COURSE CODE(CREDITS): 21M1WEC131(3) MAX. MARKS: 15
COURSE NAME: IOT Architecture and Protocols
COURSE INSTRUCTORS: Er. Munish Sood MAX. TIME: 1 Hour

Note: (a)All questions are compulsory.
(b)Marks are indicated against each question in square brackets.
(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1) Calculate the change in received signal strengths (in dB) in mobile radio propagation condition at two different distance points **[3] CO-1**

a) When the second distance point is twice the distance of the first point.
b) When the second distance point is ten times the distance of the first point.

Q2) What does a small delay spread indicate about the characteristics of a fading channel? If the delay spread is 1 microsecond, will the two different frequencies 1 MHz apart, experience correlated fading? **[3] CO-1**

Q3) Identify at least three factors that can affect signal propagation in a wireless medium. Explain how each factor can occur and how it impacts propagation. **[3] CO-1**

Q4) Distinguish between AWGN channel, Rayleigh fading channel and Rician fading channel in a wireless environment. **[3] CO-2**

Q5) List three types of fading. Explain how each one typically occurs. What are different techniques used to minimize the effects of fading. **[3] CO-2**