

Total No. of Questions :8]

SEAT No. :

[Total No. of Pages :2

P1820

[5233] - 4002

M.Sc.

COMPUTER SCIENCE

CS - 403 : Embedded System

(2013 Pattern) (Semester - IV)

Time : 3 Hours]

[Max. Marks :50

Instructions to the candidates:

- 1) Answer any five questions.*
- 2) Neat diagram must be drawn whenever necessary.*
- 3) Figures to the right indicate full marks.*

Q1) a) Draw a simple parallel I/O port and explain its basic operation. [4]

b) Write short note on real time operating system. [4]

c) Define an embedded system. [2]

Q2) a) Draw a neat diagram for the compilation process and explain it briefly.[4]

b) Explain JTAG and OnCE briefly. [4]

c) What is a flash memory? [2]

Q3) a) Briefly explain the time slice mechanism for multitasking operating system. [4]

b) Explain the basic buffer structure with suitable diagram. [4]

c) List different software tools required for designing an embedded system. [2]

P.T.O.

- Q4)** a) How is a real time performance derived from a non-real time system?[4]
b) Write a note on cross compilers. [4]
c) Define maskable and non-maskable interrupts. [2]
- Q5)** a) Explain the high level language simulation. [4]
b) Explain the read and write cycles of an DRAM cell with suitable diagram. [4]
c) What is a peripheral? List any two types of peripherals. [2]
- Q6)** a) Briefly explain the preemptive and non preemptive kernel. [4]
b) Write short note on Circular buffer. [4]
c) Define Page and Segment. [2]
- Q7)** a) What are the advantages and disadvantages of buffer exchange? [5]
b) Explain priority levels for Real Time Operating system architecture. [5]
- Q8)** a) Explain the 'Serial Lines' and 'From disk' methods of downloading the code to the target board. [5]
b) Explain task level and symbolic debugger. [5]

