APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER M. TECH DEGREE EXAMINATION
Electronics & Communication Engineering
(VLSI and Embedded Systems)
04EC 6515 – EMBEDDED SOFTWARE DESIGN

Max. Marks : 60   Duration: 3 Hours

PART A
Answer All Questions
Each question carries 3 marks

1. Explain an IDE? Name the component of an IDE.
2. Write the steps involved in the conversion of assembly language to machine language.
3. What is the difference between a process and a thread?
4. Which are the executable file formats supported by embedded OS?
5. What are the general functions of a device driver?
6. Draw and explain the format of an Ethernet frame.
7. What is HTTP? What types of applications would incorporate an HTTP client or server?
8. What is an IP address? What networking protocol processes IP addresses?

PART B
Each question carries 6 marks

9. Explain In System Programming with neat block diagram.

OR

10. With neat diagram explain the conversion of a source file to an executable file.

11. Differentiate between 'super loop 'based and 'OS' embedded firmware design? Which one is the better approach?

OR

12. Draw and explain the conversion process of high level language to machine language.
13. Explain task spawn model of task creation with necessary diagram. Give one example of OS that uses this model.

OR

14. Explain the different types of non pre-emptive process scheduling techniques.
15. Explain the different types of semaphores used in VxWorks?

OR

16. Explain BSP.
17. Explain I^{2}C Bus startup on the MPC860.

OR

18. Explain data encapsulation and media access management in Ethernet.
19. Explain Internet protocol in detail.

OR

20. Explain Simple Mail Transfer Protocol in detail.