

國立臺灣科技大學

九十一學年度博士班招生考試試題

系所組別：工程技術研究所在職專班甲組

科目：科技實務

總分爲100分

1. State the advantages of manufacturing automation and its development trend. (20%)
2. (1) Describe the configuration of a Servo control system and its characteristic. (10%)
- (2) Give five control methods for a closed-loop control system. (10%)
- (3) Consider the temperature control system for a water tank shown in figure 1, draw the block diagram and describe the operation principle. (10%)

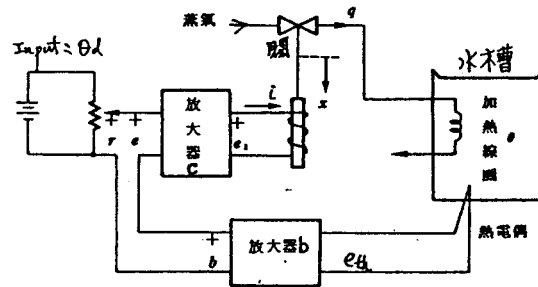


Figure 1 the temperature control system for a water tank

3. Explanation (complete name in English and Chinese, short description): (50%)
- (1) RE
 - (2) CIM
 - (3) CNC
 - (4) SCADA
 - (5) SQL
 - (6) Zero-input Stability
 - (7) Controllability
 - (8) Observability
 - (9) Gain Margin
 - (10) Final-value theorem

