Reg. No. :

Question Paper Code: 35804

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. List the factors that constitute the cost in an embedded system.

2. What do you mean by Busy-Wait I/O?

3. Define Clear-box testing.

4. What is a cache memory?

5. Define threads and process.

6. List out the major styles of inter process communication.

7. What are the five levels of capability maturity model?

8. Draw the waterfall model of software development.

9. What are the inputs of telephone answering machine?

10. What is the purpose and function of the video accelerator?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain in detail about the embedded system design process.   (16)

Or

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

12. (a) Write in detail about the following:

   (i) Optimization of software performance. (8)

   (ii) Analysis and optimization of program level energy and power. (8)

Or

   (b) Compiling an arithmetic expression in the following arithmetic expression, $a*b + 5*(c - d)$. (16)

13. (a) Define Priority based scheduling and also explain the rate monotonic scheduling in detail. (16)

Or

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

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

Or

   (b) Explain about the distributed embedded systems. (16)

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

Or

   (b) Explain about the digital telephone answering machine. (16)

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