KEMENTERIAN PENDIDIKAN TINGGI POLITEKNIK MALAYSIA KUCHING SARAWAK JABATAN MATEMATIK, SAINS & KOMPUTER		COURSE CODE / COURSE NAME	DBM2033 DISCRETE MATHEMATICS		
		COURSEWORK ASSESSMENT	TUTORIAL 2		
		SESSION	JUNE 2017		
NAME	SHARON MAIYA ZULHELMI	DURATION	1 hour	CLO 1	
REGISTRATION NO.	0500171F2019 0500171P2001				
PROGRAMME/SECTION	DDT2B	TOTAL MARKS			

INSTRUCTION:

Answer ALL questions.

Question 1 (CLO1, C2)

[5 marks]

Given that the Universal set $\xi = \{x: 28 \leq x \leq 70, x \text{ is an integer}\}$

Set $L = \{x: x \text{ is a perfect square}\}$,

Set $M = \{x: x \text{ is a multiple of } 4\}$

Set $N = \{x: x \text{ is a number such that one of its digits is } 2\}$

(a) Sketch the Venn Diagram for the Set ξ, L, M and N.

(b) Find all the elements of $n(M \cap N)$ and $n(L \cup M)$

Question 2 (CLO1, C2)

[5 marks]

Given A= {0,1,2,3} and the relation R on A is defined as follows:

R = {(0,0),(0,1),(0,3),(1,0),(1,1),(1,3),(3,0),(3,2),(3,3)}

(a) Draw the directed graph of R relation.

(b) Determine whether the given relation is equivalence on {0,1,2,3} or not by justifying your answer.

Question 3 (CLO1, C2)

[4 marks]

Draw the graph for this functions within the range of $-4 \leq x \leq 4$

(a) $\lfloor 0.5x + 1 \rfloor$

(b) $\lceil x + 2 \rceil$

Question 4 (CLO1, C2)

[6 marks]

The functions fg and f are given by $fg: x \rightarrow 6x - 1$ *and* $f: x \rightarrow 2 - 3x$. Find:

(a) g

(b) gf

(c) $(fg)^{-1}(3)$

END OF QUESTIONS ~