

**III semester B. Sc.(IT) Assignment Questions for C2 Component  
February 2021**

**Subject: Data Communication and Computer Networks**

1. Derive the expression for the Minimum length of a ring in the token ring.
2. Explain the working of Hamming code With a suitable example
3. Differentiate between IPV4 and IPv6. Discuss about the Header format of IPV4 and IPV6.
4. Why does congestion occur in a network? Explain the various congestion control mechanisms in detail.

**Subject: Systems Software**

1. What are Macros? Discuss the features of macros in detail.
2. Define a Compiler. Explain the various stages of a Compiler with a neat diagram.  
Also justify why Compiler is called n – Pass compiler.

**Subject: Object Oriented Programming with C++**

1. What are constructors? Discuss their types with an example each.
2. What are virtual functions? Explain with an example.
3. Define stream. Discuss the different I/O header files available on standard library.
4. Discuss the types of templates with an appropriate syntax.

