

70

大同大學 九十四 學年度研究所碩士在職班入學考試試題

考試科目:科技英文

所別:通訊工程研究所

第 1/1 頁

註:本次考試 不可以參考自己的書籍及筆記; 不可以使用字典; 不可以使用計算器。

Please translate the following paragraphs into Chinese.

1. A basic component used in VLSI design is the gate array. A gate array consists of a pattern of gates fabricated in an area of silicon that is repeated thousands of times until the entire chip is covered with the gates. The design with gates arrays requires that customer provide the manufacturer the desired interconnection pattern.
2. Why are communication systems, military and commercial alike, "going digital"? There are many reasons. The primary advantage is the ease with which digital signals, compared with analog signals, are regenerated. And digital circuits are less subject to distortion and interference than are analog circuits.
3. A method for miniaturization of microstrip patch antenna without degrading its radiation characteristics was investigated. It involves perforating the patch to form a microstrip square ring antenna, which was investigated numerically and experimentally. The ring geometry introduces additional parameters to the antenna that can be used to control its impedance, resonance frequency, and bandwidth. To match the antenna to a transmission line and also enhance its bandwidth, the ring was stacked by a square patch or another square ring.
4. Scientists and engineers develop mathematical models for physical processes as an aid to understanding and predicting the behavior of the process. For example, the use of differential equations can help us understand, among other things, decay of radioactive substances, electrical networks, population dynamics, dispersion of pollutants, and trajectories of moving objects.
5. Fragment-free switching works like cut-through switching with the exception that a switch in fragment-free mode stores the first 64 bytes of the frame before forwarding. Fragment-free switching can be viewed as a compromise between store-and-forward switching and cut-through switching.