

M.Sc. (IT) Semester – III Examination

Nov/— -2014

**Paper No. 09: Data Communication and Network (3598)**

**Duration: 2½ Hours**

**Total Marks: 70**

- Q -1) Answer the following Questions. 14**
- a. What is Network? Explain different types of Network.
  - b. What is Protocol? Explain the importance of protocol in the working of Internet.
- OR**
- Q -1) Answer the following Questions. 14**
- a. Write a note on : Internet Layered Architecture.
  - b. Differentiate between Internet and Network and explain various topologies of Network.
- Q -2) Answer the following Questions. 14**
- a. Write a note on : Role of HTTP over the Internet.
  - b. What is DNS? Explain the working of DNS over the Internet.
- OR**
- Q -2) Answer the following Questions. 14**
- a. Explain the working of FTP in detail.
  - b. What is Socket? Briefly explain the fundamentals and need of Socket Programming.
- Q -3) Answer the following Questions. 14**
- a. What is TCP? Explain the roles and responsibilities of TCP over the Network and Internet.
  - b. Write a note on : UDP.
- OR**
- Q -3) Answer the following Questions. 14**
- a. Explain the role of Transport Layer in OSI Reference Architecture.
  - b. Differentiate between : TCP and UDP.
- Q -4) Answer the following Questions. 14**
- a. Write a note on : Network Layer.
  - b. What is Routing? Explain Dijkstra routing algorithm with a suitable example.
- OR**
- Q -4) Answer the following Questions. 14**
- a. Write a note on : Data Link Layer.
  - b. What is ARP? Explain the working and importance of ARP with a suitable example.
- Q -5) Answer the following Questions. 14**
- a) What is Network Security? State various aspects need to be considered to ensure Network Security?
  - b) Write a note on : Network Management.
- OR**
- Q -5) Answer the following Questions. 14**
- a) What is Threat? Explain various types of Threat.
  - b) Explain various measures to be taken in order to run a Network smoothly.