Specimen of lesson Plan

Name of the Faculty : Mr. Sumit Rohilla

Discipline:

Semester: 6th

Subject: Optical Fiber communication

Lesson plan duration: 15 weeks

Work load: Lectures-04, Practical -00

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| **Week** | **Theory** | **Practical** |
| Lecture day | Topics | Practicaldays | Topics |
| 1st | **1st** | Introduction of OFC, historical prospective |  |  |
| **2nd** | **Basic** communication systems |  |  |
| **3rd** | Optical frequency range, advantage of optical fibre communication |
| **4th** | Application of FOC |
|    2nd  |  **5th** | Introduction light wave fundamentals, nature of light |   |  |
|  **6th** | Acceptance angle and numerical aperture EM waves |
|  **7th** | Dielectric wave guide modes in planner guide, Dispersion and destortation in wave guide |  |  |
|  **8th**  | Class-test of chapter 1 |  |
|   3rd |  **9th**  | Introduction OFW, fibre structure, step index fibre |    |  |
|  **10th** | Graded index fibre intention mode in step |
|  **11th** | Index and graded index fiber, pulse dispersion and information rate in optical fiber |   |  |
|  **12th**  | Construction of optical fibers, optical fiber cables |
|     4th |  **13th**  |  Assignment |   |  |
|  **14th** |  Class test  |
|  **15th** | Introduction of light source, operating characteristic of leds |   |  |
|  **16th** | Laser principle, different types of lasers, lasers diodes, Operating characteristic of laser diodes |
|   5th |  **17th** | Distributed feedback laser diode  |  |  |
|  **18th** | Optical amplifers fiber laser |
|  **19th** | Class-test |
|  **20th** | Introduction to light detectors, Principle of photo detection  |
|  6th |  **21st** | Principle of photo detection |  |
|  **22nd** | Photo multipliers, semi conductors of photo diodes  |
|  **23rd** | PIN diode and APD  |
|  **24th** | Comparison between PIN and APD  |
|     7th |  **25th** | Introduction of optical fiber joints  |
|  **26th** |  Fiber alignment joints losses  |
|  **27th** | Fiber and preparation, Splices, connectors, source coupling |
|  **28th** | Class-test  |
|   8th |  **29th** | Distribution network and fibre components |
|  **30th** | Distribution network, directional couplers, star couplers and switches |
|  **31th** | Fibre optics isolaters |
|  **32th** | Attenuators WLDM  |