

Register No.: ..... Name: .....

**SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)**

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**SECOND SEMESTER M.TECH DEGREE EXAMINATION (Regular), JULY 2022****VLSI AND EMBEDDED SYSTEMS****(2021 Scheme)****Course Code: 21VE205-D****Course Name: Electronic System Design****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. What is EDLC? What is the need of EDLC?
2. Differentiate between simulator and emulator.
3. What are the advantages of ribbon cables?
4. What are the main objectives of grounding?
5. Explain conductive windows.
6. Differentiate between nearfield and far field.
7. Explain human body model of electrostatic discharge.
8. Describe ESD induced effects in electronic system.

**PART B***(Answer one full question from each module, each question carries 6 marks)***MODULE I**

9. Describe the different phases of EDLC. (6)

**OR**

10. Explain waterfall EDLC model. (6)

**MODULE II**

11. Explain boundary scan-based hardware debugging. (6)

**OR**

12. Describe the various elements of Embedded system development environment. (6)

**MODULE III**

13. With a neat diagram explain capacitive coupling between two conductors. (6)

**OR**

14. Shielding techniques can prevent magnetic radiation. Substantiate (6)

**MODULE IV**

15. Explain separately derived systems. (6)

**OR**

16. Differentiate between single point and multipoint ground system. (6)

**MODULE V**

17. Explain shielding effectiveness. (6)

**OR**

18. What are the functions of EMI gasket? Illustrate an EMI gasket mounting with an example. (6)

**MODULE VI**

19. Explain different types of return path discontinuities in PCB. (6)

**OR**

20. Explain ESD protection in equipment design. (6)

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