Code No: A0608

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY-2012
ADVANCED OPERATING SYSTEMS
(DIGITAL SYSTEMS & COMPUTER ELECTRONICS)

Time: 3hours   Max. Marks: 60

Answer any five questions
All questions carry equal marks
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1.   Explain briefly the significance of a UNIX file, and the relation it has to a process. Why do UNIX systems predominantly use text files?

2.a)   What is meant by recursive behaviour of a command? Name four commands, along with suitable example of each that can operate recursively.
  b)   What is the significance of these commands:
       i) mv $HOME/include.
       ii) cp – r bar 1 bar 2
       iii) mv *,, / bin

3.a)   Explain FIFOS in terms of creation, usage.
  b)   Explain the rules followed by FIFO'S for reading and writing.
  c)   Explain the significance of O – NDE LAY flag with respect to FIFO reading and writing.

4.a)   Explain in detail the system calls: Fork and Wait.
  b)   Explain which of these process attributes change with a fork and exec:
       i) PID   ii) PPID   iii) Kernel I /O buffers
       iv) Pending signals mask.

5.   Draw the diagram of a local area network for a typical university campus that houses three different departments on these different floors. Include hosts, repeaters, bridges, routers and gateways. Indicate what equipment (token ring, Ethernet etc) is being used at the physical layer.

6.   What are the types of operating systems you have worked with so for and enumerate the advantages and disadvantages of each one of them.

7.   Linux runs on a variety of plat forms. What steps must the Linux developers take to excuse that the system is portable to different processors and memory management architectures.

8.a)   Explain the Linux porc file system.
  b)   Explain the input and output devices as per the Linux classipeat of
       a) Block devices   b) Characteristics devices   c) Network devices

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