

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)

M.E -DEGREE EXAMINATIONS - FEB-2022

VLSI DESIGN

Third/Fifth Semester

ELECTIVE - MOBILE COMPUTING

(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

- 1 List out the features of time division multiple access.
- 2 Define TDMA.
- 3 What are subsystems in GSM system?
- 4 Expand GSM, GPRS and UMTS.
- 5 What is exponential back off?
- 6 Define infrastructure
- 7 Mention the performance issues of ADHOC networks
- 8 Make clear least interference routing.
- 9 What are the advantages of Hawaii?
- 10 Define indirect TCP.

PART-B (5 x 16 = 80)

- 11 a. Compare the SDMA, TDMA, FDMA and CDMA.
OR
b. Explain the Forward Channels used in CDMA.
- 12 a. Explain the Satellite system used in mobile computing.
OR
b. Describe about the digital video broadcasting with diagram.
- 13 a. Explain about the MAC management.
OR
b. Explain the function of HIPERLAN.
- 14 a. Describe about the destination distance vector.
OR
b. Elucidate about the mobile ADHOC networks.
- 15 a. Enlighten about the traditional TCP.
OR
b. Give details about the transitive oriented TCP.

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
M.E -DEGREE EXAMINATIONS - FEB-2022
VLSI DESIGN
Third/Fifth Semester
ELECTIVE - VLSI FOR WIRELESS COMMUNICATION
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

- 1 List out the issues which should be consider while designing wideband amplifier.
- 2 Write the importance of high gate resistance.
- 3 Show the circuit representation of an NLTI system.
- 4 Relate intrinsic noise and extrinsic noise in mixers.
- 5 Outline the state diagram of phase frequency detector.
- 6 State frequency divider in frequency synthesizer circuit.
- 7 Differentiate Static Performance and Dynamic Performance.
- 8 Mention the need of Mixer circuit.
- 9 List the application of multitier network interface card.
- 10 Identify the Key Time Scales for System Design.

PART-B (5 x 16 = 80)

- 11 a. (a) Sketch the differences between Narrowband and Wideband LNA.

OR

- b. Analyze the operation of
(a) Class A power amplifier.
(b) Class B power amplifier.

- 12 a. Illustrate the Gilbert Mixer distortion in high frequency case.

OR

- b. Elaborate the theory of linear periodic LPTV system.

- 13 a. Elaborate the design procedure of LC oscillator with example.

OR

- b. Demonstrate the detailed considerations of phase noise.

- 14 a. Elaborate the concept of Time-Interleaved ADCs passive element.

OR

- b. Implement LMS algorithm using VHDL.

- 15 a. Demonstrate how the Home/Desk Area WLAN operates, with details.

OR

- b. Demonstrate the following in detail
 - (a) Multiple Access
 - (b) Interference Management
