

Total No. of Questions : 12]

SEAT No. :

P3437

[5670]-713

[Total No. of Pages : 2

B.E. (Computer Engineering)

EMBEDDED & REAL TIME OPERATING SYSTEM
(2015Pattern) (Semester II) (410252C) (Elective - III) (END Sem.)

Time : 2½ Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) Attempt Q.No. 1 or Q.No. 2; Q.No.3 or Q.No.4; Q.No.5, or Q.No. 6., Q.7,or Q.8, Q.9, or Q.10, Q.11, or Q.12.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) Explain block diagram of Embedded systems? [6]

OR

Q2) Explain timing diagram of Analog to Digital Converter (ADC)? [6]

Q3) Explain ZigBee protocol in detail? [6]

OR

Q4) Explain register architecture of ARM? [6]

Q5) Explain Serial protocol RS-232C in detail with neat diagram? [8]

OR

Q6) Write short notes on ISA and PCI? [8]

P.T.O.

- Q7) a)** Explain Hard versus soft real-time systems and their timing constraints. [8]
b) Explain Latest - Release - Time (LRT)? [8]

OR

- Q8) a)** Explain Precedence constraints and data dependency among real-time tasks. [8]
b) Explain Earliest-Deadline-First (EDF)? [8]
- Q9) a)** Explain shared data problem in interrupts handling? [8]
b) Explain semaphores message queues, mailboxes? [8]

OR

- Q10) a)** Explain priority inversion with neat diagram? [8]
b) Explain with example Interrupts enabling and disabling in embedded system? [8]
- Q11) a)** Explain Architecture and design of an embedded system? [9]
b) Write short notes on Microc/OS -II, Windows CE? [9]

OR

- Q12) a)** Write short notes on RT Linux, Vx Works? [9]
b) Explain Validation and debugging of embedded systems? [9]

