

GUJARAT TECHNOLOGICAL UNIVERSITY**ME Semester –II Examination Dec. - 2011****Subject code: 1720201****Date: 09/12/2011****Subject Name: Distributed Operating Systems****Time: 02.30 pm – 05.00 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 the main pros and cons of distributed system in terms of replication and migration with example? **07**

(b) Which are the different techniques to avoid Dead Lock in DOS? **07**

Q.2 (a) Explain how the messaging system of DOS differs with Traditional messaging system of Network operating system? **07**

(b) Explain weak consistency model with example? **07**

OR

(b) Explain the features of MACH operating system in terms of memory management. **07**

Q.3 (a) Suggest Suitable mechanism for implementing each of the following types of IPC semantics: **07**

- 1) Last One
- 2) At least once
- 3) Exactly once

(b) What are the main similarities and differences between the RPC and the ordinary procedure call model? **07**

OR

Q.3 (a) Describe some flexibility features that a message-passing system should provide to its users. Write suitable IPC primitives that will allow the users to take advantage of these flexibility features. **07**

(b) Explain types of transparency in DOS. **07**

Q.4 (a) Why do most RPC systems support call-by-value semantics for parameter passing? Justify your answer. **07**

(b) Explain how cryptography can be implemented for DOS. **07**

OR

Q.4 (a) Suggest some programming practice that will reduce network block faults in a DSM system. **07**

(b) Explain casual consistency with example. **07**

Q.5 (a) What will happen in a bully algorithm fir electing a coordinator when two or more process almost simultaneously discover that the coordinator has crashed? Suggest some suitable mechanism. **07**

(b) State the desirable features of a good global scheduling algorithm. **07**

OR

Q.5 (a) Explain Load balancing mechanism in DOS. **07**

(b) Name the main components of a distributed file system? What might be the reason for separating the function of Distributed file system into those components? **07**
