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Question Paper Code: 32922

M.E. DEGREE EXAMINATION, NOVEMBER 2015

Elective

Communication Systems

01PCM517 – EMBEDDED SYSTEMS AND DESIGN

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List two characteristics and challenges faced by embedded computing application.
2. What are the hardware and software components used in designing?
3. Give various registers used in PIC microcontroller.
4. Draw the internal organization of ARM Processor.
5. What is meant by Ethernet?
6. Give the benefits of 12C bus.
7. What is priority driven algorithm?
8. Give the function of elevator controller.
9. List out the specification carried out in requirement analysis.
10. How does quality assurance is maintained in implementing a product?

PART - B (5 x 14 = 70 Marks)

11. (a) (i) Draw and explain the flow diagram of architectural design. (7)
(ii) Discuss structural description of system design with an example. (7)

Or

- (b) Explain the requirements needed in embedded system design. (14)
12. (a) Discuss the Input /Output interfacing with the microprocessor. (14)

Or

- (b) Explain the features of memory organization and instructions in PIC microcontroller. (14)
13. (a) Brief out the hardware platform design with an application. (14)

Or

- (b) Explain Myrinet. Draw and explain the network diagram. (14)
14. (a) (i) What is earliest deadline first? How to optimize at the earliest deadline first? (7)
- (ii) Differentiate off line and on line. (7)

Or

- (b) How effectively release time and deadlines are maintained in real time? (14)
15. (a) What is the baud speed used in PBX? Explain with the block diagram about Telephobe PBX. (14)

Or

- (b) (i) What is meant by personal digital assistants? (7)
- (ii) Discuss about the working and principle carried out ink jet printers. (7)

PART - C (1 x 10 = 10 Marks)

16. (a) With a neat block diagram explain about alarm clock. (10)

Or

- (b) Explain elevator controller with a neat diagram. (10)