

**M. TECH.-II (ELECTRONICS V.L.S.I.) (CBCS – 2015 COURSE)**  
**: SUMMER - 2018**  
**SUBJECT: ANALOG VLSI DESIGN**

Day: **Wednesday**  
Date: **13/06/2018**

Time: **11.00 AM TO 02.00 PM**  
Max Marks: **60**

**S-2018-3003**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figure to the right indicates **FULL** marks.
- 3) Answer to both the section should be written in **SEPARATE** answer book.
- 4) Assume suitable data, if necessary.

**SECTION-I**

**Q.1** How will you define small signal model for MOS Transistor? Explain in brief. **(10)**

**OR**

Describe in detail: MOS Transistor.

**Q.2** What is MOS Switch? Explain in detail with its characteristics **(10)**

**OR**

Why Current Mirrors are used? Describe in detail.

**Q.3** How Differential Amplifiers are designed? Explain in brief. **(10)**

**OR**

What is CMOS Inverter? How it is designed?

**SECTION-II**

**Q.4** How Two Stage OP AMPs are designed? Discuss in brief. **(10)**

**OR**

Explain in brief: Cascode OP-AMPs.

**Q.5** How High Speed OP-AMPs are designed? Discuss in brief? Also state its advantages. **(10)**

**OR**

Design Low Noise OP AMP with neat schematic.

**Q.6** How Switched Capacitor Amplifiers are designed? **(10)**

**OR**

What is Switched Capacitor Integrator? How it is designed?

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