Reg. No. : ........................................
Name : ........................................

Seventh Semester B.Tech. Degree Examination, October 2014
(2008 Scheme)
08-716 : EMBEDDED SYSTEMS (TA)

Time : 3 Hours
Max. Marks : 100

PART - A

Answer all questions. Each question carries 4 marks.

1. What is DSP (Digital Signal Processor) ? Compare it with a General Purpose Processor (GPP).

2. What is HDLC ? Explain the data frame for HDLC.

3. Give the advantages and disadvantages of data transfers using serial and parallel parts/devices.

4. Explain the different program layers in embedded software.

5. Give the programming model for multiple function calls in the main () functions. What are its advantages ?

6. What are the functions of a device manager ?

7. What are the memory managing strategy for a system ?

8. When do you use co-operative scheduling and pre-emptive scheduling ?

9. What are the parameters of a TCB of a task ? Why should each task have distinct TCB ?

10. What are the features of Micro C/OS II ?

P.T.O.
PART – B

Answer any two questions from each Module. Each question carries 10 marks.

Module – I

11. Draw the detailed block diagram of an embedded system and explain its components.

12. What is SoC (System on Chip) ? Explain the components of SoC with the block diagram of a cellphone.

13. What do you mean by Software Times (SWT) ? How do SWT help in scheduling multiple tasks in real time ?

Module – II

14. Explain the various data structures in a program element.

15. Explain the source code engineering tools for embedded C/C++.

16. Explain the structure of an operating system.

Module – III

17. Explain rate monotonic co-operative scheduling.

18. Explain the various semaphores related functions in Micro C/OS II.

19. Explain the various methods of Inter Process Communication (IPC) in RTOS.