The Open University of Sri Lanka
B.Sc. Degree Program – Level 05

Closed Book Test 2007/2008

CSU3278: Database Management Systems

Duration: 1½ Hours

Date: 30th April 2008   Time: 4.00pm – 5.30pm
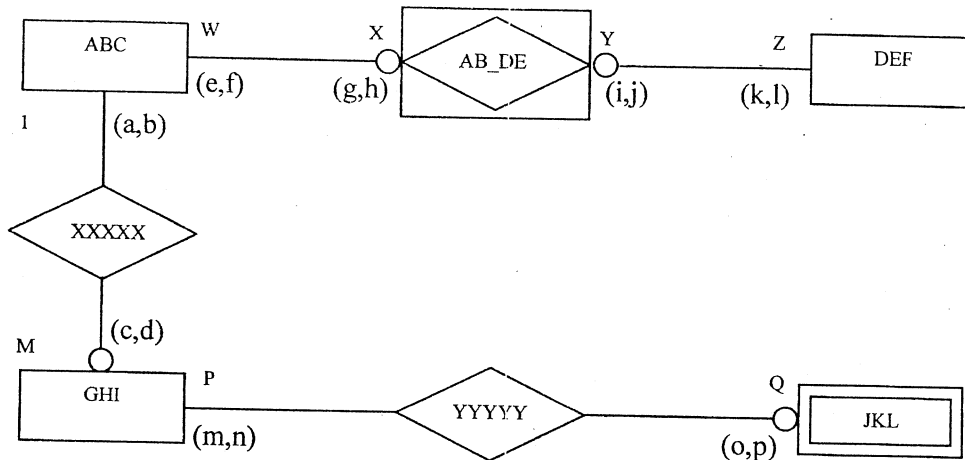
Answer **ALL** Questions

(01)

The following questions are based on the above ER diagram.

(a) Write the proper *connectivities* for W, X, Y, Z, P, Q.

(b) Write the proper *cardinalities* for (a,b), (c.d), (e,f), (g,h), (i,j), (k,l), (m.n) and (o,p).

(c) What two *attributes* must be contained in the *composite entity*? Use proper terminology in your answer.

(d) Describe precisely the composition of the *weak entity's primary key*. Use proper terminology in your answer.

(e) In a real estate database, there is an entity called PROPERTY, which is a property for sale by the agency. Each time a potential property buyer makes a purchase offer on a property, the agency records the date, offering price and name of the person making the offer.

   (i) Represent the PROPERTY entity and its purchase offer attributes using the notation for *multivalued attributes in the Chen convention.*

   (ii) Represent the PROPERTY entity and its purchase offer attributes using appropriate table structures.

   (iii) Finally, assume the agency decides also to keep data about buyers including their name, phone number and address. Expand your answer to part (i) above to accommodate this new entity type.

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