

Question Paper



MANIPAL UNIVERSITY

SCHOOL OF INFORMATION SCIENCES
SECOND SEMESTER MASTER OF ENGINEERING- ME (Embedded systems)
DEGREE EXAMINATION - NOVEMBER 2017
DATE : Monday, November 20, 2017
TIME : 10:00AM - 1:00PM
Device Drivers [ESD 604]

Marks: 100

Duration: 180 mins.

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Answer all the questions.

- 1) Describe the role of a device driver. (10)
- 2) Classify the different types of devices . Give examples for each type. (10)
- 3) What is name-space pollution? How do we avoid it? (10)
- 4) How can we have explicit init and cleanup functions in modules? When do we use __init and __exit? (10)
- 5) Why do we use copy_to_user and copy_from_user functions in linux kernel space? Give examples. (10)
- 6) How do we implement lseek system call in modules? Give an example. (10)
- 7) How can you build your own task queue inside the linux kernel? How can you insert tasks into this queue? How can you schedule this queue? (10)
- 8) Describe the architecture of the PC parallel port. (10)
- 9) Comment on kernel assisted probing for detecting irq numbers. (10)
- 10) How can we share an interrupt? Give an example code for a shared interrupt. (10)

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