

17662

11920

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (8) Use of steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. **Attempt any FIVE :**

20

- (a) Define modulator and demodulator.
- (b) Compare between Analog and Digital signal. (four points)
- (c) Explain serial communication.
- (d) Explain Domain Name System. Give example.
- (e) Explain the various ATM adaption layer.
- (f) Explain the different modes of fiber optic cable. Explain how refractive index affect the modes.
- (g) Define VRC. Explain with example.

2. **Attempt any TWO :**

16

- (a) List the various error recovery techniques. Explain stop and wait technique with example.
- (b) Explain optical fiber communication system with block diagram.
- (c) Describe the architecture of IEEE 802.11.

[1 of 2]

P.T.O.

- 3. Attempt any TWO :** **16**
- (a) Describe the following :
 - (i) Channel encoder and Decoder
 - (ii) Data transmission rate and Bandwidth
 - (b) Define standard organisations. List and explain various standard organisation.
 - (c) Explain ARP. Draw and explain the message format of ARP.
- 4. Attempt any TWO :** **16**
- (a) Define Ethernet. Explain Ethernet frame and Ethernet properties.
 - (b) Describe TCP/IP layers in detail.
 - (c) Define multiplexing. Explain TDM and FDM.
- 5. Attempt any TWO :** **16**
- (a) Draw and explain Bluetooth architecture. List the various application of Bluetooth.
 - (b) Explain the following :
 - (i) Snell's Law
 - (ii) Laser
 - (c) Describe the following :
 - (i) Attenuation
 - (ii) Noise
 - (iii) Delay Distortion
 - (iv) Parity check
- 6. Attempt any TWO :** **16**
- (a) Explain the following term :
 - (i) Simplex and Duplex communication model
 - (ii) ICMP
 - (b) Explain different losses in Fiber Optic Cable. Explain in detail.
 - (c) Describe the following term :
 - (i) SONET
 - (ii) Hamming code
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