

## Untitled Note

**Notebook:** First Notebook

**Created:** 03-02-2018 17:38

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**Location:** Kanpur Naqar, Uttar Pradesh, India

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### Complete graph

- All connected

### Nodes and edges

K regular

Centre

Eccentricity

Radius

LDiameter

Path

Cycle

Degree sequence

Graph isomorphism

Euler cycle

- A cycle in which each edge occurs exactly once.
- Each node must have even degree

### Euler path

- Iff exactly 2 are odd

### Bipartit

- Iff No odd length cycle exists.
- Complete bipartit graph

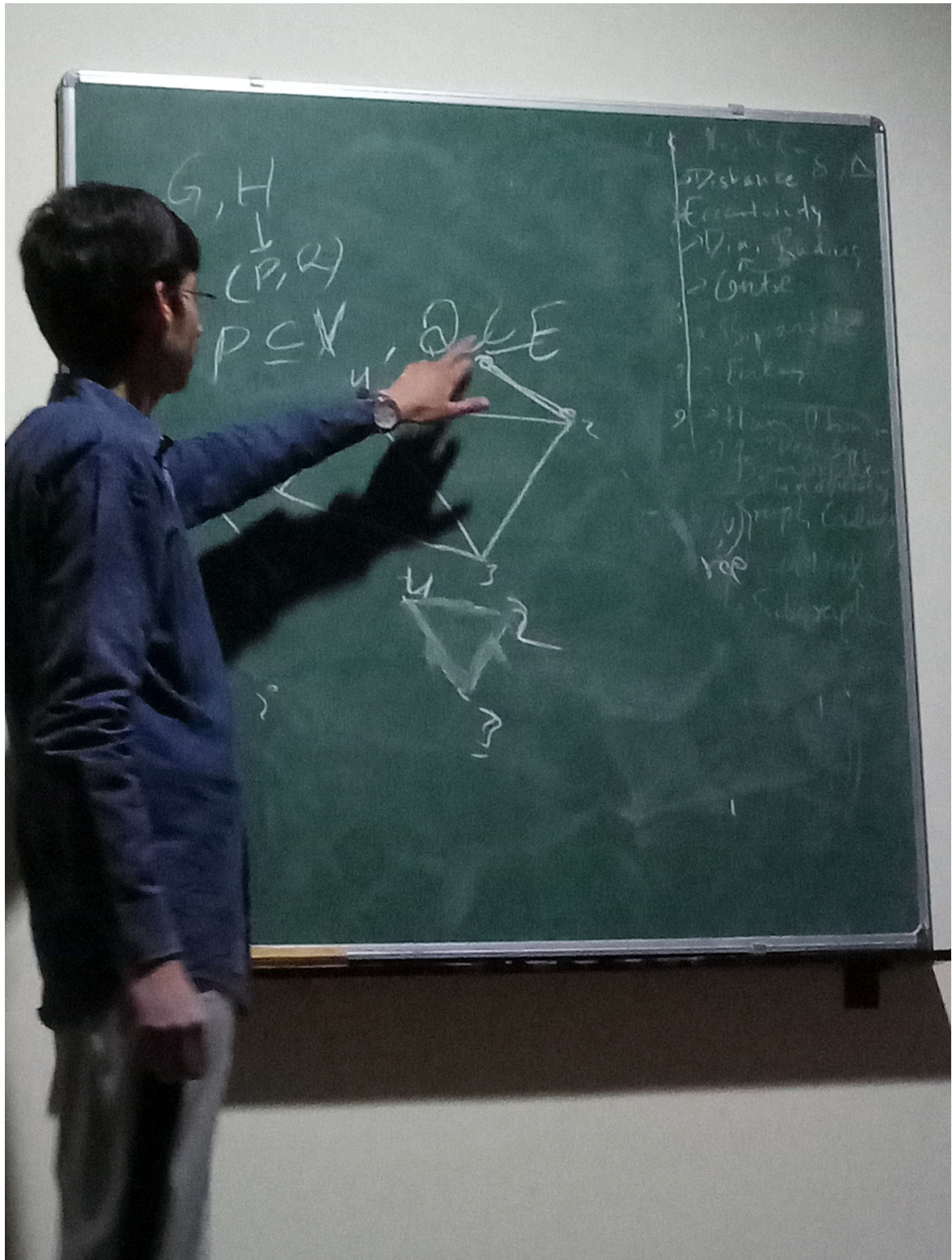
### Hamiltonian cycle

- Each node occurs once
- Bridge shouldn't exist

### Adjacency matrix

- Same for isomorphic graphs

### Subgraph



### Subgraph

- General
- Induced subgraph (edges are preserved)

### Colouring

- Valid colouring-colour of adjacent nodes different
- Chromaticity(n)-min no of colours for valid colouring

- $n$  critical graph
  - When all its proper subgraph has  $< n$  chromaticity
- Chromaticity of even cycle is 2 and odd is 3