

Roll No. 168230171

Total No. of Questions : 6]

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#### B.E. V Semester (CGPA) Elect. & Comun. Engg. Examination 2018 INTEGRATED ELECTRONICS

Paper - EL-503

Time Allowed : Three Hours] [Maximum Marks : 60

Note : Attempt all questions. All question carry equal marks.

- Q.1. a) Discuss the construction and working of MOSFET. 5
- b) Explain super beta transistor in detail. 5
- OR
- c) Explain the fabrication process of monolithic IC.
- d) Describe with construction and working of Schottky diode.

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- Q.2. a) Discuss the construction, basic operation and input output characteristics of BJT. 5
- b) Explain in detail , the working of DTL inverter. 5

OR

- c) Differentiate TTL and DTL logic families.
- d) Discuss the working of BJT as an amplifier.

Q.3

- a) Explain any method of CMOS fabrication. 5
- b) Explain the working of CMOS as an amplifier. 5

OR

- c) Write a short note on MOS inverter.
- d) Discuss the interfacing of different logic families.

- Q.4. a) Differentiate between different types of ROM. 5
- b) Why analog to digital convertor are required. Explain in detail. 5

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- c) Explain R2R type D/A convertor.
- d) Explain the charging and discharging of load capacitance.

- Q.5.
- a) Explain the principle of phase locked loops. 5
  - b) Explain the protection circuit in 79xx series voltage regulator. 5

OR

- c) Discuss the operating of 723 voltage regulator in detail.
- d) Describe the applications of PLL.

- Q.6. Write a short note on any two : 5 each

- a) ELC family
- b) PLA
- c) JFET
- d) RAM
- e) CMOS Schmitt trigger

