

大同大學 九十二 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:電機工程研究所

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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。

1. To achieve System-On-Chip (SOC) performance has been the ultimate goal of IC (integrated circuits) designers. Recently, personal computers and related components are beginning to be manufactured using SOC. However, it is soon realized that the SOC approach does not provide cost savings as expected, and even may not be “the best solution.”
2. A measure of goodness of the linearity of a circuit is the total harmonic distortion (THD) it introduces. This is the root-mean-square (rms) value of the harmonic components of the output signal, excluding the fundamental, expressed as a percentage of the rms of the fundamental. A high-fidelity audio power amplifier features a THD of the order of a fraction of a percent.
3. In any control system design problem one can distinguish five important considerations: stability, transient response, tracking performance, constraints, and robustness. Also in many practical situations, state variables are often unavailable in nonlinear systems. Thus, the output feedback or observer-based control is required for such complicated applications.
4. The notion of a fuzzy set provides a convenient point of departure for the construction of a conceptual framework which parallels in many respects the framework used in the case of ordinary sets, but is more general than the latter and, potentially, may prove to have a much wider scope of applicability, particularly in the fields of pattern classification and information processing.
5. There is a need to develop innovative technologies and services that can provide options for consumers to use energy more efficiently and bolster their ability to withstand disruptions in the delivery of electric power. The digital business sector relies heavily on linkages between power, data transfer, and communications.
6. The system shown in Fig. 1 has three sub-systems to each of which the same data stream is sent for parallel processing.

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