M.E. (VLSI & Embedded Systems) (E & TC)

Embedded System Design (504103)

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

Notes:

1) **Answer any five questions.**

2) **Neat diagrams must be drawn whenever necessary.**

3) **Figure to the right indicate full marks.**

4) **Assume suitable data, whenever necessary.**

Q.1.	(a)	Explain the design metrics (a) Time to market (b) NRE cost	(4)
	(b)	Define Embedded system and mention its four characteristics features.	(3)
	(c)	Explain the advantages and disadvantages of system on chip	(3)
Q.2.	(a)	Explain the waterfall model of Embedded system architecture.	(4)
	(b)	Explain the software tools (a) Cross compiler (2) Linkers.	(3)
	(c)	Compare system specifications and system requirements.	(3)
Q.3.	(a)	Draw and explain block diagram of ARM 9 TDMI Processor core.	(4)
	(b)	How does ARM architecture support high level language?	(3)
	(c)	Explain in details memory hierarchy & memory subsystem architecture.	(3)
Q.4.	(a)	Write a note on design consideration for cache system.	(4)
	(b)	Write a note on I2C protocol.	(3)
	(c)	Which are different ARM exceptions and how processor will respond?	(3)

Q.5. (a) Explain Embedded Linux System architecture. (5)

(b) What are different types of device drivers? Explain any one (5)

Q.6. (a) What are the different steps involved in booting the kernel. (5)

(b) Describe different file system types supported by embedded Linux. (5)

Q.7. (a) Explain Android operating systems with its applications. (5)

(b) What do you understand by manifest with reference to Android OS (5)

Q.8. (a) Explain various network services support provided by Android OS . (5)

(b) Write a short note on advance operations with Android like telephony (5) & SMS.