**Quiz 2**

**Name:**

**ID:**

**Question 1**

1. Consider a matrix below and answer either YES or NO:

MR = 1 0 0 0

 0 1 0 1

 1 0 1 0

 1 1 0 1

Is this matrix a

1. square matrix?
2. diagonal matrix?
3. identity matrix?
4. boolean matrix?
5. zero matrix?

[5 marks]

1. Explain how a matrix above can be symmetric.

[2 marks]

**Question 2**

1. Let p, q and r be the propositions:

 p: you are above 20 years old

 q: you have passed the driving class

 r: you can drive a car

Write the proposition using p, q and r and logical connectivity for the statement below:

“if you are not above 20 years and you are not passed the driving class then you cannot drive a car”

 [2 marks]

1. Let p and q be the propositions:

 p: John is rich

 q: John is kind

Given the symbols below, translate it into sentences.

 p ∨ (~ p ∧ q)

 [2 marks]