Reg. No.

MANIPAL UNIVERSITY

FIRST SEMESTER ME (EMBEDDED AND WIRELESS TECHNOLOGY / COMPUTING TECHNOLOGIES AND VIRTUALIZATION) DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: EWT 615.2 (ELECTIVE 1) / VIR 609.5 (ELECTIVE 1)
LINUX INTERNALS AND PROGRAMMING

Wednesday, November 18, 2015

Time: 10:00 – 13:00 Hrs.   Max. Marks: 100

✍   **Answer ALL the questions.**

1.   With a neat diagram explain the directory structure of Linux.

(10 marks)

2.   Explain with neat examples:
2A. Brace Operator
2B. Shebang Operator
2C. Pipe Operator
2D. Tee Operator
2E. * operator

(2 marks × 5 = 10 marks)

3A. With a neat example, explain the for loop in shell scripting.
3B. With a neat example, explain the while loop in shell scripting.

(5+5 = 10 marks)

4.   What are arrays? Explain the concept of arrays with respect to shell scripting.

(3+7 = 10 marks)

5.   With a neat example explain the concept of Makefile.

(10 marks)

6.   List the features and advantages of python.

(10 marks)

7.   Explain the file read and write operation with a neat python code example.

(10 marks)

8.   What is a socket? Explain with a neat diagram of server – client communication with respect to sockets.

(10 marks)

9.   With a neat diagram explain the concept of Micro Kernel and Monolithic kernel.

(10 marks)

10. Explain:
10A. Socket
10B. Bind
10C. Accept
10D. Listen
10E. Write with respect to python

(2 marks × 5 = 10 marks)