Total No. of Questions : 8]

SEAT No. :

P3761

[Total No. of Pages : 2

[4960] - 1253
M.E. (E & TC) (VLSI & Embedded Systems)
Embedded System Design
(2013Pattern)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Answer any Five questions.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to the right hand side indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) Explain the architecture of an Embedded System with suitable diagram. **[4]**

b) Distinguish between architectural model and functional model. **[3]**

c) Discuss in brief System Specification versus system requirements. **[3]**

Q2) a) What is the product life cycle? Identify and briefly discuss the steps that comprise the Spiral life cycle model. **[4]**

b) Discuss various embedded system metrics considered in Embedded System Design. **[3]**

c) Write short note on "General Purpose Processors". **[3]**

Q3) a) Draw and explain 5 stage pipeline organization in ARM9. **[5]**

b) Explain ARM architectural support for high level languages. **[5]**

Q4) a) Explain the ARM floating point architecture. **[4]**

b) Explain in brief the memory protection unit incorporated in ARM processor. **[3]**

c) Write short note on Communication protocols. **[3]**

P.T.O.

Q5) a) Discuss in brief Kernel initialization in an embedded system. **[5]**

b) Explain the concept of boot loader in detail. **[5]**

Q6) a) Explain in brief the Kernel configuration (Kconfig) in Linux. **[5]**

b) What are the device drivers? Why device drivers are essential? **[5]**

Q7) a) Explain in brief the architecture of android operating system. **[4]**

b) Explain in detail structure of android applications. **[3]**

c) What are the main features of an android operating system? **[3]**

Q8) a) Explain in detail Android manifest file and its structure. **[5]**

b) Write the short note on: **[5]**

i) Network Services and APIS.

ii) Intends.