SYCS/SEM IV/EXT/CN

Time: 2½ hrs. **Marks:75**

Note:
1. All questions are compulsory with internal choice.
2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks.

Q.1 Answer the following (any four) **(20)**

(a) What are the characteristics of a Data Communication System?
(b) List the types of Communication. Explain any one in detail.
(c) Explain Point to Point Connection.
(d) List the type of Network Topology.Explain Mesh and Star topology.
(e) Write a short note on LAN and WAN.
(f) Explain different layers of the OSI model.

Q.2 Answer the following (any four) **(20)**

(a) What is meant by digital to digital conversion. Explain LINE CODING.
(b) Write a short note on Sampling.
(c) How serial transmission modes are carried out?
(d) Explain modulation i.e used for analog to analog conversion.
(e) Explain different classification of transmission media.
(f) What is switching? Which are the three methods of switching?

Q.3 Answer the following (any four) **(20)**

(a) What are the requirements of wireless lan.
(b) Write a short note on logical addresses.
(c) Explain IPv4 address format.
(d) Which are the different classes in IPv4 address.
(e) Explain shortest path routing protocol of static algorithms.
(f) What is UDP? Write advantage and responsibility of UDP.

Q.4 Answer the following (any five) **(15)**

(a) Define Data and Data Communication.List the components of data communication?
(b) Which are the different forms to represent Data?
(c) Explain multiplexing with a proper diagram.
(d) Define bitrate and bandwidth. Draw the frequency and time domain of the serial signal.
(e) Write full form and use of 1) RIPv1 2) DHCP 3) OSPF
(f) What is meant by Addressing ? How many bits are there in Network id and Host id of Class C?

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