

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

**Short-answer/long-answer questions (100%)**

1. What are the main objectives of Human Factors? (10%)
2. List and describe the three most common classifications of Human Factors Research and the two settings that research can be conducted. (15%)
3. Explain in what situations “DESIGNING FOR THE AVERAGE USERS” should be used? Give an example to support your argument. (10%)
4. What is the design procedure for Anthropometric Design? (10%)
5. You have been asked to design a workbench for construction managers that allows relaxing shoulders and arms while standing doing planning work. List the ergonomics design considerations for the workbench. (10%)
6. The effects of masking vary with the type of masking sound and the masked sound. When is the greatest masking effect of a pure tone by another pure tone? (5%)
7. What is Work Space Envelope, explain why it is important in Ergonomics design. (10%)
8. Our human ear is less sensitive to what range of low frequency sounds? Our human ear is more sensitive to what range of high frequency sounds? (5%)
9. You've been tasked with redesigning a nursing task at the McDonald Memorial Hospital. The task requires nurses in the emergency unit to monitor several patients' vital signs (heart rate, blood pressure, respiration, brain waves, etc. What type of attention is required of these nurses? How could you improve attention for this task? (10%)
10. Draw the Human Information Processing model identifying all the connections. Describe each component. (15%)