INTERNAL ASSESSMENT TEST 1

B. Tech Sec. B

Semester IV

TOTAL MARKS: 25

CS208: Operating System DURATION: 60 mins Date:4/04/2024 Q.N **MARK** ы **QUESTIONS** CO **BL** 0 S Part A What do you mean by an operating system? What are its basic functions? 2 1.7.1 1 L1 CO1 What is a Pipe and when it is used? 2 CO1 L1 1.7.1 With appropriate example discuss how user program, API, system call interface, system call and operating system are related? printf() calls standard C-library (API) (user program through API calls C-library function printf()) C-Library calls system call write() (C-lib function will call a 2 3 CO1 L4 2.6.3 system call write() through system call interface) Operating system will execute write() system call and the result will be return to API (C-lib) through system call interface. API inturn retuns the result to user program How many processes will be created by the following program segment: fork(); fork(); fork(); Why? 2 CO2 L2 2.6.3 When the OS runs the same application twice, is each run treated as the same 5 2 CO2 L3 2.6.3 process? Part B Answer ALL Questions What are the various services provided by an Operating System. 1.7.1 6 5 L1 CO1 What is a process? What are the different states of a process? 1.7.1 5 CO2 7 L1 Write a code segment in C/C++ where a parent forks two child processes, the child processes execute some designated tasks, and the parent waits for the 5 CO2 l L3 2.6.3 termination of the two child processes, before printing the message "Parent exiting ...". **Total Marks for CO1** 11 **Total Marks for CO2** 14