

# MCA 5th Semester Mid Term Examination 2023

Wireless Communication Networks  
(MCAO5E11))

Full Marks: 20

Time: 1hour

[The figure in the margin indicates full marks for the question)  
All Questions are Compulsory.

## PART - A

1. Write the characteristics of wireless medium . (4 X 1 = 4)
2. List all the multiple access techniques for wireless communication.
3. List the types of analog and digital modulation methods.
4. What is doppler effect?

## PART - B

(4 X 2 = 8)

5. Differentiate between Amplitude Modulation, Frequency Modulation and Pulse Modulation
6. Compare Amplitude Shift Keying, Frequency Shift Keying and phase Shift Keying.
7. What is the effect of multipath in digital radio communication and how it can be solved?
8. Explain the following wireless channel modelling:
  - i. Path loss
  - ii. Shadow fading

## PART - C

(2 X 4 = 8)

9. Compare FDMA, TDMA, CDMA and SDMA
10. Explain the following radio wave propagation in wireless communication along with their advantages and disadvantages
  - i. Ground wave propagation
  - ii. Sky wave propagation
  - iii. Line of sight propagation
  - iv. Tropospheric propagation.