

**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
<b>Q.1</b>	(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
<b>Q.2</b>	(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
<b>OR</b>		
	(c) Explain /proc file system. Also discuss implementation of files in /proc.	07
<b>Q.3</b>	(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
<b>OR</b>		
<b>Q.3</b>	(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
<b>Q.4</b>	(a) Explain poll system call.	03
	(b) Explain the use of jiffies counter.	04
	(c) Explain the prototype for kmalloc.	07
<b>OR</b>		
<b>Q.4</b>	(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
<b>Q.5</b>	(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
<b>OR</b>		
<b>Q.5</b>	(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

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