

B.E. Electronics & Communication/Telecommunication Engineering
(CBCS / Model Curriculum) Semester - VIII
8BEET05B / ET804M-I - Program Elective-IV : High Speed Electronics

P. Pages : 2

Time : Three Hours



GUG/S/23/14357

Max. Marks : 80

-
- Notes :
1. All questions carry marks as indicated.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain any two types of interconnect modeling. **8**
- b) Write a short note on crosstalk mitigation techniques. **8**

OR

2. a) Explain how Thevenin termination is placed for terminating transmission lines. **8**
- b) Write note on **8**

- i) Microstrip transmission line
- ii) Stripline transmission line

3. a) Describe the following in relation with transmission line losses- **8**
- i) Loss in impedance function

- ii) Loss in propagation constant

- b) Write a note on Intersymbol Interference (ISI) **8**

OR

4. a) Explain any four types of vias. **8**

- b) Write short note on Non-ideal current return path. **8**

5. a) Explain basic CMOS output buffer. What is application of CMOS buffer? **8**

- b) Explain source - synchronous clock Topology. **8**

OR

6. a) Write a note on signal integrity in high speed PCB design. **8**

- b) Explain radiated emission from PCB. **8**

7. a) Describe- 8
- i) Thermal noise in circuits
 - ii) Shot noise in circuits
- b) Which important specifications for the performance of high frequency amplifier are required in consideration of design. 8

OR

8. a) Explain any two LNA topology. 8
- b) Give the advantages, disadvantages and applications of Low noise amplifier. 8
9. a) Write short note on RF upconverter and RF down converter. 8
- b) Explain RF mixer specifications in detail. 8

OR

10. a) Write a note on class AB Amplifier. 8
- b) Give the advantages and disadvantages of class A Amplifier. 8
