Exam 1 (Total Marks 16)

Name: ---------- **ID:** ---------- **Serial Number:** ----------

1) Computer architecture consists of:
   a) Instruction set architecture. b) Computer organization. c) Instruction set architecture and computer organization. d) None of a, b, c.
2) A computer which has a specific task or set of tasks is called:
   a) Desktop computer. b) Embedded computer. c) Server. d) None of a, b, c.
3) High level programs are:
   a) Hardware dependent. b) Hardware independent. c) Assembly programs. d) None of a, b, c
4) Number of tasks completed per unit time is called:
   a) Latency. b) Throughput. c) Execution time
5) Which of the following translates high level programs into instructions:
   a) Operating system. b) Compiler. c) Assembler. d) None of a, b, c
6) Computer performance depends upon
   a) Instruction count. b) Clock cycle time. c) Clock cycle per instruction (CPI). d) All of a, b, c
7) Clock cycle time and CPI depend upon:
   a) Compiler b) Instruction set architecture. C) Compiler as well as instruction set architecture. d) Processor implementation
8) Time taken to run a program 10s on A, 50s on B, How much times A is faster than B
   a) 10 (b) 15 (c) 1.5 (d) 5
9) If there are 10 clock cycles and clock rate is 1 GHz, then CPU time is
   a) 10ns (b) 1ns (c) 20ns (d) 5ns
10) There are 10 instructions such that each instruction takes one cycle. If clock rate is 1 GHz then CPU time is
    a) 10 ns (b) 1 ns (c) 20 ns (d) 5 ns
11) In multiprocessors, the focus is on:
    a) response time (b) Execution time (c) Throughput (d) None of a, b, c
12) Static power is due to the ----------that flows even when the transistor is OFF.
13) ---------- power is the primary source of power dissipation
14) Increasing the number of transistors increase the ---------- current
15) When we increase the clock rate, the power ----------
16) Write the formula for CPU time in terms of instructions count, CPI and clock rate: