



C14-EC-603

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DECE-SIXTH SEMESTER EXAMINATION**

OPTICAL FIBRE COMMUNICATION

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

Instructions :

1. Answer **All** questions.
2. Each question carries **Three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Mention different optical spectral bands.
2. List the advantages of SMFs over MMFs.
3. List three types of fibre drawing processes.
- * 4. Define wave guide dispersion.
5. Mention the need for connector in FOC.
6. State use of optical attenuators.
7. Mention important features of an optical detector.
8. State the principle of laser.
9. Define wavelength division multiplexing.
10. Distinguish between wideband WDM and narrow band WDM (DWDM).

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PART-B

10X5=50

- Instructions* : *
1. Answer any **Five** questions, choosing at least one from each section.
 2. Each question carries **ten** marks.
 3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Derive the expression of NA interns of core and cladding refractive indices.
12. Explain plasma activated chemical vapour deposition (PCVD) method.
13. Explain the working of an optical coupler.
14. Explain the working optical time domain Reflectometer (OTDR).
15. Explain the construction and working of APD (Reach through APD).
16. Draw the block diagram of fibre optic communication system and explain each block.
17. Explain Bus. Ring and Start topologies used in fibre optic networks.
18. (a) Explain the characteristics of loose buffered cable.
(b) Distinguish between repeaters and optical amplifiers.

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