

2011

Session: 2010-11

Subject Code: IV

Time : 3 Hours

Paper : CHN / 1 / IV / 11

Full Marks : 80

Candidates are required to give their answers in their own words as far as practicable.

The figure in the margin indicates full marks.

Answer from both the groups as directed.

**GROUP - A**

*(Objective Type Questions - Compulsory)*

Q.No. 1. Choose the correct answer of the following:

2 x 10 = 20

1. Which mode of transmission requires a clock?
  - a) Serial
  - b) Parallel
  - c) Serial-parallel
  - d) None of the above
  
2. Which is the process in which two or more signals are combined?
  - a) Multiplexing
  - b) De-multiplexing
  - c) Both a) and b)
  - d) None of the above
  
3. The throughput of pure ALOHA.
  - a) 18.1%
  - b) 18.2%
  - c) 18.4%
  - d) 18.9%
  
4. UDP runs over .....
  - a) IPv6
  - b) TCP
  - c) IPv4
  - d) None of the above

- Optical fiber is based on the principle of .....
- a) Reflection
  - b) Refraction
  - c) Total internal reflection
  - d) None of the above
6. A noiseless 3-kHz channel transmits binary signals at the rate of .....
- a) 6kbps
  - b) 5kbps
  - c) 4kbps
  - d) 2kbps
7. 25) The address reserved for private networks is .....
- a) a) 172.16.255.0
  - b) b) 173.15.256.1
  - c) c) 173.15.258.2
  - d) None of the above
8. ARP is defined in .....
- a) RFC 826
  - b) RFC 827
  - c) RFC 829
  - d) RFC 286
9. Inter NIC is known as .....
- a) International Net Information Communication
  - b) Inter Network Information Command
  - c) International Network Institute Center
  - d) International Network Information Center
10. The number of the levels in digital signal is .....
- a) One
  - b) Two
  - c) Four
  - d) Ten

### GROUP - B

#### *(Long Answer Type Questions)*

Answer any *four* questions. Each question carries 15 marks.

- Q.No. 2. What are the five service primitives for implementing a simple connection oriented service? Explain them. Also explain the two types of transmission technology.
- Q.No. 3. Explain about store-and-forward packet switching. Also write short notes on routing of mobile hosts.

- No. 4. Explain with examples, error detecting and correcting codes. Also explain in detail on pure ALOHA system.
- Q.No. 5. Explain ARQ protocol with its various functions. Also write difference between TDM and FDM.
- Q.No. 6. What is modulation? Explain AM, FM and PM with waveforms. Also explain physical topologies with diagram.
- Q.No. 7. Explain PCM with block diagram. Also discuss Data link, Network and Transport layer in detail.
- Q.No. 8. Write short notes on the following:  
(i) MPLS (ii) RSVP
- Q.No. 9. Write and explain frame format of IPV6.

