You submitted this quiz on **Tue 2 Jun 2015 8:42 AM PDT**. You got a score of **10.00** out of **10.00**.

Top of Form

**Question 1**

Suppose I conduct a study and publish my findings. Which of the following is an example of a replication of my study?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| An investigator at another institution conducts a study addressing the same question, collects her own data, analyzes it separately from me, and publishes her own findings. | Correct | 1.00 |  |
| An investigator at another institution conducts a study addressing a different scientific question and publishes her findings. |  |  |  |
| I take my own data, analyze it again, and publish new findings. |  |  |  |
| I give my data to an independent investigator at another institution, she analyzes the data and gets the same results as I originally obtained. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 2**

Which of the following is a requirement for a published data analysis to be reproducible?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| The investigator makes the analytic data publicly available. | Correct | 1.00 |  |
| The investigator's final publication is made available free of charge. |  |  |  |
| The analysis is conducted on a variant of the Unix operating system. |  |  |  |
| The data analysis is conducted using R. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 3**

Which of the following is an example of a reproducible study?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| The study's analytic data and computer code for the data analysis are publicly available. When the code is run on the analytic data, the findings are identical to the published results. | Correct | 1.00 |  |
| The study's analytic data are publicly available, but the computer code is not. |  |  |  |
| The study's analytic data and computer code are not publicly available, but the study was simple enough to be repeated by an independent investigator. |  |  |  |
| The study's original authors re-run their computer code on their analytic data and confirm publicly that the findings match those of the published results. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 4**

Which of the following is a reason that a study might NOT be fully **replicated**?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| The original study was conducted by a well-known investigator. |  |  |  |
| The original study was opportunistic in its timing and it would be difficult to find a similar context in which to repeat it. | Correct | 1.00 |  |
| The original study was published in a high impact journal and is considered authoritative. |  |  |  |
| The original study had null findings. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 5**

Which of the following is a reason why publishing **reproducible research** is increasingly important?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| The statistical methods for most studies can be accurately described using plain language. |  |  |  |
| Most studies today are small-scale and easily replicated. |  |  |  |
| Computing power is limited today, making it difficult to apply sophisticated statistical methods. |  |  |  |
| New technologies are increasing the rate of data collection, creating datasets that are more complex and extremely high dimensional. | Correct | 1.00 |  |
| Total |  | 1.00 / 1.00 |  |

**Question 6**

What is the role of *processing code* in the research pipeline?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| It transforms the measured data into analytic data. | Correct | 1.00 |  |
| It transforms the computational results into figures and tables. |  |  |  |
| It transforms the analytic data into computational results. |  |  |  |
| It conducts the statistical analysis of the primary outcome. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 7**

Which is a goal of literate statistical programming?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| Separate figures and tables from other data analytic summaries. |  |  |  |
| Combine explanatory text and data analysis code in a single document. | Correct | 1.00 |  |
| Require that data analysis summaries are always written in LaTeX. |  |  |  |
| Ensure that data analysis documents are always exported in PDF format. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 8**

What does it mean to *weave* a literate statistical program?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| Transform the literate program into a human readable document. | Correct | 1.00 |  |
| Transform a literate program from R to python. |  |  |  |
| Transform the literate program into a machine readable code file. |  |  |  |
| Compress the literate program so that it takes up less space. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 9**

Which of the following is required to implement a literate programming system?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| A program that views PDF files. |  |  |  |
| A programming language like R. | Correct | 1.00 |  |
| A cloud-based computing service for running computations. |  |  |  |
| A web server for publishing documents. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**Question 10**

What is one way in which the knitr system differs from Sweave?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| knitr lacks features like caching of code chunks. |  |  |  |
| knitr allows for the use of markdown instead of LaTeX. | Correct | 1.00 |  |
| knitr is written in python instead of R. |  |  |  |
| knitr was developed by Friedrich Leisch. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

Bottom of Form