

**Bachelor of Science B.Sc. (Semester-V) (C.B.S.)**  
**Examination**  
**ELECTRONIC COMMUNICATION**  
**Paper—1**  
**(Electronics)**

Time—3 Hours] [Maximum Marks—50

**N.B. :—** (1) All questions are compulsory and carry equal marks.  
(2) Draw neat diagrams wherever necessary.

**EITHER**

1. (A) Draw the block diagram of communications system and explain it.  
Explain need of modulation. 6+4

**OR**

(B) Explain simplex and duplex system.  
Explain Amplitude Modulation in detail. 4+6=10

**EITHER**

2. (A) Explain ground waves, sky waves and space waves.  
Explain various characteristics of Antenna. 4+6

**OR**

(B) Explain Classification of Antennas on the basis of frequency.

Explain various antennas based on feed mechanism.

5+5

5. (A) State the advantages and disadvantages of digital communication.  
(B) Explain repeaters used in communication systems.  
(C) State and explain Shannon Theorem.  
(D) Explain various types of optical fibers. 4×2½

**EITHER**

3. (A) Explain synchronous and asynchronous data transmission methods.

Explain digital FSK modulator. 5+5

**OR**

(B) Explain ASK modulator.

Explain PSK modulator. 5+5

**EITHER**

4. (A) Explain fiber optic communication system. Also state its advantages (any **TWO**).

Explain features of Cellular Telephone System.

5+1+4

**OR**

(B) Draw the block diagram of Fax Machine and explain the functioning of Fax System.

Draw the block diagram of Cellular Telephone Unit and explain it. 6+4