KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
		COURSEWORK ASSESSMENT		TUTORIAL 4	
		SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	
				CLO2	20 MARKS
				CLO3	
NAME		TOTAL MARKS		20 MARKS	
REGISTRATION NO.					
PROGRAMME/ SECTION					

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.

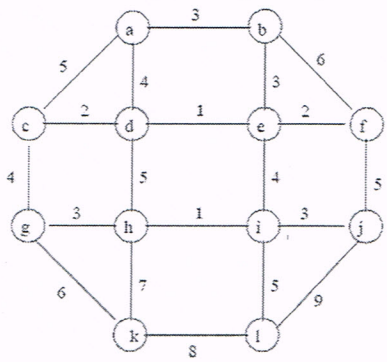
Question 1

CLO1, C3 [6 marks]

For the following graph,

(a) Demonstrate the execution of Prim's algorithm.

(b) Give a total weight of the minimum spanning tree produced.



Question 2

CLO1, C2 [6 marks]

Represent the expressions below using binary trees.

(a) $3 * x/(8 - 3) + x * (4 + 2)$

(b) $(((x - y) * z) - 3)/(19 + (x * x))$

Question 3

CLO1, C2 [8 marks]

Consider the following tree.

Write the order that would be printed by methods of the following types:

(a) In-order traversal

(b) Post-order traversal