

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：電機工程研究所 共 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。

請將以下英文段落翻譯成中文

1. A microcontroller-based driver was designed and developed for dot-matrix displays made with organic light emitting diodes (OLEDs). It was made by modifying driver designed for dot matrix LEDs made with inorganic semiconductors. The driver was designed with adjustable driving frequency, pulse width, polarity and pulse amplitude. It is a generalized driver suitable for operating OLED dot matrices made with different electro-luminescent organic materials or in different device structures. (20%)
2. A key step in the design of transistor amplifiers is to bias the transistor to operate at an appropriate point in the saturation region. A good bias design ensures that the parameters of the bias point are predictable and stable, and do not vary by a large amount when the transistor is replaced by another of the same type. (15%)
3. The problem of robust stabilization for uncertain time-delay systems containing a saturating actuator has attracted a considerable amount of interest in recent years. A numerical example shows that the presented method is feasible and less conservative than reported methods. (15%)
4. The fact that a large area viewed at a grazing angle will look like a small area, viewed frontally. This is important because two different receivers will receive the same amount of radiation from a source if they look exactly the same to the source; two different sources will have the same effect on a receiver if they look exactly the same to the receiver. (15%)
5. The deregulation of the electric power industry seeks to segment the vertically integrated utility into a horizontally integrated set of companies. This segmentation intends to promote competition in each sector (generation, transmission, and distribution). The generation market has been deregulated more than other sectors. Generation presently experiences a high level of competitiveness. Generation is not only selling energy but also ancillary services, as well as byproducts. (20%)
6. Scientists and engineers develop mathematical models for physical processes as an aid to understanding and predicting the behavior of the process. Modeling a physical process often leads to equations that involve not only the physical quantity of interest but also some of its derivatives. Such equations are referred to as differential equations. (15%)

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