		GUJARAT TECHNOLOGICAL UNIVERSITY ME - SEMESTER-II EXAMINATION – SUMMER 2015	
Subje Subje Time	Ibject Code: 2720213Date: 01/06/2015Ibject Name: ADVANCE OPERATING SYSTEMTotal Marks: 70ime: 02:30 PM to 05:00 PMTotal Marks: 70structions:Structions:		
mstru	1. A 2. M 3. Fi	ttempt all questions. [ake suitable assumptions wherever necessary. [gures to the right indicate full marks.	
Q.1	(a) (b)	Explain with diagram UNIX system architecture Specify the concept of hard link and symbolic link in UNIX system	07 07
Q.2	(a) (b)	Enlist similarity and difference between fork() and vfork() function. Explain signals in UNIX. List the conditions which can generate signals. How Unix handles disposition of signals.	07 07
	(b)	Write a program to create a zombie process. Also verify through your program that you created a zombie process.	07
Q.3	(a) (b)	Write short note on i) Orphan Process ii) Re-solvers and Name Servers Compare wait(), waitpid(), wait3() & wait4() functions	07 07
Q.3	(a) (b)	Explain TCP connection establishment and connection termination process. Write a Concurrent server program which uses TCP and display a status message of the Server before call to fork, after fork and after socket closing by parent and child. Write a client to trigger the server operation.	07 07
Q.4	(a)	Explain in detail: i. inet_addr ii. htons iii. memcpy	07
	(b)	What is socket? Explain its role over client and server programming. Describe the APIs for UDP communication.	07
Q.4	(a) (b)	Explain byte manipulation functions in detail. Explain the following system calls that a process can use to receive data through a socket: . recv(), recvfrom(), recvmsg(). Bring out their differences by giving suitable examples.	07 07
Q.5		 Answer following questions briefly: (Any 7) a) What is the purpose of DNS? b) What are the different domain (protocol family) and type values available for creating a socket. c) Define sockaddr_in socket address structure d) Which signals cannot be handled by a process? e) Explain synchronous and asynchronous communication. f) What is an Iterative Server? g) What is the Concurrent Server? h) Define UDP sockets. 	14
Q.5	(a)	OR Enlist the difference between dup and dup2 function	07

- Enlist the difference between dup and dup2 function Q.5 **(a)**
 - Explain the different types of Resource Records in DNS. **(b)**

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