Universiti Malaysia PAHANG	FACULTY OF INDUSTRIAL SCIENCES & TECHNOLOGY	MARKS /10
DISCRETE MATHEMATICS AND APPLICATIONS	CODE: BUM 1233	TOPIC: SETS
ASSESMENT: QUIZ 2	SET A	DURATION: 10 MINUTES
NAME:	MATRIC NO:	SECTION: 4

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

Question 1 Answer **T** (True) or **F** in the given box
Let A, B and C be sets.

(a) If $A \subset B$, then $A = B$ .... ☐

(b) If $A \subseteq B$ and $B \subseteq C$, then $A \subseteq C$ .... ☐

(c) $|B \times C| = |B| + |C|$... ☐

(d) $C \oplus \overline{C} = \varnothing$ .... ☐

(e) $|A \cap B| = |A| + |B| - |A \cup B|$ .... ☐

(1 mark each)

Question 2
Let $U = \{n | n \in \mathbb{Z}^+, n \leq 10\}$
$A = \{n | n \in U, 1 \leq n < 7\}$
$B = \{n | n \in U, n \text{ is a multiple of 3 }\}$

(a) State A and B in roster notation.

(b) Determine $A - B$

(c) Determine $|\overline{A \cup B}|$

(5 marks)