\ Diameter}{\sqrt{2 * Die\ Area}}$

10. If the slowest part of program executes in 52 seconds, in how many seconds the whole program might not be executed?

a) 75 seconds

b) 42 seconds

c) 62 seconds

d) 59 seconds

Answers:

1. c
2. b
3. a
4. c
5. b
6. a
7. c
8. a
9. c
10. b