

國立臺北科技大學

九十七學年第一學期電機系博士班資格考試

軌道電力系統

填學生證號碼

第一頁 共一頁

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注意事項：

1. 本試題共【4】題，配分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在試卷答案欄內，否則不予計分。
4. 考試時間：二小時。

1. Sketch the function block diagram of the traction power systems for Taiwan's mainline railroad, i.e. Taiwan Railway Administration(TRA) system. Please list all major components and the associated voltage ratings. (30%)
2. Explain the major differences between the traction power systems of Taipei and Kaohsiung Rapid Transit System heavy rail lines. (20%)
3. Explain the major differences between the propulsion power systems of TRA's push-pull train sets and Taiwan High Speed Rail's train sets, knowing that both use ac induction motor to drive wheels. (30%)
4. Sketch the function block diagram of the propulsion systems for TRA's 700-Type EMU's. Please list all major components and the associated voltage rating. (20%)