1. Which of the following is not one of Nielsen's heuristics?
   
   A. The user can see that controls produce the desired effects
   B. Dialogues have no irrelevant information
   C. Error messages are precise and use plain language
   D. The interface supports undo and redo

2. Which of the following statements about user testing is most true?
   
   A. It is nearly impossible to conduct a user test on a paper prototype.
   B. User testing should always be done before investing time on walkthrough and heuristic evaluations.
   C. Conducting an effective user test always requires a usability lab.
   D. It usually takes 4-8 users to get a consistent sense of the usability challenges of an interface being tested.

3. Suppose you are coming up with many different possible ideas for your user interface project. Are you:
   
   A. Exercising convergent thinking
   B. Working on getting the design right
   C. Working on getting the right design
   D. Performing a user-centered task analysis

4. GOMS analysis and other forms of formal action analysis have shown remarkable results in predicting task performance times and error rates in several domains. Despite this fact, GOMS is almost never used to evaluate Web site designs, even for large Web retailers like Amazon.com. All of the following statements about why GOMS may not be used are true except one: which statement is not true?

   A. GOMS simply doesn’t apply to websites -- it is limited to command line and similar interfaces.
   B. GOMS focuses primarily on repetitive tasks of experienced users; it wouldn’t be very useful for exploring or browsing.
   C. GOMS is remarkably hard to do well; few people are trained to perform GOMS analyses.
   D. Informal alternatives to GOMS (such as back-of-the-envelope action analysis) can find some of the large bottlenecks with much less effort than a full GOMS analysis.
5. The screens shown above illustrate what happens in Google’s Inbox email program when a user marks a message as “Done.” The system archives the message, then puts up a brief message at the bottom of the screen: “1 marked done … UNDO.” If the user taps on UNDO, the message will be moved back to the inbox. Otherwise, the message will disappear after a few seconds or when the user takes another action. Many of the design principles we have studied suggest this is a good design principle. Which of the following principles is most relevant to this design feature?

A. Be unobtrusive.
B. Avoid non-obvious modes.
C. Minimize the use of user-settable preferences.
D. Be consistent.

6. Norman discussed different types of errors. One of those types is the “slip.” Which of the following statements about slips is false?

A. When you finally notice a slip, it is usually fairly easy to figure out what went wrong.
B. An example of a slip would be getting off at your usual exit from the road when you were actually planning to go somewhere else.
C. Slips are often the result of not paying careful attention to what you are doing, perhaps because it is too easy or too automatic.
D. Slips are more likely to happen the first time you’re trying a particular task.
7. Congratulations, you just received a new electric car! Which of the following problems in operating that car would most likely reflect a mismatch between your mental model (as a user) and the actual system model?

   A. You have trouble opening the car door because the sleek, aerodynamic design makes the door handle slippery.
   B. There are several seemingly identical buttons that control the clock, and you can’t tell which one does what. In fact, the leftmost two buttons control the hour and minute.
   C. **You can’t turn the car on. In fact, the power button doesn’t work unless the driver’s seat belt is buckled and the driver’s foot is on the brake.**
   D. You have trouble seeing out the back window when trying to back up. In fact, the headrest and design of the rear window make it hard to see behind the car.

8. Which of the following statements about formative usability evaluations is **false**?

   A. They are most effective when done early in the design process.
   B. **They are a useful way to obtain precise quantitative measures of user performance.**
   C. They are a good way to learn whether users understand your overall design concept.
   D. They are effective for learning which features of your interface users focus on and which they don’t pay much attention to.

9. Which of the following is a disadvantage of low fidelity prototypes?

   A. They do not help you make sure your design concept is generally on the right track.
   B. **It is hard to test rapid dynamic interaction with a low fidelity prototype.**
   C. They require specialized expertise to produce.
   D. Once designers make a low fidelity prototype, they are reluctant to modify it.

