

Total No. of Questions – [06]

Total No. of Printed Pages: 1

G.R. No.	
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DECEMBER 2021 - ENDSEM EXAM
S. Y. B. TECH. (Computer) (SEMESTER - I)
COURSE NAME: ANALOG AND DIGITAL ELECTRONICS
COURSE CODE: ES21201CS
(PATTERN 2020)

Time: [1 Hour]

[Max. : 30]

Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
- 2) Figures to the right indicate full .
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

- Q.1) a) Elaborate Models Moore and Mealy. [4]
b) Construct MOD-8 Counter, State Diagram and timing diagram. [6]

OR

- Q.2) a) Design 3 bit Synchronous Down Counter using T flip flop [4]
b) Design 4-bit Johnson counter with circuit diagram. [6]

- Q.3) a) Elaborate Characteristics of Digital ICs . [4]
b) Discuss Unipolar and Bipolar Logic Families. [6]

OR

- Q.4) a) With the help of a neat diagram, explain the configuration of CMOS. [4]
b) Discuss Application of Raspberry Pi I. [6]

- Q.5) a) Give the Comparison between PROM, PLA and PAL. [4]
b) A combinational circuit is defined by the function [6]
 $F1 = \sum m(3,5,7)$, $F2 = \sum m(4,5,7)$.
Implement the circuit using a PLA which consists of 3 inputs
(A, B and C), 3 product terms and two outputs.

OR

- Q.6) a) Discuss Modeling Styles of VHDL in brief. [4]
b) A combinational circuit is defined by the function $F1 = \sum m(3,5,7)$, [6]
 $F2 = \sum m(4,5,7)$. Implement the circuit using a PLA which
consists of 3 inputs (A, B and C), 3 product terms and two
outputs.