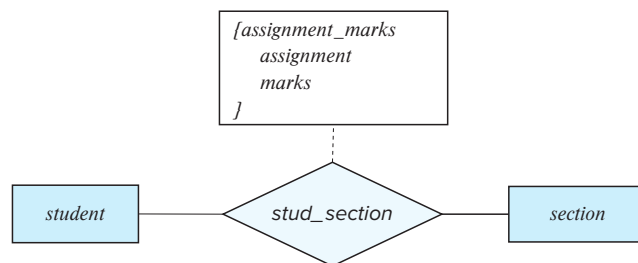


(c) Correct alternative to erroneous E-R diagram (b)



(d) Correct alternative to erroneous E-R diagram (b)

**Figure 6.22** Correct versions of the E-R diagram of Figure 6.21.

since relationship instances must be uniquely identified by the participating entities, *student* and *section*.

One solution to the problem depicted in Figure 6.21c, shown in Figure 6.22a, is to model *assignment* as a weak entity identified by *section*, and to add a relationship *marks\_in* between *assignment* and *student*; the relationship would have an attribute *marks*. An alternative solution, shown in Figure 6.22d, is to use a multivalued composite attribute  $\{assignment\_marks\}$  to *takes*, where *assignment\_marks* has component attributes *assignment* and *marks*. Modeling an assignment as a weak entity is preferable in this case, since it allows recording other information about the assignment, such as maximum marks or deadlines.

When an E-R diagram becomes too big to draw in a single piece, it makes sense to break it up into pieces, each showing part of the E-R model. When doing so, you may need to depict an entity set in more than one page. As discussed in Section 6.2.2, attributes of the entity set should be shown only once, in its first occurrence. Subsequent occurrences of the entity set should be shown without any attributes, to avoid repeating the same information at multiple places, which may lead to inconsistency.

### 6.9.2 Use of Entity Sets versus Attributes

Consider the entity set *instructor* with the additional attribute *phone.number* (Figure 6.23a.) It can be argued that a phone is an entity in its own right with attributes *phone*