

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Civil Engg. / Electronics and Communication Engg.) (Sem.-6)

CMOS AND RF CIRCUIT DESIGN

Subject Code : BTEC-906C-18

M.Code : 79379

Date of Examination : 15-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Define THD.
- b) What is the need for mixer?
- c) What do you mean by NOISE MATCH?
- d) Discuss the advantages of s-parameters for RF measurement.
- e) What are the basic building blocks of CMOS design?
- f) What do you mean by flash ADC?
- g) Define homodyne receiver.
- h) Define popcorn noise.
- i) Compare common gate and common source amplifiers.
- j) Define power match.

SECTION-B

2. What parameters are tested using s-parameters in RF testing and how??
3. What is the difference between source intermodulation distortion and cross distortion?
4. Discuss the pipeline ADC.
5. Explain MOSFET physics.
6. Discuss high frequency amplifier design.

SECTION-C

7. Discuss the concept of CMOS and RF circuit designs.
8. Discuss the design methods of receivers and transmitters.
9. Discuss the s-parameters using smith chart.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.