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**Question Paper Code: 31854**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Fifth Semester

Information Technology

01UIT504 – EMBEDDED COMPUTING SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define embedded systems with examples.
2. List out the major goals of the embedded system design.
3. What is interrupting masking?
4. Define worst-case execution time.
5. Define preemption.
6. Give the types of multi state systems.
7. What are the five levels of capability maturity model?
8. What is a logic analyzer?
9. What are the inputs of telephone answering machine?
10. Define data flow graphs.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the hardware and software architecture for moving map. (16)

Or

(b) Describe in details about the ARM processor. (16)

12. (a) Draw a timing diagram and explain complete operation of DMA. (16)

Or

(b) Explain in detail about the software performance optimization. (16)

13. (a) Explain the Inter-Process Communication (IPC) mechanisms with appropriate diagrams. (16)

Or

(b) Explain the priority based scheduling and types with example. (16)

14. (a) Explain details about the design methodologies. (16)

Or

(b) Discuss the quality assurance required for an embedded system. (16)

15. (a) Discuss the architecture of digital still cameras. (16)

Or

(b) Explain about the design and implementation of alarm clock. (16)