GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2181106   **Date: 30/04/2018**

Subject Name: Device Driver & Writing(Departmental Elective - III)

Time: 10:30 AM to 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.**

			MARKS
Q.1	(a)	Define the term: User Space and Kernel Space.	03
	(b)	Discuss Hello World module in detail.	04
	(c)	Explain OPEN and RELEASE method in detail.	07
Q.2	(a)	Explain role of The Device Driver.	03
	(b)	Explain "The Current Process" in detail.	04
	(c)	Explain the steps for Dynamic Allocation of Major Number.	07
		OR	
	(c)	Explain /proc file system. Also discuss implementation of files in /proc.	07
Q.3	(a)	What is oops message? Explain with example.	03
	(b)	Write short note on kdb Kernel Debugger.	04
	(c)	Write short note on Concurrency and its management.	07
		OR	
Q.3	(a)	List out various debugging techniques.	03
	(b)	What is Rate Limiting? Discuss in brief.	04
	(c)	What is Spinlock? Discuss spin_lock and spin_unlock function in detail.	07
Q.4	(a)	Explain poll system call.	03
	(b)	Explain the use of jiffies counter.	04
	(c)	Explain the prototype for kmalloc.	07
		OR	
Q.4	(a)	Write short note on SBus.	03
	(b)	Write short note on Kernel Timers.	04
	(c)	Write short note on Interrupt-Driven I/O.	07
Q.5	(a)	Explain function usb_control_msg.	03
	(b)	Write short note on Workqueues.	04
	(c)	List out and Explain functions used for Disabling Interrupts.	07
		OR	
Q.5	(a)	Explain how the Completion Callback Handler works.	03
	(b)	Write short note on USB Urbs.	04
	(c)	Write short note on Registering a USB Driver.	07

****