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BOARD DIPLOMA EXAMINATION

MARCH/APRIL - 2019

* **DIPLOMA IN ELECTRONICS AND COMMUNICATION ENGINEERING**
OPTICAL & MOBILE COMMUNICATIONS
FIFTH SEMESTER EXAMINATION

Time: 3 Hours**Total Marks: 80**

PART - A (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. **Classify optical fibers based on core diameter and give their approximate values of core diameters**
2. **List the extrinsic losses of Optical Fibers**
3. **Distinguish between a coupler and splitter in Fiber Optic Communication**
4. **List the various fiber optic active components**
5. **Define space division switching and time division switching**
6. **Classify various telephone switching systems**
7. **Define channel capacity in mobile communication**
8. **State the need for frequency reuse in mobile communication**
9. **List the features of digital cellular system.**
10. **List the salient features of 4G**

PART - B (10m x 5 = 50m)

Note 1: Answer any five questions and each carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. **a) Explain the structure of Optical Fiber with neat sketch**
 * **b) List advantages of Light wave communication system over EM wave system**
12. **a) Classify fibers based on refractive index profile and explain with sketches**
b) Classify fibers based on core diameter and explain
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13. **Explain the Block Diagram of fiber optic communication system**

14. (a) State the functions of Mobile Switching Centre with basic block diagram
- (b) List and define various Channels in Mobile communication
- 15A. List the two types of optical sources and give the differences between them
- B. Explain how electronic telephony is superior over manual telephony
16. (a) Give the features of TDMA
- (b) Give the features of CDMA
17. Explain the process of call progress in cellular telephone system
18. Explain the Global system for Mobile communication with block diagram.

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