Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (ECE)   (Sem.–7)
VLSI DESIGN & TECHNOLOGY
Subject Code : EC-406
M.Code : 57555

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1.   **Write briefly :**

  a.   Enlist different types of delays in VHDL.

  b.   What is difference between signal assignment and variable assignment?

  c.   Enlist the three forms of primary storage in computer.

  d.   Enlist different types of delays in VHDL.

  e.   What is FPGA? What are the main advantages of using FPGA?

  f.   What is role of HDL in digital system design? How does HDL differ from other software language?

  g.   Write a short note on ROM.

  h.   What is Data object? Enlist all types of Data objects.

  i.   What is difference between Encoder & Multiplexer?

  j.   How do you differentiate between Primary Memory and Secondary Memory?

SECTION-B

2.   Differentiate between Behavioural and structural styles of Modeling.

3.   In Behavioral Modeling explain :

  a.   Architecture Body

  b.   Process statement

  c.   Case statement.

4.   Write a VHDL code for 3 bit binary to Excess-3 code converter in Data Flow Modeling?

5.   Write a VHDL code for Modulo-5 counter in Structural Modeling.

6.   Write a short note on (i) GAL (ii) CPLD

SECTION-C

7.   What are the basic components of a computer? Write down VHDL code for Memory Subsystem.

8.   What is difference between PAL and PLA? Implement Full Subtractor using PAL.

9.   Write a VHDL code for Priority Encoder in Behavioural Modeling and Data Flow Modeling.

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.