



C16-EC-504

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BOARD DIPLOMA EXAMINATION, (C-16)
JANUARY/FEBRUARY—2022
DECE - FIFTH SEMESTER EXAMINATION
OPTICAL AND MOBILE COMMUNICATIONS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

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

1. Define acceptance angle and cone of acceptance.
2. List the types of fibers based on core diameter.
3. List the two types of detectors used in OFC.
4. State the function of splice in optical fibers.
5. List the limitations of conventional mobile phone system.
6. State the functions of mobile switching center.
7. Define the term cell and cluster.
8. Define Hand-off in mobile communication.
9. List the advantages of 3G over earlier versions.
10. Compare the features of GSM, GPRS and EDGE systems.

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[Contd...

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PART—B

10×5=50

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

- 11.** Define Snell's law and explain light wave propagation in OFC.
- 12.** Draw and explain the block diagram of DWDM system.
- 13.** Draw the block diagram of fiber optic communication system and explain each block.
- 14.** (a) Explain DTMF dialing. 5
(b) State the need for optical coupler/splitter. 5
- 15.** Draw and explain the block diagram of electronic telephone exchange.
- 16.** Explain the concept of frequency reuse.
- 17.** Explain the concept of spread spectrum technique.
- 18.** Draw and explain the GSM.

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