

Con. 3463-11.

RK-2172

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is **compulsory**.
 (2) Answer any **four** questions from remaining.
 (3) Do **not** write anything on question papers **except** seat no.
 (4) Draw the well labeled diagram.
 (5) **Each** question carries equal maximum marks **20**.

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|--------|---|----|
| 1. (a) | Draw and explain different Network topology. | 6 |
| (b) | Explain voice integration technique. | 6 |
| (c) | Explain with block diagram Generation and Reception of BPSK. | 8 |
| 2. (a) | What is BFSK ? Draw and explain BFSK T_r and co-herent receiver. Comment on B-W requirement. | 10 |
| (b) | Prove that probability of error of QPSK is :— | 10 |
| | $P_e = \text{erfc} \sqrt{\frac{E_b}{2 N_0}}$ | |
| | Where E_b is bit energy. | |
| 3. (a) | Explain Traffic Management in ATM. | 10 |
| (b) | Draw and explain CDMA in UMTS Network. | 10 |
| 4. (a) | Explain 3G and 4G wireless communication with advantages. | 10 |
| (b) | Explain the term Network Architecture with suitable example. | 10 |
| 5. (a) | Draw and explain Architecture of IMS for UTMS. | 10 |
| (b) | Derive the equation for BPSK spectrum and draw it, Also plot the geometric representation of BPSK signal. | 10 |
| 6. (a) | What is data encryption technique and explain Transposition Ciphers in details. | 10 |
| (b) | Differentiate between ASK, PSK and FSK. Write advantages of each. | 10 |
| 7. | Write short notes on (any three) :— | 20 |
| (a) | Ad-hoc Network | |
| (b) | Firewalls | |
| (c) | Digital Signature and Certificate | |
| (d) | Traffic Policing. | |
