SANT GADGE BABA AMRVATI UNIVERSITY, AMRAVATI
Summer Examination 2020
HVPM's College of Engineering and Technology, Amravati
Department of Electronics & Tele communication Engineering
Bachelor of Engineering Sem. :- VII

Subject :- VLSI DESIGN **Code :- 7ET1**

Instructions:-

1) **Solve any two questions**
2) **All question carry equal marks**

Q1.

a)	What is MOS structure capacitance? Explain.	**02 Credit Point**
b)	Explain clocked latch.	**02 Credit Point**
c)	What are the CMOS fabrication processing steps?	**02 Credit Point**
d)	Explain VLSI Design flow in detail.	**02 Credit Point**
e)	What is gate level modeling?	**01 Credit Point**
f)	Explain timing control with example.	**01 Credit Point**

Q2.

a)	Explain CMOS inverter.	**02 Credit Point**
b)	Draw and explain conventional Flip flop circuit.	**02 Credit Point**
c)	Explain twin tube process.	**02 Credit Point**
d)	Explain Data types in VHDL.	**02 Credit Point**
e)	Explain behavioral modeling with example?	**01 Credit Point**
f)	Compare parallel and sequential block.	**01 Credit Point**

Q3.

a)	What is MOS transistor switch? Explain it in brief.	**02 Credit Point**
b)	Draw and explain SRAM write operation.	**02 Credit Point**
c)	Explain λ based design rule for manufacturing of CMOS circuits.	**02 Credit Point**
d)	With suitable examples explain directives used in VHDL	**02 Credit Point**
e)	Explain initial and always statement.	**01 Credit Point**
f)	What is task and function?	**01 Credit Point**

Q4.

a)	Explain Power desipation.	**02 Credit Point**
b)	What is large SRAM? Explain.	**02 Credit Point**
c)	What is silicon-on-insulator process? Explain.	**02 Credit Point**
d)	Explain predefined datatypes in VHDL with example	**02 Credit Point**
e)	Design any sequential circuit.	**01 Credit Point**
f)	What are conditional statements? Explain.	**01 Credit Point**