Hall Ticket Number :										

R-17

Code: 7G353

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2023

Analog & Digital Integrated Circuits Applications

(Electronics and Communication Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

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UNIT–I

1. Analyze the behavior of Triangular wave generator with neat sketches. 14M

OR

2. a) List the types of ICs and Interpret circuit complexity. 7M
   b) Identify the applications of Op-amp and its advantages. 7M

UNIT–II

3. Explain the Astable and Monostable Multivibrator using Op-Amp with a neat diagram. 14M

OR

4. a) Discuss about advantages and disadvantages of Flash ADC over successive approximation type ADC 6M
   b) Summarize the working principle of R-2R ladder DAC 8M

UNIT–III

5. a) Differentiate between CMOS and TTL families. 7M
   b) Describe the VHDL based design flow. 7M

OR

6. a) Differentiate between functions and procedures 8M
   b) List out the advantages and disadvantages of TTL families 6M

UNIT–IV

7. Discuss about IC 74x85 with its VHDL program. 14M

OR

8. a) List out the advantages of Combinational Circuits 6M
   b) Design Full adder using half adders. 8M

UNIT–V

9. Discuss about VHDL program for a 3-bit synchronous counter using D flip flops. 14M

OR

10. Explain about Impediments to synchronous Design 14M

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