

CSC 290H5 S 2019 Midterm Test - Multiple Choice Booklet

Last Name: _____ First Name: _____

Booklet Version: A
Instructor: Lisa Zhang

*Do **not** turn this page until you have received the signal to start.
Good Luck!*

This booklet contains 28 multiple choice questions. *When you receive the signal to start, please make sure that your copy is complete.*

- No aids are permitted for this midterm.
- Answer multiple choice questions using the Scantron sheet provided, using a pencil. **Do not write any solutions inside this booklet.**
- Write **and bubble in** your student ID on the Scantron sheet.
- Bubble in the Booklet Version (A) on the “Form” field of the Scantron sheet.

Do **not** hand in this booklet.

Answer the following multiple choice questions on the Scantron sheet using a pencil. Only select one best answer per question.

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| <p>1. Links on webpages are usually underlined. In the SMCR model of communication, this is an example of:</p> | <p>(A) Source
(B) Message
(C) Channel
(D) Recipient
(E) None of the above</p> |
| <p>2. Sam believes that robots will help humanity prosper. Jamie disagrees because Sam is a computer scientist. Which fallacy might Jamie be committing?</p> | <p>(A) Sampling bias
(B) Inappropriate appeal to authority
(C) Inappropriate sample
(D) Vested interest fallacy
(E) Slippery slope</p> |
| <p>3. What is an appropriate sample size?</p> | <p>(A) 1% of the population you are trying to study.
(B) 5% of the population you are trying to study.
(C) At least 100 samples.
(D) At least 1000 samples.
(E) Depends on the problem you wish to study.</p> |
| <p>4. If A and B are correlated, then ...</p> | <p>(A) Either A causes B, or B causes A
(B) A causes B
(C) B causes A
(D) We need a large sample size to determine the direction of causality
(E) None of the above</p> |
| <p>5. At the University of Toronto, course evaluations are used to determine the quality of courses and professors. Why do course evaluations suffer from survivorship bias?</p> | <p>(A) Students have already “survived” the course, so they won’t care anymore.
(B) Students who dropped the course do not complete the evaluations.
(C) Every student will perceive the course a little differently.
(D) Students may retaliate against professors if they receive a poor grade.
(E) Students only rate professors who are still teaching the course.</p> |
| <p>6. The average lifespan of a resident of downtown Toronto is 81 years, and a resident of the suburbs is 83 years. What can you conclude?</p> | <p>(A) People should avoid living downtown.
(B) People who are older tend to live in suburbs.
(C) People who live in suburbs tend to be wealthier.
(D) People who live in suburbs tend to live longer.
(E) Two or more of the above are true.</p> |

7. Sam disagrees with the “broken window” analogy from the readings, citing insufficient hard evidence and lack of data collected from real companies. Which of the following is **true**?
- (A) Sam is mistaking a conceptual argument with an empirical argument.
 (B) Sam is committing a straw man fallacy.
 (C) Sam is looking for causation where only correlation can be shown.
 (D) Sam also has no data; it is Sam’s job to collect data if Sam wants to make a counter-claim.
 (E) None of the above.
8. Which of the following is an example of using an unrepresentative sample?
- (A) Sampling 1% of UTM students to complete a survey about UTM student stress.
 (B) Sampling 2% of UTM students to complete a survey about UTM student stress.
 (C) Sampling 30% of UTM students to complete a survey about how adults perceive colour.
 (D) Sampling 25% of UTM researchers to complete a survey about availability of funding at UTM.
 (E) Both (a) and (b)
9. Which of the following does not follow good data visualization practices?
- (A) A bar chart that uses a logarithmic vertical axis.
 (B) A pie chart with only 2 categories.
 (C) A bar chart with only 2 bars.
 (D) A pie chart that is black and white.
 (E) A line chart with a y-axis that does not begin at 0.
10. We discussed how bar chart vertical axis should always begin at 0. Recall the reason why. Which of the following is also true, and **for the same reason**?
- (A) Bar charts should not show negative values.
 (B) Pie charts should never be square (and always be round).
 (C) In a bar chart, the width of each bar should be the same.
 (D) Line chart axis should start at 0.
 (E) There should never be too many points on a scatter plot.
11. What is an example of a non-functional requirement?
- (A) The software should work on both Windows and Mac.
 (B) The user should be able to change the app background.
 (C) The app should not work if the phone is not connected to the internet.
 (D) The software should log users out if they haven’t been active in a day.
 (E) The software should automatically update to a newer version.
12. You are developing a robot that helps senior citizens do laundry. Which of the following is **not** a stakeholder of your project?
- (A) The senior citizen.
 (B) The robot maintainers.
 (C) The senior citizen’s children or other caregivers.
 (D) The nanny whom the robot will replace.
 (E) All of the above are stakeholders.

