

Roll No.

24324

B. Tech. (CSE) 6th Semester (Re-appear)

Examination – October, 2020

DIGITAL SYSTEM DESIGN

Paper : EE-310-F

Time : 1.45 Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Attempt any three equal marks.

1. (a) Define VHDL.
- (b) What is CAD tool ? Explain it.
- (c) Define the term entity.
- (d) Write VHDL code for half adder.
- (e) Write a short note on PLA.

24324-1100-(P-3)(Q-9)(20)

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2 (a) What is delay ? Explain inertial and transport delay in detail with example.

(b) Write the capabilities of VHDL.

3. Discuss various Data types and Data objects used in VHDL.

4. Write short note with example on the following :

(a) Wait statement

(b) Case statement

(c) If-else statement

(d) Assert statement

5. (a) What is package ? Describe its parts and utilities.

(b) Write a short note on all modeling styles of defining architecture body in VHDL.

6 (a) Write VHDL code for 8 : 1 multiplexer using case statement.

(b) Write VHDL code for 3 bit up counter.

24324- (P-3)(Q-9)(20) (2)

7. (a) Write VHDL code for priority encoder.
(b) Write VHDL code for SISO shift register.
8. (a) Write a short note on ALU and CPU.
(b) Write in detail about ROM.

9. Write short note on :

- (a) Micro computer
(b) PEEL
(c) GAL
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