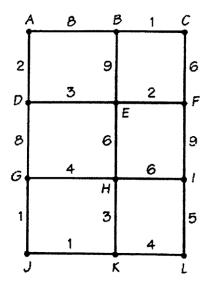
KEMENTERIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
PENDIDIKAN MALAYSIA		COURSEWORK ASSESSMENT		TUTORIAL 3	
		SESSION		DECEMBER 2018	
JABATAN MATEMATIK, SAINS DAN KOMPUTER				CLO1	
NAME		DURATION	60 MINS	CLO2	20 MARKS
REGISTRATION NO.				CLO3	
PROGRAMME/ SECTION		TOTAL MARKS		20 MARKS	

### 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.

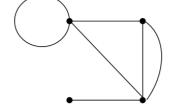
## **Question 1**

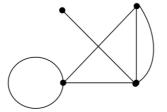
CLO1, C3 [6 marks] Identify the shortest route with the minimum cost spanning tree on the following graph:



## **Question 2**

CLO1, C2 [4 marks] Show that the following graphs are isomorphic.





# **Question 3**

CLO1, C2 [4 marks]

Write the correct answer for each of the following statements.

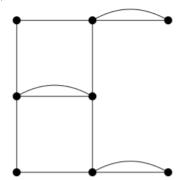
- (a) A vertex of degree zero.
- (b) Two vertices connected to each other with a line.

- (c) A graph on *n* vertices that contains exactly one edge between each pair of distinct vertices.
- (d) A graph with no loops and no multiple edges.

# **Question 4**

CLO1, C2 [6 marks]

(a) Eulerize the following graph:



(b) Find the Hamiltonian graph if exist. If not exist, explain your answer.

