

# SC205- Discrete Mathematics

## Home Work 9

**Tutorial Discussion Week:** March 30, 2020

- (1) Can a simple graph exist with 15 vertices each of degree 5?
- (2) Draw these graphs:  $K_7$ ,  $K_{1,8}$ ,  $K_{4,4}$ ,  $C_7$ ,  $W_7$ .
- (3) For which values of  $n$  are the graphs  $K_n$ ,  $C_n$ ,  $W_n$  bipartite?
- (4) Represent the graphs  $K_4$ ,  $K_{2,3}$ ,  $C_4$ ,  $W_4$  with an adjacency matrix.
- (5) For which values of  $n$  do the graphs  $K_n$ ,  $C_n$ ,  $W_n$  have an Euler circuit?
- (6) For which values of  $n$  do the graphs  $K_n$ ,  $C_n$ ,  $W_n$  have a Hamilton circuit?