Question 1

- **Visibility of system status** – This would be much less likely to catch interface problems in a gestural interface compared to a WIMP interface. The idea here is that the system should always keep the user informed of what’s going on. In many gestural interfaces this is present, however, due to the lack of screen real estate and proprietary messages on most gestural devices this visibility can really tell the user next to nothing. For example, on an Android device, the bar at the top of the screen will tell you if you have a new email, text, update, etc. However it shows this with tiny icons which mean little to anyone not already familiar with the system (for instance the new text icon is very similar to the new email icon, and the icon indicating an application update is available just looks like the Android guy). Also, any visibility of system status on a gestural system might not readily indicate which application is giving the status update, due to usually full-screen apps and the ability to multi-task. A pop-up box on an iPhone, for example, does not always indicate which application initiated it.

A WIMP system, on the other hand, usually has enough screen real estate to make visibility messages useful and make it clear which application initiated the message (for example by showing the message within the application window that initiated it, regardless of which application the user is currently running in the foreground).

- **User control and freedom** – This would be much more likely to catch interface problems in a gestural interface. Users sometimes make mistakes and never like to feel trapped or that the system is doing things randomly. In a gestural interface mistakes happen a lot more often because apps are usually full-screen and your finger is not a very accurate pointing device. As mentioned in the article, a lack of undo in most gestural interfaces is quite apparent when you press something accidentally and are taken somewhere you didn’t expect with no apparent way to go back or get out (except to simply exit the app and return home). These kinds of mistakes frustrate users and make the lack of user control very apparent in a gestural interface.

This heuristic can certainly find issues in a WIMP system, but since applications are not full screen, multitasking is clearer (i.e. it’s clear what programs are open at any given time), and windows keep applications separate, users are less likely to feel trapped in a single application and not know why. For instance, if you accidentally open a new program, a user sees it easily on the Dock or the Windows Taskbar and is less likely to be frustrated since they know what’s happening, whether or not proper undo controls are present. Also opening a new application accidentally in a WIMP interface will not necessarily pull you away from the application you’re in entirely as it would in a gestural interface.

- **Recognition rather than recall** – This would be much more likely to find issues in a gestural interface. Reducing the user’s memory load and making instructions always visible is tough on a smaller gesture-based screen for one thing. The article explains how it is difficult to know what commands and controls are available to you in an application, especially because menus aren’t always available (and even discouraged in Apple’s gesture-based iOS). And motions like ‘swiping to the right’ to delete an email are not natural or even explained in Apple’s Mail app for instance.
Users of gestural interfaces are much more likely to feel lost and not have any available help if they are not familiar with a particular gestural interface, so problems would be easily discovered. And since apps are full screen, it can be very easy to put the memory load on the user of what happened before and what should happen next, and users would quickly feel the burden of this. A WIMP system, however, almost always has more visibility of actions and controls because of more screen real estate and more capability. Help systems are usually available in most programs as well. A WIMP system’s problems would come to light with this heuristic, but users are less likely to feel the burden of recall they would feel immediately with an unfamiliar full-screen gestural app.