

BT7/D06

9302

Broadband Communication (2004-05)

Paper-IT-453

Time : Three Hours]

[Maximum Marks : 100

Note :- Attempt any FIVE questions. All questions carry equal marks.

1. (a) What is the use of Fibres in Optical Communication ? Explain different types of fibres and their characteristics. 10
- (b) What do you mean by Dispersion ? Explain in detail. 7
- (c) Define Optical Amplifiers. 3
2. (a) What are Lasers ? Explain their use in data transmission. 7
- (b) Explain DWDM with its specifications and topologies. 7
- (c) What are optical multiplexers and demultiplexers ? 6
3. (a) What are principles, objectives and benefits of ISDN ? 10
- (b) What are the three kinds of connections which can be set up over a B-Channel ? 4
- (c) Explain call negotiation procedure in ISDN-ISDN Interworking. 6
4. (a) Explain LAPD in detail. 8
- (b) Explain frame structure of I. 465 / V.120 for circuit mode connection. 8
- (c) Why is ATM called so ? Explain. 4
5. (a) Explain Basic User Network Interface in detail. 10
- (b) How is flow control, error control and error monitoring done in SS7 ? 5
- (c) Differentiate between virtual circuits and virtual paths. 5

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- 6. (a) What are different service categories in ATM ? Explain all. 8
- (b) Explain B-ISDN Protocol Reference Model. 8
- (c) Explain ATM Cell Format. 4
- 7. (a) Can IP addresses be used in ATM ? Why or why not ? 5
- (b) Explain how 3-bit sequence numbers in AAL1 header can be used to deal with lost cells and with misinserted cells. 6
- (c) Explain ATM OAMM functions. 9
- 8. Write short notes on following :-
- (a) NRZ
- (b) Rate Adaptation
- (c) SS7 Protocol Architecture
- (d) ISDN Standards. 5×4