

# 大同大學 九十七 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.

(每題25分)

1. For an analog signal which has the highest frequency at  $f_H$  will need a sampling rate higher than  $2f_H$  for aliasing free. This scheme is well known as Nyquist sampling. However, for most radio applications, the required sampling rate would be impractically high if Nyquist sampling is employed. Fortunately, sampling at rates lower than  $2f_H$  still can allow for an exact reconstruction of the information content of the analog signal if the signal is a bandpass signal.
2. The SIP protocol can be used for creating, modifying and terminating two-party or multiparty sessions consisting of one or several media streams. The modification can involve changing addresses or ports, inviting more participants, adding or deleting media streams, etc.
3. The RFID system includes RFID tag, which is placed on the item to be tracked. The tag is a small transponder which can be read by a RFID interrogator. The interrogator includes a transceiver and a reader antenna. When orientation of items is not known, the tags may not be aligned with the axis of the polarization of the reader antenna. Therefore, tags may not be read. As a result, the interrogator usually includes antenna that transmits a circularly polarized signal.
4. Many digital signal processing applications require real-time processing over long periods of time. For real-time processing, successive input samples must be processed to produce an output data stream within a relatively short time delay. This places maximum requirements on the design since the data cannot be stored and subsequently processed over a time period much longer than the data period. The processor must execute the algorithm fast enough to avoid any loss of input data. The requirements may dictate very extreme environmental conditions under which the processor must operate. In addition, the space, weight, and power consumption must be minimized. A key design constraint is the system cost.