

Department of Electrical Engineering

Assignment

Date: 20/04/2020

Course Details

Course Title: Advance Wireless System

Module: 3

Instructor: _____

Total Marks: 30

Student Details

Name: _____

Student ID: _____

INSTRUCTIONS:

1. Answers to question 1 must be written in form of Research *Paper*.
 2. Each answer must be supported by related research articles (at least 3)
 3. The answers must be in your own words and references must be cited wherever it is necessary
 4. Plagiarized content will NOT be accepted (Max allowed similarity Index: 15%)
 5. The solution must be uploaded before the end of deadline mentioned on the *Online Portal* of subject.
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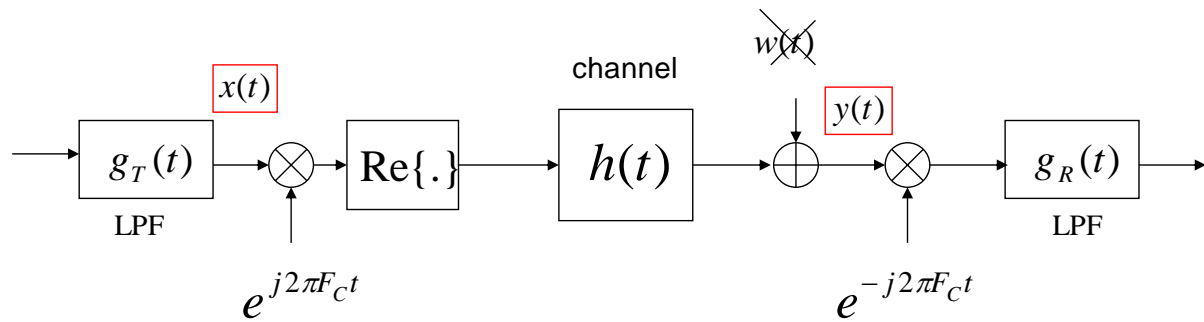
Question No. 1

Write a detailed report of DVB-S2 standard that should incorporate the details related to Transmission System, Basic Architecture, Subsystem Specifications and Receiver System.

Question No. 2

Consider the following communication system with impulse response of wireless channel as $h(t)$ where the received signal after passing through the radio channel is ideally is desired to be

$$y(t) = \text{Re} \left\{ x(t) e^{j2\pi F_c t} \right\}$$



Model the channel and show the output by considering

- Only the time shift due to multipath transmission for LOS communication
- Doppler frequency shift in multipath LOS communication
- Both (i), (ii) along with attenuation in LOS communication

Question 3

Consider the No-LOS conditions to represent the received signal through Rayleigh fading channel in terms of $r_\ell(t)$ and $c_\ell(t)$