

New Algorithm For MCB of Join Of Two Graphs  $G$  and  $H$

```
 $\mathcal{C} \leftarrow 0$   
for a vertex  $v_g \in V(G)$  do  
  for all  $e = \{xy\} \in E(H)$  do  
    Add to  $\mathcal{C}$  the cycle  $c = v_gx + v_gy + e$   
  end for  
end for  
  
for a vertex  $v_h \in V(H)$  do  
  for all  $e = \{xy\} \in E(G)$  do  
    Add to  $\mathcal{C}$  the cycle  $c = v_hx + v_hy + e$   
  end for  
end for
```

Suppose  $T_H$  is a spanning tree of graph  $H$

```
for all  $v_i \in V(G)$  such that  $v_i \neq v_g$  do  
  for all  $e = \{xy\} \in E(T_H)$  do  
    Add to  $\mathcal{C}$  the cycle  $c = v_ix + v_iy + e$   
  end for  
end for  
Return  $\mathcal{C}$ 
```