

**B.Tech Sem – IV (2007 Course) (Electronics) : SUMMER - 2019**  
**SUBJECT: ANALOG COMMUNICATION**

Day: Saturday  
Date: 25/05/2019

**S-2019-3024**

Time: 10.00 AM TO 01.00 PM  
Max Marks: 80

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**N.B:**

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** question from each section.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Answer to both the sections should be written in **SAME** Answer book.
  - 4) Assume suitable data, if necessary.
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**SECTION-I**

- Q.1** a) Define noise figure and noise temperature. (05)  
b) Define modulation index and percent modulation for AM wave. (05)  
c) Compare Amplitude Modulation and Phase Modulation. (04)
- Q.2** a) Define microphone. Explain any one type of microphone in detail. (07)  
b) What are the methods of sound recording? Explain optical recording on compact disc. (06)
- Q.3** a) Explain in detail high level modulation. (07)  
b) Derive expression for AM wave. Draw the frequency spectrum of AM wave. (06)
- Q.4** a) Draw and explain Armstrong method for FM generation. (07)  
b) Draw and discuss phase modulation technique with waveforms. (06)

**SECTION-II**

- Q.5** a) Draw and explain block diagram of communication receiver system. (06)  
b) Explain sky wave propagation. (04)  
c) Draw and explain block diagram of electronic telephone exchange system. (04)
- Q.6** a) Draw and explain envelope detector. (07)  
b) Draw the block diagram of FM receiver and explain each block. (06)
- Q.7** a) Explain space wave propagation with diagram. (07)  
b) What is smith chart. Mention applications of smith chart. (06)
- Q.8** a) Draw and explain push button dialer in detail. (07)  
b) Explain in detail the working of electronic exchange system. (06)

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