

B. Tech. (ECE) (Elective-II) 6th Semester
(G Scheme) Examination, July-2022

VHDL & DIGITAL DESIGN

Paper-PEC-ECE-312-G

Time allowed : 3 hours]

[Maximum marks : 75

Note : Attempt five questions in all, selecting at least one question from each section. Question No. 1 is compulsory. All questions carry equal marks.

1. Define the following : 6×2.5=15
- Advantages of Computer aided designing.
 - Categories of Delays in VHDL.
 - Identifiers and extended Identifiers.
 - Libraries in VHDL.
 - Justify all the types of overloading with example.
 - Entity and interface declaration.

Section-A

2. Discuss the three basic models for architecture declaration with suitable example. 15

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or

3. Discuss all the types of operators used in VHDL and mention their declaration syntax. 15

Section-B

4. Compare between concurrent and sequential statement. Discuss all the categories of concurrent statement. 15

or

5. (a) Write short note on conditional statements used in VHDL. <https://www.mdustudy.com> 7
- (b) Write short note on resolution function and generics. 8

Section-C

6. Develop the VHDL code for structural model of an encoder. 15

or

7. (a) Write the VHDL code for behavioural model of 4×1 multiplexer. 8
- (b) Write the VHDL code for dataflow model of a comparator. 7

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Section-D

8. Differentiate between PAL and PLA. Discuss the designing of PLA in detail. 15
- or
9. Draw and discuss the architecture of simple microcomputer structure. 15

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