COMPUTER SCIENCE TRIPOS Part IB – 2016 – Paper 4

6 Databases (TGG)

This question deals with the variety of approaches to database design.

(*a*) What is meant by the term *on-line transaction processing* (OLTP)? [3 marks]

(*b*) What is meant by the term *on-line analytic processing* (OLAP)? [3 marks]

(*c*) Compare and contrast the approach to schema design for OLTP and OLAP databases. [3 marks]

(*d*) Compare OLAP with the so-called NoSQL approach to database design. [3 marks]

(*e*) Give an example of a set of requirements whose solution would need to combine OLAP, OLTP and NoSQL. Describe an architecture integrating these elements in the system design. [8 marks]