

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject code: 1720306****Subject Name: Embedded System Design****Date: 27/06/2011****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 Explain various methods of implementation of digital camera along with its merits and demerits. **14**
- Q.2 (a) Explain advantages of Huffman encoding with example. **07**
(b) Define process and threads in detail. **07**
- OR**
- (b) Explain the terms atomicity and starvation with the help of an example. **07**
- Q.3 Explain with all conditions the example of a lift using State Chart. **14**
- OR**
- Q.3 Explain the sleeping barber problem in context to semaphore in detail. **14**
- Q.4 Explain various operating system scheduling algorithm. **14**
- OR**
- Q.4 Explain flight simulator example of embedded application. **14**
- Q.5 (a) Describe Reader-writer problem in detail. **07**
(b) Describe producer-consumer problem with semaphores. **07**
- OR**
- Q.5 Explain concepts of state charts: clustering, zooming out, zooming in, default states, history maker. **14**