10. Which of the following is **not** a correct instruction for performing a cognitive walkthrough?

    A. Each member of your team should do the walkthrough individually, then you merge the results together.
    B. Do not start a walkthrough until you have a prototype, task descriptions, and scenarios for each task you plan to walk through.
    C. Your walkthrough team can include developers and even users, but should have someone with skill/training in the walkthrough technique.
    D. For each scenario step and each walkthrough question, estimate the likelihood of the user having trouble with that step.
11. The picture above shows a series of cups from largest (at the bottom) to smallest (at the top). To the right of each set of cups are the lids that fit that size of cup. Which of the following concepts from Norman’s *The Design of Everyday Things* best describes why this is a good design?

   A. Use standards when possible.
   B. Give good feedback.
   C. Constrain user actions.
   D. Use natural mappings.

12. When is it important to have test users who are as close as possible to real users?

   A. When conducting user- and task-analysis.
   B. When conducting user testing.
   C. When getting user feedback on captured personas and tasks.
   D. All of the above.
13. In class we talked about Google’s design rationale for the Material Design framework. Which is not a rationale for Material Design?

   A. Color palettes: set increments of hue, saturation, contrast, and color value, taking advantage of C.R.A.P. principles
   B. Skeuomorphism: virtual ornamental design details modeled after physical objects, taking advantage of users’ mental models
   C. Enhanced progress bars and text field floating labels, taking advantage of the visibility of system status heuristic
   D. Multiple form factor (phone, tablet, mobile web, desktop web) approach, taking advantage of the consistency heuristic

14. When a user is evaluating an interface, which of the following ‘prompts’ would you be least likely to want to give the user?

   A. “Please remember to think aloud.”
   B. “If you’re stuck, feel free to move on to the next task.”
   C. “Here’s the right way to complete the task.”
   D. “Remember, you can ask questions anytime.”

15. The following text is an example of an artifact that could be useful in guiding the design of a system. Which of the following terms best describes this artifact?

   Hannah is preparing to submit the final version of her paper to CSCW 2015. She wants to be sure she specifies the order of the authors and their affiliations correctly, including specifying that she is the contact author. She also wants to be sure to select the right copyright form to ensure the most open access to her work. After finishing the submission, she hopes to get a confirmation message indicating that she did everything right.

   A. Persona
   B. Scenario
   C. Task
   D. Walkthrough

16. Which of the following statements about Fitts’ Law and its implications is false?

   A. Pointing to distant targets takes longer than pointing to nearby targets.
   B. It is faster to access a menu at the edge of the screen than one at the edge of a window that isn’t at the edge of the screen.
   C. Users take twice as long to point at a target that is twice as far away.
   D. A major factor in pointing time is how much “stopping distance” a user has between hitting the front and back of the target.
17. Which of the following is *not* a benefit of designing interfaces to be accessible?
   A. Accessible interfaces make your system usable to people with disabilities.
   B. **Accessible interfaces are easier to design and cheaper to build.**
   C. Accessible interfaces make your system more usable by people without disabilities in challenging contexts.
   D. Accessible interfaces are part of complying with laws in many countries.

18. In the cognitive walkthrough, two of the questions are whether the user (1) sees the correct control, and (2) sees that the control produces the desired effect. Which statement most correctly explains the difference between these questions?
   A. (1) is about whether the user can visually see the control, while (2) is whether other controls might look more appealing.
   B. (1) is about whether the user is thinking about the correct task, while (2) is about whether the user will understand that the control is the correct one.
   C. **(1) is about whether the control is actually visible on the screen and likely to be seen, while (2) is about whether the user understands the effects of the control and that it is the right control to move the user towards her goal.**
   D. (1) is about whether the control is clearly enough labeled to make the function clear, while (2) is about whether the feedback from the operation confirms that the user is doing the right thing.

19. Nielsen found that the optimal number of heuristic evaluators is 3 to 5. What was the primary reasoning behind this number?
   A. It is difficult to resolve differences and disagreements among more than five evaluators.
   B. Additional evaluators tend not to find any more problems.
   C. Problems found by additional evaluators tend to be less severe.
   D. **A cost-benefit analysis.**

20. Which of the following statements about back-of-the-envelope action analysis is *false*?
   A. Back of the envelope action analysis replaces the precise estimates of GOMS and similar methods with a listing of steps that take “a couple of seconds.”
   B. Back of the envelope action analysis is useful in identifying potential interface bottlenecks.
   C. **Back of the envelope action analysis leads to surprisingly accurate estimates of task-performance times and error rates, often within 15-20%.**
   D. Back of the envelope action analysis can help identify what a user needs to know, understand, or remember to complete a certain task.
21. The Swiftkey keyboard includes predictive typing, as shown in the example above -- after the words “I am” and the letters “ge” are entered, Swiftkey predicts that the word the user is entering is “getting.” This is a good design feature, as suggested by a number of the design principles and heuristics. Which of the following principles is least relevant to Swiftkey’s predictive typing user interface?

