

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-III • EXAMINATION – WINTER • 2014

Subject Code: 2630004**Date: 02-01-2015****Subject Name: Operating Systems (OS)****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** (a) Explain Readers/Writers problem in detail **07**
(b) Explain the objective of OS and mention working of various management modules. **07**
- Q.2** (a) Explain Deadlock prevention and detection technique. **07**
(b) Briefly discuss three types of processor scheduling. **07**
- OR**
- (b) What is Process? Explain PCB in details. **07**
- Q.3** (a) Discuss User Level Thread and Kernel Level Thread. **07**
(b) What is RAID? Explain various levels of RAID. **07**
- OR**
- Q.3** (a) What is Real time Scheduling? Explain the Characteristics of Real –Time Operating System. **07**
(b) What is Virtual Memory? What are the techniques used to manage it by operating system? **07**
- Q.4** (a) Explain Producer Consumer problem. How we can solve it in terms of OS concepts. **07**
(b) Explain Internal Fragmentation and External Fragmentation. **07**
- OR**
- Q.4** (a) Explain Dining Philosopher problem. How we can solve in terms of OS concepts. **07**
(b) What is RPC ? Explain in details. **07**
- Q.5** (a) Explain various disk scheduling algorithm. **07**
(b) Explain I/O buffering and Record blocking. **07**
- OR**
- Q.5** (a) Explain Distributed Processing with client server computing and clustering. **07**
(b) Explain Fair-Share Scheduling and Gang scheduling. **07**
