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53 (IT 816) RTES

2017

## REAL TIME AND EMBEDDED SYSTEM

Paper : IT 816

Full Marks : 100

Time : Three hours

**The figures in the margin indicate full marks for the questions.**

Answer **any five** questions.

1. Describe the architecture of an Embedded system with a neat diagram. 20
  
2. (a) What are the characteristics of an Embedded System? Explain. 10
  
- (b) Differentiate between RISC and CISC architecture. 5
  
- (c) What is a real time system? How is it related to Embedded System? 5

Contd.

3. What are the different types of real time scheduling algorithms? Explain EDF algorithm with an example. Why is it said to be an optimal algorithm? Differentiate between online *vs* offline scheduling.

3+10+3+4=20

4. Describe CAN protocol in details.

20

5. (a) What is Hardware Software codesign? Elaborate with suitable examples.

10

- (b) What are the phases in Embedded system development process? Which is the longest phase? Describe the last phase.

10

6. Write short notes on : 10×2=20

(a) FPGA

(b) Security Issues in Embedded Systems.