# 10.6 - Telecommunication

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- (1998) Give the reason for better reception of radio waves for high Frequency signals at night than during the day time.
- (1998) Explain briefly three different types of radio waves travelling from a transmitting station to a receiving antenna.
- (2000) Explain why Audio amplification is necessary for a practical radio set.
- (2013) An electron gun fires electrons at the screen of a TV tube. The electrons start from rest and are accelerated through a potential difference of 30 kV. What is the speed of impact of electrons on the screen of the picture tube?
- (2013) Briefly explain why long distance radio broadcasts make use of short wave bands.
- (2014) Give the meaning of the following terms:
  - Bandwidth
  - Amplitude modulated carrier wave
- (2014) Sketch the frequency spectrum for 1500 m radio waves modulated by 4 kHz audio signal.
- (2014) List down two advantages of digital signals over analogue signals.
- (2014) A carrier of frequency 800 kHz is amplitude modulated by frequencies ranging from 1 kHz to 10 kHz. What frequency range does each sideband cover?
- (2015) Give one advantage of frequency modulation (FM) as compared to amplitude modulation ( AMT).
- (2015) Briefly explain the importance of bandwidth of an amplitude modulation (AM) signal.
- (2015) State the function of a modulator in radios.
- (2015) Sketch a block diagram to show the general plan of any communication system.
- (2015) The amplitude modulated (AM) broadcast band ranges from 450 to 1200 kHz. If each station modulates with audio frequencies up to 5.5 kHz, determine the
  - Bandwidth needed for each station.
  - Total bandwidth available.
- (2017) List three basic elements of communication system.

- (2018) Identify two difficulties which would arise when two straight wires are used to transmit electricity direct from the source to the city station.
- (2019) Identify three basic elements of a communication system.
- (2019) Why sky waves are not used for transmission of TV signals?