

八十五學年度 工業工程系(所) 工業工程組碩士班研究生入學考試

科目 人因工程 科號 3401 共 1 頁第 1 頁 *請在試卷【答案卷】內作答

人因工程

1. Draw a figure and explain what "beta" means in signal detection theory? What would be the possible performance affected by "beta" if you are a quality inspector in a factory? (15%)
2. Please discuss how "Adaptation" and "Accommodation" affect our visual capabilities? (15%)
3. Based on your human factors knowledge, please design an experiment for demonstration of Fitts' Law. List the equipment used, experimental procedure, data to be collected, and the method of data analysis. Your own design is encouraged. (20%)
4. Discuss the important design considerations for VDT workstation, such as the workstation for the word processing secretary. (15%)
5. Define the following terms: (20%)
 - (1) Hand-Arm Vibration Syndrome (HAVS)
 - (2) Carpal Tunnel Syndrome (CTS)
 - (3) work space envelop
 - (4) maximum working area
 - (5) lumbar lordosis
 - (6) sequence of use principle
 - (7) isoresponse time region of the visual field
6. If you are invited to design the control panel in the control room of a petrochemical factory, what is your approach? (15%)