1. **GCC stands for:**   `1 / 1 point`

   ◯ Great Computer Compiler

   ◯ Geneva Computation Corporation

   ⦿ GNU Compiler Collection

   ◯ GNU Compiler for C

   > ✓ **Correct**
   > This is the correct answer

2. **A good choice of compiler options for day-to-day use would be:**   `0 / 1 point`

   ◯ **gcc -O0 -Wall -ansi program.c**

   ⦿ **gcc -Wall -I /tmp/include -L /tmp/lib program.c**

   ◯ **gcc -M -H -O3 -E program.c**

   ◯ **gcc -O2 -Wall -pedantic program.c**

   > ⊗ **Incorrect**
   > Use of **-I** and **-L** options is not a uniform choice

3. **Why might you choose to link your program statically, rather than use a**   `1 / 1 point`
   shared library version?

   ⦿ The static program will not use new versions of shared libraries as they
   become available, and thus may avoid breakage and bugs

   ◯ The static program will load and execute more quickly

   ◯ The static program will use less memory

   ◯ The static program need not have an open source license, while the
   shared library version cannot be closed source

   > ✓ **Correct**
   > Yes, some bugs can be avoided

4. To find the shared libraries used by **/usr/bin/cp** you can do (Select all answers that apply):

- ☑ **ldd /usr/bin/cp**

  > ⊘ **Correct**
  > You can run **ldd** directly on the executable

- ☐ **find -libso /usr/bin/cp**

- ☑ **ldd $(which cp)**

  > ⊘ **Correct**
  > You can run **ldd** indirectly on the executable using **which**

- ☐ **gcc -ldd /usr/bin/cp**

5. Which statements are true (Select all answers that apply):

- ☑ Use of shared libraries can cause bugs because the application may conflict with the new library version

  > ⊘ **Correct**
  > Unfortunately, there may be unforeseen problems and inadequate testing

- ☑ Use of shared libraries saves memory

  > ⊘ **Correct**
  > Only one copy of the library needs to be kept in memory if more than one application is using its contents

- ☑ Use of shared libraries enables applications to stay up to date with new library features without being recompiled

  > ⊘ **Correct**
  > The application will automatically use the new features

- ☑ Applications can load faster when using shared libraries

  > ⊘ **Correct**
  > If the relevant data is already in memory it need not be loaded again