

**Prabhat Kumar College, Contai**

**Department of Mathematics**

**4<sup>th</sup> Semester Mathematics (Hons) CBCS Pattern**

**Paper: SEC-2**

**Time: 1 hours**

Answer any one :-

1. Prove that the number of odd vertices in a graph is even.
2. The maximum degree of any vertex in a simple graph with  $n$  vertices is  $(n - 1)$ .
3. The maximum number of edges in a simple graph with  $n$  vertices is  $\frac{n(n-1)}{2}$ .