

Time : 3 Hrs.

**Note :**

1. Part 'A' may be attempted in first 5 pages of Answer Sheet.  
भाग 'क' के सभी उत्तर, उत्तर-पुस्तिका के प्रथम पांच पृष्ठों में ही करने हैं।
2. Part 'B' in rest of the Sheets of Answer Sheet.  
भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
3. Answers may be given in English or Hindi.  
प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

### Part 'A'

10x2= 20

1. Attempt any ten questions:

- (i) What is meant by time domain in data transmission?
- (ii) What is digital data transmission?
- (iii) What is thermal noise in data transmission?
- (iv) What is bandwidth?
- (v) Draw structure of Coaxial cable.
- (vi) Explain modulation.
- (vii) Explain packets in data transmission.
- (viii) What are parity bits?
- (ix) Explain line of sight in communication.
- (x) Define baud rate.
- (xi) What is TDM?
- (xii) What is half duplex communication?
- (xiii) Explain Uncast.

5 x 4 = 20

2. Attempt any 5 of the following questions:

- (i) Explain FDM in detail.
- (ii) Distinguish between synchronous and asynchronous data transmission.
- (iii) Explain types of errors incurred during data communication.
- (iv) What is OSI? Explain.

- ~~(v)~~ Explain circuit switching.
- ~~(vi)~~ What is frame delay? How is it calculated?
- ~~(vii)~~ What is serial and parallel transmission?

## PART-B

Attempt any 3 of the following questions:

3. Distinguish between ASK, FSK and PSK.
4. What are various scrambling techniques?
5. Explain data correction codes in detail using example.
6. Compare satellite and terrestrial microwave links.
7. Explain various IEEE 802 standards in detail.