**MSVD01**

**MTCSE16C1/MTETE16C1**

**MODEL QUE PAPERS**

**M.TECH**

**IV Semester**

**SPE: (VLSI DESIGN)**

**EMBEDDED SYSTEM DESIGN**

Time: 3 Hours Max. Marks: 75

***INSTRUCTIONS:***

* *Question paper is divided into three groups.*
* *Each group is of 25 marks.*
* *Figure to the right in bracket indicates mark.*
* *Assume suitable data if necessary.*

**GROUP A : Answer any three questions. (Question No. 1 is compulsory)**

Q.1 Define a network OS? How does a network OS differ from conventional OS?

(05)

Q.2 Explain in detail structural units in advanced processor architecture. (10)

Q.3 Give important features and Architecture of 80c51 micro-controller. (10)

Q.4 Discuss various type of interrupt like processing interrupts, serial port interrupts, external interrupt. (10)

Q.5 Compare micro-controller to microprocessor in detail. (10)

**GROUP B : Answer any three questions. (Question No. 6 is compulsory)**

Q.6 How does a mailbox message is differ from a queue message? Can you use message queue as a counting semaphore? (05)

Q.7 (a) Explain the term multitasking OS and multitasking scheduler.

(b) What are the states of a task? Define critical Section of a task? (10)

Q 8 Explain timer modes 1, 2 of 8051.    (10)

Q 9 Draw and explain diagram of memory interfacing of 8051. (10)

Q.10 Explain SCON of 8051 (10)

**GROUP C: All Questions are Compulsory.**

**Q.11 Fill in the blanks (Each question carries 2 marks)**

(i) J2ME is also called as \_\_\_\_\_\_\_\_ Java .

(ii) Advanced Processor circuits consist of \_\_\_\_\_\_\_\_\_\_ unit.

(iii) Semi conductor memories are \_\_\_\_\_\_\_\_\_\_

(iv) The decimal equivalent of 101.10110\_\_\_\_\_\_\_\_\_\_\_\_\_.

(v) Fan out for the 74 series is \_\_\_\_\_\_\_\_\_\_\_\_.

**Q.12 Multiple choice question. (Each question carries 2 marks)**

(i) HDLC is a \_\_\_\_\_\_\_ oriented protocol.

(a) Byte

(b) Bit

(c) Nibble

(d) Word

(ii) \_\_\_\_\_\_\_\_\_\_\_\_\_ is not an example of small –scale Embedded system.

(a) Keyboard controller

(b) Remote controller

(c) Mobile computer

(d) None of these

(iii) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ device is required for port O in 8051.

1. Flip – flop
2. Register
3. Latch
4. Resiston

(iv) EA terminal is used for :

(a) External memory

(b) Internal memory

(c) Both

(d) None of these

(v) 8051 has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Bit fleey register

(a )5

(b) 8

(c) 4

(d) 16

**Q.13 True or false (Each question carries 1 marks)**

(i) ROM is a volatile memory.

(ii) Physical devices include keypad, printer or display unit.

(iii) In FORTRON subroutine always follows main program.

(iv) Micro-programming is a technique for programming the control steps of a computer.

(v) In INHIBIT operation output is 0 when blocking input is 1.

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