

There are two questions carrying **5** marks each. Write answers within the question paper. You have **15** minutes to complete this exam.

ID:.....

1. Moore's law states that the transistor density on integrated circuits doubles every 2 years. Now, derive a function $f(n)$, that takes the number of years to develop a new microprocessor and returns the transistor count of the microprocessor according to moors law. Assume that the number of transistors in the beginning year has already been given.
2. Suppose, in 1988, the number of transistors in the Intel 386 SX microprocessor was 275,000. Then calculate the transistors counts of the Pentium II Intel microprocessor in 1997 using the function developed in question no. 1?