

4633

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH /APRIL-2019

DECE - FIFTH SEMESTER EXAMINATION

OPTICAL FIBRE COMMUNICATION

Time: 3 Hours]

[Max. Marks : 80

PART - A

3x10=30M

Instructions: 1) Answer **all** questions. Each question carries **three** marks.
2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

- 1) List Different Generations of Optical Fibres.
- 2) Classify Optical Fibres.
- 3) List various types of dispersions exist in Optical Fibres.
- 4) List different types of Fibre drawing processes.
- 5) List different types of connectors.
- 6) Explain need for connectors in Fibre Optic Communication.
- 7) Distinguish between LED and LASER sources.
- 8) Classify repeaters in Optical Fibre Communication.
- 9) List the differences between Wide band WDM and Narrow band WDM.
- *10) Define wavelength division multiplexing.

PART-B

5x10=50M

- Instructions:**
- 1) Answer any **five** questions.
 - 2) Each question carries **ten** marks.
 - 3) The answer should be comprehensive and the criterion for valuation is the Content but not the length of the answer.

- 11) Explain Structure of Optical Fibre and also explain how wave propagation takes places in optical Fibre with neat diagrams.
- 12) Describe the characteristics of loose buffered cable and tight buffered cable.
- 13) Explain intrinsic and extrinsic losses.
- 14) Explain working principle of optical Coupler and Optical Isolators.
- 15) Explain (a) Optical Power Meter (5M)
(b) Optical Time-Domain Reflectometer (5M)
- 16) Explain Construction and Working of PIN diode with neat diagrams.
- 17) Explain EDFA (Erbium Doped Fiber Amplifier) and its architecture.
- 18) (a) Explain Optical Network Topologies. (7M)
(b) Draw the block diagram of typical WDM network. (3M)

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