

# 大同大學九十學年度通訊研究所碩士在職專班招生入學考試題

考試科目:科技英文

所別: 通訊工程研究所

第1/1頁

## A. Please translate the following essays into Chinese.(25 points)

1. Another factor that comes into play if a group service is to be reliable is that group members must be known. Information about the group members must be provided to the sender or to other nodes in the network that provide support for reliability. The aspect of awareness becomes even more complex if group membership is highly dynamic.
2. Generally speaking, modulation is defined as "the process by which some characteristic of a carrier is varied in accordance with a modulating signal" or "the process by which a property or a parameter of a signal is varied in proportion to a second signal". The precise dependence is determined by the type of modulation employed. The message signal is referred to as the modulating signal, and the result of the modulation process is referred to as the modulated signal.
3. The basic technological components of a cellular telephone system are radio transmission technology and computer technology. A cellular telephone system has two basic functions; it must locate and track the mobile stations and it must always attempt to connect the mobile stations to the best available base stations. The latter task requires the continuous evaluation of the radio link quality with the serving base stations, and the radio link quality with alternate base stations.
4. (a) The electron beam bombards the inner surface of a screen with a substrate (phosphor) that emits visible light.  
(b) The impedance and pattern of an antenna do not change too much over an octave band.  
(c) The system can generate signal strength and figures-of-merit parameters for digital signals (DAB, ATSC).
5. By interesting audio (both speech and sound), images, video, text, graphics and data into multimedia format, the communication areas has become instant and interactive. Multimedia computers (in which CD-ROM) drivers are an integral part have now become the rule rather than the exception.

## B. 選擇 & 問答(5 points)

- i. ( ) Last month, Hong Kong's police \_\_ Nokia Networks an \$18 million contract to supply a TETRA network over the course of the next year. (a) assigned (b) awarded (c) gave (d) put.
- ii. ( ) As for the ADSL application, you may term it as one of (a) contact techniques (b) access techniques (c) dial-up techniques (d) wire techniques. Choose a proper one used in the telecommunication field.
- iii. ( ) The radiation pattern of an antenna used for a GSM cellular phone should be \_\_ .(a) all-directional (b) self-directional (c) omni-directional (d) poly-directional.
- iv. Give a 'physical law' or 'theorem' you had ever learned when you studied the Fundamental Electromagnetics before. Just give the term, no need to explain.