A. Provide shortcuts.
B. Be consistent.
C. Promote recognition over recall.
D. Prevent errors.

22. You need multiple members of the design team to be present for a usability evaluation. Which of the following is not one of the roles that a team member needs to fill?

A. Facilitator: Orients the user, gives general instructions, prompts as needed
B. Data-collector: Takes notes on what the user is doing, her comments, etc.
C. Computer: “Runs” the low-fidelity prototype or makes sure the system is working properly
D. Helper: If the user gets on the wrong track, quickly instructs them how to get back on the right track
23. The figure above represents a desktop office program (say, Microsoft Word). There is a dropdown menu (“File”) with several menu options underneath. The letters A, B, and C are labels of three possible positions of mouse arrow cursors, visible in the figure. The user wants to click the menu option labeled “Quit Program.” All arrows are the same length, and mouse cursors are situated exactly at the beginning of each arrow. Which mouse position leads to the shortest time to move to the “Quit Program” menu option?

A. Position A  
B. Position B  
C. **Position C**  
D. There is no difference between A, B, and C

24. A problem for usability research is that users often don’t know what they do or want, or how they would use new interfaces. Which of the following is not a way to address this problem?

A. Observe what users actually do rather than just asking them.  
B. Gather data on/from multiple users; don’t simply depend on a single user.  
C. Involve users along the way in the design process, getting their feedback as design ideas are explored.  
D. **Don’t worry about users until the design is complete; then you can take advantage of user input to figure out what documentation or training is needed.**
25. Which of the following is not necessary for carrying out a cognitive walkthrough?
   A. A detailed task description
   B. A prototype with enough detail to read text and symbol labels
   C. At least one, and preferably two or three representative users willing to carry out the walkthrough
   D. A complete “scenario” that describes the correct way to carry out the task in the prototype, step-by-step

26. In *The Design of Everyday Things*, Norman talks about how “Great Precision is Not Required” in most everyday activities. What does this mean when it comes to designing user interfaces?
   A. That humans usually make a lot of mistakes, so all interfaces should have an undo.
   B. That humans can’t easily make fine distinctions, so interfaces shouldn’t have easily-confused controls.
   C. That humans often can’t figure out their immediate goals, so giving users menus is very helpful.
   D. That humans can’t accurately estimate distances, so pointing devices like mice are better than touch screens or light pens.

27. Which of the following statements about “think aloud” user tests is true?
   A. There are serious ethical concerns with asking users to think aloud, so any time a think-aloud protocol is used it requires review by a human subjects committee (IRB).
   B. Sometimes thinking aloud interferes with natural execution of a task, so it may be useful to have some subjects not think aloud.
   C. If subjects stop thinking aloud, the facilitator should take over by asking them questions like “why did you press that button?” or “do you see the save icon there?”
   D. Almost all users think aloud naturally if just left alone in a usability test, so it is usually better not to offer instructions and instead to just keep very quiet.

28. In class, Lana discussed strategies for divergent thinking. Which of the following is not one of these strategies:
   A. Come up with ideas, evaluating/judging them along the way.
   B. Think about other stakeholders and non-users.
   C. Blue-sky first, use it to inform your constrained design.
   D. Think goals and motivations, instead of tasks.
29. Norman writes about designing for people by supporting users' mental (or conceptual) models. If you are designing for a system with many possible operations, which of the following design options is least relevant/useful?

A. Visible limitations on what can be done in the interface
B. Clear messages about possible uses, actions, and functions
C. Natural arrangement of controls
D. 
   