13. Which of the following is **true** about use case diagrams?
- (A) Each actor is assigned to a maximum of one action.
 - (B) Each action is assigned to a maximum of one actor.
 - (C) Actions should be described precisely and at length.
 - (D) The action label "process data" is poor.
 - (E) Actions are drawn as stick figures.
14. Why do software developers hold design review meetings and presentations?
- (A) To obtain feedback on the design of software from their clients.
 - (B) To obtain feedback on the design of software from their peers.
 - (C) To convince their bosses that the software design is sound.
 - (D) To communicate the software design to implementers.
 - (E) To communicate the software design to stakeholders.
15. Which of the following about project proposals, project charters, and project plans is **false**?
- (A) All three documents list the project stakeholders.
 - (B) All three documents list the project milestones.
 - (C) All three documents have different goals.
 - (D) All three documents have the same audience.
 - (E) All three documents list the project goals.
16. Which of the following is **true** about wireframes?
- (A) A wireframe shows the exact visual elements and images used in the design.
 - (B) A wireframe should be shown in colour.
 - (C) A wireframe is used to explain what a user sees, not what they do.
 - (D) A wireframe shows the same information as a use case diagram.
 - (E) None of the above are true.
17. Why is it important to determine the features that are **out of scope**?
- (A) To provide a clear estimate of how long the project will take.
 - (B) To identify all the stakeholders of a project.
 - (C) To make sure that the project has the right amount of resources.
 - (D) To be able to say "no" more easily.
 - (E) Two or more of the above are true.
18. Which of the following is **true** about class diagrams?
- (A) Class diagrams and use case diagrams are both UML diagrams.
 - (B) Class diagrams are also called "object diagrams".
 - (C) Class diagrams shows everything about a software project's design.
 - (D) Both of (a) and (c) are true.
 - (E) All of the above are true.

19. Presentation slides should ...
- (A) Use a serif font.
 - (B) Use ALL CAPS for titles and headers.
 - (C) Use a different font size for every slide for a “popping” effect.
 - (D) Contain one idea per slide.
 - (E) Be standalone (understandable without the context of the presentation).
20. Which of the following about the Residual Method presentation structure is **true**?
- (A) You should provide all the solutions first, then explain why they won’t work.
 - (B) The description of the problem should take 30-50% of the talk.
 - (C) You should spend roughly 60% of the talk on explaining your solution.
 - (D) You should explain your own solution first, then explain in detail why no other solution will work as well.
 - (E) You should explain a solution, then explain why it doesn’t work, and repeat until your own solution remain.
21. Which of the following about the introduction of a technical presentation is **false**?
- (A) The introduction should contain an agenda slide.
 - (B) The introduction should outline the entire presentation.
 - (C) The introduction should convince the audience to listen to the rest of the talk.
 - (D) The introduction should conclude with a call-to-action.
 - (E) The introduction slides should have a large enough font.
22. Which of the following is a good variable name for a loop index for a 30-line loop, where the loop index is used in several places?
- (A) `index`
 - (B) `number`
 - (C) `theOuterMostLoopIndex`
 - (D) `k`
 - (E) `i`
23. Which of the following is an effective use of inline (also known as endline) comments?
- (A) `isEnabled = false; // Fixed Bug 17 by Amy`
 - (B) `int speed; // In kilometers per hour`
 - (C) `x = x + 1 // Compensate for border`
 - (D) `return null; // To do: Fix before deploy`
 - (E) None of the above
24. Which of the following is a good name for a boolean variable?
- (A) `status`
 - (B) `names`
 - (C) `name`
 - (D) `complete`
 - (E) `checkNull`

25. You prefer 2-space indentations, but your coworkers prefer 4-space indentations. What should you do?
- (A) Use tab characters, so each programmer can configure their editors to their own liking.
 - (B) You should use 4-space tabs, because majority rules.
 - (C) You should use 4-space tabs, to be nice.
 - (D) To avoid unnecessary conflicts, each programmer should follow their own preferences.
 - (E) Every programmer should follow the coding convention set for the project or organization.
26. Which of the following is a good commit message?
- (A) `added comments to tictactoe`
 - (B) `the description is fixed`
 - (C) `Write more code`
 - (D) `Add installation instructions`
 - (E) Two or more of the above are good commit messages.
27. Which is **true** about code review?
- (A) There is exactly one reviewer for each change to be reviewed (each pull request).
 - (B) A reviewer never reads all of the code.
 - (C) Code reviewer is less important than writing actual code.
 - (D) Reviewers should not worry about silly things like trailing white spaces.
 - (E) None of the above.
28. Why do organizations perform code review?
- (A) So that more than one person knows what's happening.
 - (B) So that there is consistency across all code.
 - (C) So that there is an opportunity for developers to learn from one another.
 - (D) So that bugs and inefficiencies are more likely to be caught early.
 - (E) All of the above.