

Department of Electrical Engineering

Assignment

Date: 23/06/2020

Course Details

Course Title: _____ Mobile and Broadband Networks _____

Module: _____

Instructor: _____

Total Marks: _____ 50 _____

Student Details

Name: _____

Student ID: _____

Q1.	Passive Optical Network is a promising broadband Access Technology that provide many advantages such as high-quality triple play service in a cost-effective manner. PON technologies have been developed with different architectures and standards over the past few decades. IEEE and ITU are the standardization bodies that have proposed their own versions of PON's. Support you answer to Explain the PON Architectures proposed by ITU and IEEE in terms of its FRAME STRUCTURES (DATA LINK LAYER).	Marks 12
Q.2	Due to Bandwidth Hungry Applications like Video on Demand, Online Gaming and other multimedia services, the demand for high bandwidth is increasing day by day. Apart from that, multiple users are adding to that network which increases the network capacity. In order to accommodate more users to the network and provide these users with a high bandwidth, a strong Broadband Access Network is required. Passive Optical Networks have the ability to provide high bandwidth as well as it accommodates more users to the network. Support your answer to Explain different types of PON Networks along with its Architecture that are in use to provide the scalability and High bandwidth to their users	Marks 12
Q.3	The Advancement in Wireless Communication Technology is considered to be the prominent and the most dominant Innovation of 20 th Century. Through these advancements, users can be seamlessly connected to one another through their portable devices supporting different wireless technologies. Make a Comparative Analysis of the Wireless Communication Technology Era's from 1G to 5G showing how different Wireless Technologies evolved with time.	Marks 12

Q.4	Visible Light Communication is considered a promising candidate for future wireless communication because of its feature like non-licensed channel, high bandwidth and low power consumption. For VLC applications, the placement and working principle of transmitter and receiver is very important. Explain the working principle of VLC in terms of its Physical Layer and MAC layer according to the IEEE standards.	Marks 12
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