**Review Answers**

* 3.1 (a) the need to integrate existing data from spreadsheets, data files, and database extracts

(b) the need to develop new information systems projects

(c) the need to redesign an existing database to adapt to changing requirements

* 3.2 The premise is that you have received one or more tables of data from some source that are to be stored in a new database
* 3.3 The buyers manage more than one sku and they have multiple college majors, if another sku was to be assigned to ‘Nancy Meyers’ two rows would be added to the table and so would it be if a buyer had 4 majors instead of creating just a row
* 3.4 (a) Relation: a relation is a special case of a table, which means that all relations are tables but not all tables are relations

(b) Functional dependency: this is when the value of one or more attributes determines the value the value of another attribute

(c) Determinant: can consist of one or more attribute which can determine attributes

(d) Candidate key: is a determinant that determines all of the other columns in a relation

(e) Composite key: these are keys with two or more columns

(f) Primary key: these are unique identifiers in a table

(g) Surrogate key: is an artificial column that is added to a table to serve as the primary key

(h) Foreign key: is a column or composite of columns that is the primary key of a table other than the one in which it appears

(I) Referential integrity constraint: is a statement that limits the values of the foreign key. In this case

(j) Normal form: this is when you normalize a table which modification anomalies or other problems they are subject to

(k) Multivalued dependency: is when a determinant is matched with a particular set of values

* 3.5 (a) Characteristics of