Seat No.

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MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: High Performance Communication Networks

Sub. Code: 84864/85044

Day and Date: Wednesday,03-06-2026 **Total Marks: 70**

Time: 02:30 PM To 05:00 PM

Instructions:
1. **All questions are compulsory**
2. **Assume suitable data wherever necessary and mention it boldly**
3. **Draw neat labelled diagrams wherever necessary**
4. **Figures to the right indicate full marks**

Q1) Solve following MCQ. **[14]**

i. Information bearing channels in ISDN are called _____.
- A. D channels
- B. Data channels
- C. B channels
- D. Voice channels

ii. DQDB is standardized under which IEEE standard?
- A. IEEE 802.2
- B. IEEE 802.3
- C. IEEE 802.6
- D. IEEE 802.11

iii. A _____field on a cell header in the ATM layer determines whether a cell can be dropped.
- A. VPI (Virtual path identifier)
- B. VCI (Virtual circuit identifier)
- C. CLP(Cell loss priority)
- D. GFC(generic flow control)

iv. Which type of VPN connects a remote user to a private network?
- A. Site-to-Site VPN
- B. Remote Access VPN
- C. Broadcast VPN
- D. Mesh VPN

v. MPLS uses which type of switching mechanism?
- A. Circuit switching
- B. Packet switching
- C. Label switching
- D. Frequency switching

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vi. VANET is a specialized form of which type of network?

A. WLAN
B. MANET
C. PAN
D. LAN

vii. A multiplexer _____ several transmission streams while a demultiplexer _____ them.

A. combines ; separates
B. compresses ; decompresses
C. encrypts ; decrypts
D. separates ; combines

Q2) Attempt any two of the following questions : [14]

a. With neat schematic explain DQDB n/w? **[7]**

b. Explain the various network elements using a suitable diagram? **[7]**

c. Describe the function of various modules in ATM Switching? **[7]**

Q3) Attempt any two of the following questions : [14]

a. Describe the FDDI network with the help of a neat diagram? **[7]**

b. Draw and explain Open data network model? **[7]**

c. Explain the function of each field in ATM cell Header for NNI? **[7]**

Q4) Attempt any two of the following questions : [14]

a. With neat diagram explain Site-to-Site VPN? **[7]**

b. Explain in detail optical link? **[7]**

c. Explain with sketch scenario of Pedestrian-to-vehicle application in VANET? **[7]**

Q5) Attempt any two of the following questions : [14]

a. What is MPLS? Explain MPLS Network? **[7]**

b. With neat sketch explain optical cross connect? **[7]**

c. Explain vehicle sensors in VANET? **[7]**

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End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (1154) B.Tech. CBCS (84864) High Performance Communication Networks Part 4 SEM 8

2] (101) Bachelor of Engineering (85044) High Performance Communication Networks Part 4 SEM 8

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