

**UIT2201: Computer Science and Information Technology Revolution
(Spring Semester 2007)**

ANSWER KEY TO QUIZ 2

(NOT TO BE GIVEN TO FUTURE UIT2201 STUDENT!)

Fun Question: (1 bonus point)

president(nixon, first_moon_landing).

Question 1: (20 marks)

- (a) TRUE (b) FALSE (c) TRUE (d) TRUE (e) FALSE
(f) TRUE (g) TRUE (h) TRUE (i) expert system, (j) protocol

Question 2: (15 marks)

- (a) (5 marks) Give the truth table for X. (An incomplete table is given to you.)

A	B	C	X			
0	0	0	0			
0	0	1	1			
0	1	0	1			
0	1	1	1			
1	0	0	0			
1	0	1	1			
1	1	0	0			
1	1	1	1			

- (b) (4 marks)

$$\begin{aligned}
 \text{ANSWER: } X &= \sim A \sim B C + \sim A B \sim C + \sim A B C + A \sim B C + A B C \\
 &= \sim A \sim B C + \sim A B C + \sim A B \sim C + \sim A B C + A \sim B C + A B C \\
 &= \sim A C (\sim B + B) + \sim A B (\sim C + C) + A C (\sim B + B) \\
 &= \sim A C + \sim A B + A C = C (\sim A + A) + \sim A B \\
 &= C + \sim A B
 \end{aligned}$$

- (c) (3 marks) Simple -- DIY

- (d) (3 marks)

OR-Gate: Yes AND-Gate: No XOR-Gate: Yes

