	FACULTY OF INDUSTRIAL SCIENCES & TECHNOLOGY		MARKS
			/10
DISCRETE MATHEMATICS AND APPLICATIONS	CODE: BUM 1233	TOPIC: LOGIC	
ASSESSMENT: QUIZ 3	SET A	DURATION: 10 MINUTES	
NAME:	MATRIC NO:	SECTION: 4	

**Instructions:** Please answer all question and show your workings clearly.

**Question 1**

Given two propositions

$p$  =Spider has eight legs

$q$  =Spider is not a mammal.

Rewrite the propositions into these forms:

(a) Contrapositive

(b) Converse


(c) Inverse

*(3 marks)*

**Question 2**

Determine whether  $\neg(p \vee q) \equiv (\neg p \wedge \neg q)$ .

*(7 marks)*

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**Instructions:** Please answer all question and show your workings clearly.

**Question 1**

Given two propositions

$p$  =Spider is not warm blooded

$q$  =Spider is a reptile.

Rewrite the propositions into these forms:

(a) Inverse

(b) Converse


(c) Contrapositive

*(3 marks)*

**Question 2**

Determine whether  $\neg(p \wedge q) \equiv (\neg p \vee \neg q)$ .

*(7 marks)*

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**Instructions:** Please answer all question and show your workings clearly.

### Question 1

Given two propositions

$p$  =Spiderman has two legs

$q$  =Spiderman is a human.

Rewrite the propositions into these forms:

(a) Inverse

(b) Contrapositive

(c) Converse

*(3 marks)*

### Question 2

Determine whether  $\neg(p \wedge q) \equiv (\neg p \wedge \neg q)$ .

*(7 marks)*