1. Give at least one advantage of treating as I/O device as a special file.

Special files are subject to the same protection mechanisms as regular files.

2. What does the return value from a call to read( filep, buffer, count ) represent?

The number of bytes actually transmitted.

3. How is the "link count" field in an i-node used?

It is used as a reference count. The files resources (i-node and disk blocks) are reclaimed when the link count becomes 0.

4. Must a program be coded differently to accommodate I/O redirection, and, if so, how?

No, the command just needs to use the standard file descriptors 0 and 1 when appropriate.

5. Define “filter” in the context of this paper.

A program such as pr which copies its standard input to its standard output (with processing) is called a filter.