   **Choosing a small number of controls that are used in combination to accomplish the system's operations**

30. Which of the following statements is not necessary to tell a user before she begins evaluating an interface for you?

A. “Your participation in the test is voluntary.”
B. “You are evaluating the interface, you are not being evaluated.”
C. “You are welcome to ask questions at any point.”
D. “Other people will be testing the interface, too, so don’t worry if you don’t notice every problem.”

31. Suppose you are developing a mobile web application using HTML5 and the PhoneGap framework: which of the following statements is true?

A. Like native Android development, the mobile web application code can only be compiled for an Android platform.
B. 
   
   **A mobile web application's ability to access native device functionality is limited to what is implemented in the PhoneGap framework.**
C. A PhoneGap-built application will run faster than a native Android-built application.
D. A mobile web application has to be styled manually to make it look “app-y.”

32. Which of the following statements about personas is false?

A. A persona is based on user research.
B. A persona is a description of a fictional user of your system.
C. A persona is used to guide design decisions.
D. A persona is designed to represent all the users of your system.

33. Which of the following is not an example of accessible website design?

A. Providing text descriptions for visual content such as images on your site.
B. 
   
   **Having clear labels on specific pages indicating that they require vision, hearing, etc.**
C. Ensuring that displayed text can be resized using standard browser features.
D. Keeping the language on the site clear and simple.
34. When discussing walkthrough and heuristic evaluation, we remind you to let your focus guide you in finding usability problems, but not blind you. What does that mean?
   A. When you find a problem, you should always consider the possibility that users might not have that problem after all.
   B. It isn't really important to follow the evaluation protocol carefully.
   C. Always consider that users may have a smaller display or window, so content may not be visible to them.
   D. If you see a usability problem that isn't specifically related to the walkthrough or heuristic, you should still record and consider it.

35. Why is it often useful to have application designers/developers in the observer room of a usability lab during user testing?
   A. Because seeing users struggle is often the best way to motivate people to make changes.
   B. Because they are needed in case users find bugs -- it impresses users when you can fix bugs on the spot.
   C. Because the more staff time you devote to the usability test, the easier it is to get management to approve more usability tests.
   D. Because you can use designers or developers as sample users if your test users don’t show up or finish prematurely.

36. Which of the following is not an advantage of low fidelity prototypes?
   A. They enable users to focus on key design details, like layout, colors, and fonts.
   B. Missing features don’t result in testing coming to a stop.
   C. They support rapid design iteration.
   D. They are easy to create.

37. According to “Designed for Use,” designers should consider the costs as well as the benefits of adding a new feature to a user interface. Which of the following is not one of the costs mentioned in “Designed for Use” and in class discussion?
   A. Adding more features makes it harder for users to learn the interface.
   B. Adding more features makes it harder for developers to maintain the interface.
   C. Adding more features often leads to a less coherent and more cluttered interface.
   D. Adding more features means users will have to pay more for the product.
38. The screen above shows a sequence of user actions (1, 2, and 3) and a system response (4) in Microsoft Word. The key point is that as the user hovers over an item in the font menu (Arial Black), the selected text in the document is changed to be displayed in that font. (Of course, if the user does not click on a new font choice, the text in the document will remain in its current font.) Which Nielsen heuristic best describes why this is an effective design feature?

A. Match between system and the real world  
B. Flexibility and efficiency of use  
C. Promote recognition over recall  
D. Aesthetic and minimalist design

39. We discussed a case study of how Microsoft decided to include a large, prominent “Paste” button in their Office 2007 interface. How did the design team make this decision?

A. By analyzing usage data from earlier versions of Office  
B. By doing usability research  
C. By relying on their intuitions about how people used Office  
D. By doing a cognitive walkthrough of common Office tasks
40. Which of the following best describes the difference between walkthrough and (Nielsen-style) heuristic evaluations?

A. **Walkthrough evaluations are task-based while heuristic evaluations are task-free.**
B. Heuristic evaluations require multiple evaluators while walkthrough evaluations can be completed by a single evaluator.
C. Heuristic evaluations require actual users to carry them out while walkthrough evaluations can be done just by the design team.
D. Walkthrough evaluations are more likely to find consistency problems than heuristic evaluations.