

6632

## BOARD DIPLOMA EXAMINATIONS

OCT/NOV-2019

## DECE-FIFTH SEMESTER

## OPTICAL &amp; MOBILE COMMUNICATIONS

Time:3 hours

Max. Marks: 80

## PART – A

3 X 10 = 30

- Instructions:*
1. Answer **all** questions.
  2. Each question carries **Three** Marks.
  3. Answer should be brief and straight to the point and should not exceed five simple sentences.

1. State the advantages of light wave communication system.
2. Classify different types of dispersions that occur in optical fibre.
3. List the sources used in Optical Fibre Communication.
4. What is the need for optical coupler?
5. What are the advantages of DTMF?
6. List the limitations of Conventional mobile phone system.
7. State the need for hexagonal cells.
8. Define hand – off in mobile communication.
9. What are the features of digital cellular system?
10. What are the advantages of GSM?

[cont.,

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**PART – B**

**10 X 5 = 50**

- Instructions:** 1. Answer any **Five** questions  
2. Each question carries **TEN** Marks.  
3. Answer should be comprehensive and Criteria for Valuation is the content but not the length of the answer.

11. (a) List Intrinsic and Extrinsic losses in optical fibre. 3M  
(b) Explain DWDM with neat Block diagram. 7M
12. (a) What is the need of WDM system. 2M  
(b) Draw the block diagram of WDM system and explain. 8M
13. Explain the principle, construction and working of LASER source.
14. (a) What are features of an optical detector. 5M  
(b) Explain the evolution of cellular mobile communication system. 5M
15. Draw the block diagram of electronic telephone exchange and explain each block.
16. (a) Draw the block diagram of a basic cellular system and explain each block 6M  
(b) What are the features of TDMA? 4M
17. a) Explain the concept of frequency reuse. 6M  
b) What are the advantages of CDMA? 4M
18. a) Explain IP Multimedia Subsystem (IMS). 5M  
b) Explain about GPRS. 5M

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