Reg. No. : | | | | | | | | | | |

Question Paper Code: A31744

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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 challenges faced in embedded computing system design.
2. What are the parameters used to evaluate the CPU performance?
3. What is the bus protocol especially, four-cycle handshake?
4. State the function of an Assembler and linker.
5. List the process of scheduling policies.
6. Define the power optimization strategies used for processes?
7. What is mean by accelerators/hardware accelerator and give one example?
8. What are the advantages of network based design?
9. Define Hardware and software co-design.
10. What is PDA?

PART - B (5 x 16 = 80 Marks)

11. (a) Discuss about the requirements, specification and architectural design in the process of embedded system design. (16)

Or

(b) Explain in detail the operation of ARM processor and coprocessor. (16)

12. (a) What are the various debug techniques and challenges in embedded system design. (16)

Or

(b) Draw the three structures commonly used in embedded software with programming and elaborate with an example. (16)

13. (a) What is priority based scheduling and explain the rate monotonic and EDF with suitable example. (16)

Or

(b) What are the various inter process communication mechanism provided by OS to transfer data explain any two in detail. (16)

14. (a) Discuss about accelerator based embedded system and network based embedded systems. (16)

Or

(b) Explain in detail about networks for Embedded Systems with an example. (16)

15. (a) Discuss about data compressor in detail with suitable diagrams. (16)

Or

(b) What are FOSS tools for embedded system development? Explain the tools in detail. (16)