6 Databases (TGG)

(*a*) Explain how *data duplication* and *data redundancy* are distinct concepts in relational database design. [2 marks]

(*b*) What is meant by the term *on-line transaction processing* (OLTP)? [2 marks]

(*c*) What is meant by the term *on-line analytic processing* (OLAP)? [2 marks]

(*d*) Describe how the task of designing an OLTP system would differ from that of an OLAP system. [4 marks]

(*e*) Suppose that an OLAP database contains data extracted from an OLTP database.

(*i*) How might the presence of NULL values in the OLTP database complicate the task of data extraction? [5 marks]

(*ii*) How might schema migration of the OLTP database complicate the task of data extraction? [5 marks]