

TE | IT | V (REV) 27/5/14.  
CTNC.

QP Code : **MV-18503**

(3 Hours)

[ Total Marks : 100

- N.B.** (1) Questions No. 1 is **compulsory**.  
(2) Solve any **four** out of remaining questions.  
(3) Assume **suitable** data if **necessary**.

1. Attempt the following (any **four**) : - 20
  - (a) What are difference between ASK, PSK, FSK ?
  - (b) How frames are form at data link layer ?
  - (c) Explain GSM channels in detail ?
  - (d) What is importance of logical layers in TMN ?
  - (e) Explain different network topology ?
  
2. (a) What are different error correction and detection techniques used at data link layer? 10  
(b) Explain modulator and demodulator used in Binary frequency shift keying (BFSK). 10  
What is probability of error ?
  
3. (a) Explain Telecommunication managemen network (TMN) in detail and also explain 10  
use of reference points in TMN.  
(b) Explain in detail circuit switching, virtual circuit switching, packet switching ? 10
  
4. (a) Explain ISDN protocol stack ? How call is established and released in ISDN ? 10  
(b) Explain input buffering, out buffering and shared buffering. Also state their merits 10  
and demerits.
  
5. (a) Explain any three methods used for error correction and error detection at data 10  
link layer ?  
(b) Whar is Bridging ? Explain Bridges in LANS. 10
  
6. (a) What are different types of Bluetooth technology ? Explain bluetooth protocol 10  
stack in detail ?  
(b) What are the different multiple access system used in cellular system ? 10
  
7. Write short notes (any **four**) : - 20
  - (a) Shared Memory and Shared Medium Switching
  - (b) 3G UMTS Network
  - (c) Traffic Shaping and Traffic Policing
  - (d) GSM architecture
  - (e) Network Topology.