



- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw Neat and labelled diagram and use supporting data wherever necessary.
 3. Avoid vague answers and write specific answer related to question.

Either

1. a) What is Network? Explain the need of computer Network. **8**
- b) Describe OSI reference model in detail. **8**

OR

- c) Explain different types of Network in detail. **8**
- d) Describe different Network protocols and standards. **8**

Either

2. a) Explain the following. **8**
- i) Gateways
- ii) Repeaters.
- b) What is Guided and Unguided media? Explain in detail. **8**

OR

- c) Write a note on: **8**
- i) DTE interfaces.
- ii) DCE interfaces.
- d) Explain X.21 and EIA – 530 standards. **8**

Either

3. a) Explain X.25 layer and packet layer protocols. **8**
- b) Explain synchronous protocols along with. **8**
- a) Character oriented protocol.
- b) Bit oriented protocol.

OR

- c) Write a note on: 8
- i) Flow control mechanism.
- ii) Error control mechanism.
- d) Describe Asynchronous protocols in detail. 8
- Either
4. a) Write a note on. 8
- i) Token Bus.
- ii) Token Ring.
- b) Explain packet switching in detail. 8
- OR**
- c) Describe Distributed queues. Explain in detail. 8
- d) Explain. 8
- i) Ring configuration.
- ii) Dual Bus.
5. Solve all the question.
- a) Explain different transmission modes. 4
- b) Write a note on routers. 4
- c) Explain line Discipline. 4
- d) Explain Message switching. 4
