KEMENTERIAN PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA **JABATAN MATEMATIK, SAINS DAN KOMPUTER**		COURSE CODE/ COURSE NAME		PBM1035 INTENSIVE MATHEMATICS	
		COURSEWORK ASSESSMENT		TEST 2	
		SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	10 MARKS
NAME				CLO2	
REGISTRATION NO.				CLO3	
PROGRAMME/ SECTION	IPP1	TOTAL MARKS		10 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C1 [4 marks]

Write each interval as an inequality.

(a) $(-2, 7]$ $\mathbf{-2 < x \leq 7}$

(b) $(-\infty, 5)$ $\mathbf{x < 5}$

Question 2

CLO1, C2 [4 marks]

Solve for $x$which satisfy the inequality below:

$$2(x + 2) \leq -2(x - 1)$$

$\mathbf{2x + 4 \leq -2x + 2}$

$4x \leq -2$

$\mathbf{x - \frac{1}{2}}$

Question 3

CLO1, C2 [3 marks]

Simplify the expression and leave only positive indices in the answer.

$$\frac{(-a^4b)^3}{-a^4b^3}$$

$\mathbf{\frac{-a^{12}b^3}{-a^4b^3} = a^{12-4}b^{3-3} = a^8}$

Question 4

CLO1, C3 [4 marks]

Calculate the following indices without using calculator.

$$8^{x-1} \div \frac{1}{32^x} = 16^{x+1}$$

$\mathbf{8^{x-1} \div 32^{-x} = 16^{x+1}}$

$\mathbf{2^{3x-3} \div 2^{-5x} = 2^{4x+4}}$

$\mathbf{2^{3x-2+5x} = 2^{4x+4}}$

$\mathbf{8x - 2 = 4x + 4}$

$\mathbf{4x = 6}$

$\mathbf{x = \frac{3}{2}}$