COMP5323 – Quiz

1)
- a) Invalid
- b) Valid
- c) Valid

2)
- a) Possible pair of elements to use the "key" and "keyrefs" are in the first xml schema, "studentID" of element "student" and "studentID" of element "enrollment". Others may simply apply "unique" to define the element/attribute.

- b) It depends how the function is defined.
  For example, "studentID, subjectID → grade".

- c) The two xml files should be merged by a **full outer join**.
  Although the two xml files have similar elements or attributes, the contents of the two files are different. Records in "ugrads.xml" are of **undergraduate** students and subjects while "gradSubjects.xml" is about the **MSc** students and subjects. The two files mention different things.

3)
```
<X>
    <Y>
        <Z> Text </Z>
    </Y>
</X>
```

4)
- a) Department's faculty is the advisor has more students come from other departments rather than its own department.

- b) Actually, we cannot rearrange the "let" and "for" clauses because the first statement is a "for" clause to declare the variable "$d1" which is to be used in the first "let" clause.

```
for $d1 in /…          ]
let $s1 := $d1/…        ] This is an example that "let" and
                       ] "for" can be rearranged.
for $d2 in /…          ]
let $s2 := $d2/…        ] The first statement must be the
                       ] declaration of "$d1".
for $f  in $d1/…        ]
```

- c) Return nothing.