CS2503 - Main topics in 2016, but not to construed as inclusive or exclusive for exam purposes.

1. Basic filesytem commands:
   a) cat, ls,
   b) directory shortcults : / . .. ~

2. search / extract : find, grep, cut

3. data : sort, wc

4. file permissions : chmod etc

5. files & directory : rmkdir, rmdir, rm, cp, mv

6. links : soft & hard

7. regex
   a) chars
   b) range of characters
   c) negation of characters
   d) start & end of lines
   e) use with grep & sed

8. sed : inline & file

9. awk : inline & file
   a) pattern, action
   b) BEGIN, END
   c) fields
   d) operators

10.   bash
   a) quotes
   b) arguments :$
   c) process PID's
   d) debug flags etc.
   e) IFS
   f) numeric & string comparators (- eq & = etc., changing so don't feature much)
   g) Boolean logic operators for combining tests -a , -o etc.,
   h) conjunctive & disjunctive logic operators && , ||

11. Applications
   a) lab 7 text analysis, word count… all explained in lab handout on moodle
   b) lab 8 : scripts for science runs, taking a control file to select which processes to run on which data, logging the process, and generating files with unique dated & identifying names
   c) lab 9 backups & cron, looking also at simple Ubuntu backup script
   d) simple admin like monitoring examples in last few lectures (fully explained in slides)
      • CPU & disk use & hogs
      • monitoring logs for new errors
      • pinger panic - unresponsive IP nodes