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Question Paper Code: 37404

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Seventh Semester

Electronics and Communication Engineering

01UEC704 - EMBEDDED AND REAL TIME SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the functions of ARM processor in supervisor mode.
2. How is ARM processor different from other processors?
3. What is a data flow graph?
4. What does a linker do?
5. Define context switching.
6. What are the three conditions that must be satisfied by the re-entrant function?
7. What is best effort routing?
8. What is the use of attached accelerator to CPU?
9. State the function of Set-Top-Box.
10. What are FOSS tools for embedded systems?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain about cache memory in ARM processor.

(16)

Or

- (b) Explain briefly the model train controller system. (16)
12. (a) Explain on how on chip memory management schemes can improve higher speed process. (16)

Or

- (b) Draw the three structures commonly used in embedded software with programming and elaborate with an example. (16)
13. (a) Describe in detail about the inter process communication mechanism. (16)

Or

- (b) Why need multiprocessors? Analyze the performance of the system with multiple processors. (16)
14. (a) Explain briefly I²C bus and Ethernet. (16)

Or

- (b) Explain in detail about networks for Embedded Systems with an example. (16)
15. (a) Explain the design procedure of data compressor with its specifications and requirements. (16)

Or

- (b) Discuss the design of Personal Digital Assistants with step by step procedure. (16)
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