

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2181106****Date:09/05/2019****Subject Name:Device Driver & Writing****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
<b>Q.1</b>	(a) Explain role of The Device Driver.	<b>03</b>
	(b) Differentiate the function printf and printk.	<b>04</b>
	(c) Draw and explain split view of kernel.	<b>07</b>
<b>Q.2</b>	(a) Explain Kernel Symbol Table in detail.	<b>03</b>
	(b) List and Explain the functions used to register and unregister device number.	<b>04</b>
	(c) Write short note: Design of scull.	<b>07</b>
<b>OR</b>		
	(c) Explain the steps to register device in scull.	<b>07</b>
<b>Q.3</b>	(a) Write short note on “inode structure”.	<b>03</b>
	(b) Explain scull_write() function in detail.	<b>04</b>
	(c) List out different Debugging Techniques. And discuss printk function in detail.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Write a short note on ioctl method.	<b>03</b>
	(b) What is Rate Limiting? Discuss in brief.	<b>04</b>
	(c) Explain /proc file system. Also discuss implementation of files in /proc.	<b>07</b>
<b>Q.4</b>	(a) Write short note on SBus.	<b>03</b>
	(b) Explain function in detail: init_rwsem.	<b>04</b>
	(c) Write short note on Concurrency and its management.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Explain call_rcu () function in detail.	<b>03</b>
	(b) What is Spinlock? Discuss spin_lock in detail.	<b>04</b>
	(c) Explain the prototype for kmalloc.	<b>07</b>
<b>Q.5</b>	(a) Write short note on kernel timers.	<b>03</b>
	(b) Write short note on sysfs.	<b>04</b>
	(c) Write short note on Interrupt-Driven I/O.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Explain function usb_control_msg.	<b>03</b>
	(b) Explain the use of jiffies counter.	<b>04</b>
	(c) Write short note on Registering a USB Driver.	<b>07</b>

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