



17662

11718

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
 - (2) *Illustrate your answers with neat sketches wherever necessary.*
 - (3) *Figures to the right indicate full marks.*
 - (4) *Mobile Phone, Pager and any other Electronic Communication devices are **not** permissible in Examination Hall.*

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|--|--------------|
| 1. Attempt any five : | 20 |
| 1) Define the following : | 4 |
| a) Amplitude | 4 |
| b) Frequency | 4 |
| c) Period | 4 |
| d) Phase | 4 |
| 2) What are standards ? Name any 4 standard organization. | 4 |
| 3) What is FTP ? State its applications. | 4 |
| 4) Describe the concept of IEEE 802.11 FHSS. | 4 |
| 5) List advantages of fiber optic cable over electrical cable. | 4 |
| 6) Explain stop and wait protocol used for error recovery. | 4 |
| 7) Draw and describe the block diagram of digital communication system. | 4 |
| 2. Attempt any two : | 16 |
| 1) What is multiplexing ? Explain TDM and FDM with 2 advantages and 2 disadvantages. | 8 |
| 2) Explain the following : | 8 |
| a) ARP | 8 |
| b) RARP. | 8 |
| 3) Describe Asynchronous transfer mode with respect to switching mode, packet size, ATM cells and ATM layer. | 8 |
| 3. Attempt any four : | 16 |
| 1) Differentiate between analog and digital signal. | 4 |
| 2) Draw and explain Isochronous transmission mode. | 4 |
| 3) What is IP address ? Give the classes of IP address. | 4 |
| 4) Explain concept of DSSS. Give its two advantages. | 4 |
| 5) List different light sources used in fiber optic communication ? Describe any one in detail. | 4 |
| 6) Explain cyclic redundancy check method of error detection. | 4 |

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- 4. Attempt any four :** **16**
- 1) State the meaning of following terms with example. **4**
 - a) Data transmission rate
 - b) Bandwidth.
 - 2) Compare digital and analog transmission. **4**
 - 3) Describe the concept of DNS. **4**
 - 4) Draw and explain the structure of Ethernet frame. **4**
 - 5) Describe Rayleigh Scattering loss and bending loss in an optical fiber cable. **4**
 - 6) Explain Go-back-in method of error recovery. **4**
- 5. Attempt any two :** **16**
- 1) Explain Bluetooth architecture. **8**
 - 2) Explain construction of optical fiber cable and principle of light propagation in fiber. **8**
 - 3) What is error ? Explain delay distortion, attenuation and noise in detail. **8**
- 6. Attempt any four :** **16**
- 1) Describe serial communication. Give its advantages and disadvantages. **4**
 - 2) What is TCP/IP ? Explain any two layers of TCP/IP. **4**
 - 3) State any 4 functions of OFDM. **4**
 - 4) Explain the following terms : **4**
 - a) Reflection
 - b) Refraction.
 - 5) Explain Single bit error and Burst error. **4**
 - 6) List any 4 applications of Laser. **4**
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