

所別：網路學習科技研究所碩士班 不分組科目：資料庫系統

## Database

1. Please describe the concept and purpose of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> normalization, a Also apply the following table with the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> normalization and then show the normalized results for each normalization (20%)

訂單號碼	書局名稱	負責人	城市	城市等級	書籍號碼	數量
1	前程書局	小王	KS	20	1	5
1	前程書局	小王	KS	20	3	3
1	前程書局	小王	KS	20	4	2
2	高明書局	小陳	TN	15	1	7
2	高明書局	小陳	TN	10	2	5
3	天龍書局	小楊	TP	15	1	5
3	天龍書局	小楊	TP	5	3	5

2. Multimedia database play an important role in e-learning and e-commerce, please describe how to store multimedia content (voice or video) into Database instead of File System. Also show the advantages and disadvantages of this way by list? (20%)

3. Please transfer the following natural language into E-R model:

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4. Pease introduce four technologies about Data Mining and show their characteristics (20%)

5. Please briefly describe the meaning of the following terms. (20%)

- OLAP
- OLTP
- Functional dependencies
- Isolation in transaction

