

! Try again once you are ready

TO PASS 70% or higher

Try again

GRADE
61.53%

Full Entrance Assessment - Attempt 2

LATEST SUBMISSION GRADE

61.53%

1. What type of bias would be introduced if a survey about recycling practices is sent by mail?

0 / 1 point

✗ Incorrect

2. Construct the least squares regression line based in the following output:

2 / 2 points

Call:

lm(formula = reactions ~ comments, data = feeddata)

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.22512 4.24370 0.023 0.816

comments 0.13440 0.33145 2.321 0.0170 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 '' 1

Correlation Matrix:

reactions comments

reactions 1.000000 0.7019233

comments 0.7019233 1.0000000

Please, structure your response as $y = b_0 + b_1x$ so, for example, if the value of b_0 was 1.301 and the value of b_1 was 0.422, then your answer would be: $y = 1.301 + 0.422x$. Please round values to the third decimal place.

✓ Correct

3. Use the following information to determine your answer: A survey was sent out to compare the proportion of part-time workers living in rural and urban settings (p_1 = rural residents and p_2 = urban residents). The following data was obtained from those who responded.

1 / 1 point

	Work a part time job?	Work a part time job?	
Group	Yes	No	Total
1 = rural residents	162	202	364
2 = urban residents	474	256	730

This survey was done specifically to test the suggestion that the proportion of rural residents who have a part-time job is greater than the proportion of urban residents who have a part-time job. Which of the following represents the hypotheses that we will be testing, assuming that p_1 represents the population proportion of all rural residents who have a part-time job and that p_2 represents the population proportion of all urban residents who have a part-time job.

✓ Correct

4. True or False: There is not enough evidence to reject the null hypothesis if alpha is set to 10% when the p-value is 0.1099.

2 / 2 points

✓ Correct

5. Two competing coffee shops wanted to know how satisfied their customers were with their drink choices (on a scale of 1 to 7, where 1 is very unsatisfied and 7 is very satisfied). They're assuming that there is some difference between the two companies' customers, but not who will be better. They each took a random sample of their customers to get an average rating.

0 / 1 point

Company A had 58 participants, who responded with an average rating of 4.52 and a standard deviation of 0.72. Company B had 62 participants, who responded with an average rating of 5.21 and a standard deviation of 1.35.

Assume that sample1 comes from Company A and sample2 comes from Company B.

Compute the 90% confidence interval. Round to the fourth decimal point. Please enter your answer in the following format: (lower_value, upper_value)

Incorrect

6. Which of the following correlation coefficient values would match the following description:

1 / 1 point

strong to very strong positive relationship

Correct

7. A restaurant is curious about people who play trivia at their establishment. They took a random sample of people who participate, and noted how many questions they answered correctly on average. Based on many results, the (partial) probability distribution below was determined for the discrete random variable X = number of correct answers (during a fixed time period).

2 / 2 points

X = # correct answers	0	1	2	3	4	5	6	7	8	9
Probability	--	.14	.15	.09	.14	.11	.10	.02	.03	.04

Given that the person correctly answers at least 5 questions, what is the probability that they correctly answer all 9 questions? Please round to the second decimal point.

Correct

8. A random sample of 800 men and women were asked about their opinion on fighting in hockey games. Below is the gathered data.

1 / 1 point

Assuming there's no relationship between gender and opinion on fighting in hockey games, how many women would you expect to be in favor of permitting fights in hockey games? Please round up to a whole number.

	Ban Fights in Hockey Games	Permit Fights in Hockey Games	Total
Men	112	311	423
Women	135	242	377
Total	247	553	800
Pearson's Chi-square test			
X-squared = 13.11	df = 1		p-value = ?

Correct

9. Which of the following graphs match the following distribution description?

1 / 1 point

bimodal, symmetrical, no apparent outliers

Correct

10. Use the following information to determine your answers: The typical cost for customers at a local coffeehouse fits a bell-shaped distribution with a mean of 8.53 dollars and a standard deviation of 2.25 dollars.

1 / 1 point

About 95% of purchases cost between a minimum of ____ dollars and a maximum of ____ dollars. Round your answers to the second decimal point. Please enter your answer in the following format: (min_value, max_value)

Correct

11. Which of the following list comprehensions will extract all country names in the dictionary "co2_emissions", which have a "Per Capita" value that is larger than 10.00. Select all that apply.

0 / 2 points

```
1 co2_emissions = [{"Name": "United States",
2     "Rank": 2,
3     "Total Emissions": 4997.50,
4     "Per Capita": 15.53},
5     {"Name": "China",
6     "Rank": 1,
7     "Total Emissions": 9040.74,
8     "Per Capita": 6.59},
9     {"Name": "Germany",
10    "Rank": 6,
```

```

11     "Total Emissions": 729.77,
12     "Per Capita": 8.93},
13     {"Name": "Mexico",
14      "Rank": 12,
15     "Total Emissions": 442.32,
16     "Per Capita": 3.66},
17     {"Name": "Canada",
18      "Rank": 9,
19     "Total Emissions": 549.23,
20     "Per Capita": 15.32},
21     {"Name": "Turkey"
22      "Rank": 18,
23     "Total Emissions": 317.22,
24     "Per Capita": 4.10}
25     {"Name": "Russia"
26      "Rank": 4,
27     "Total Emissions": 1468.99,
28     "Per Capita": 10.19}
29     {"Name": "Saudi Arabia"
30      "Rank": 10,
31     "Total Emissions": 531.46,
32     "Per Capita": 16.85}]
33

```

Incorrect

12. Which of the following lines of code will sort the list of class instances, called gardens by the attribute (not the method) called style, from A to Z?

1 / 1 point

Correct

13. Which of the following functions takes in two parameters, a string and an integer, extracts the character at the n'th position (dictated by the integer parameter) from the string, and returns a dictionary where the original string is the key and the extracted character is the value? Select all that apply.

0 / 2 points

Incorrect

14. Assume that we have some dictionaries (stored in the variable called "diction_to_save") that we would like stored in a json formatted file. We want to call the json file "previous_data.json". Which solution would store the python object into a json file? Assume that json has been imported in each case. Select all that apply.

0 / 1 point

Incorrect

15. Which of the following while loops do **not** contain an error or an infinite loop? Select as many as apply.

0 / 1 point

Incorrect

16. Assuming the following class is defined, how would you write code to add a new instance of the Game class, which **has 40 players**, is **called "Ice Hockey"**, and starts off with **sticks, a goal, ice skates, and a puck as equipment**? Select all that apply.

0 / 1 point

```

1  class Game():
2      def __init__(self, title, players, equipment):
3          self.title_of_game = title
4          self.num_players = players
5          self.equipment = equipment
6          self.rules = []
7
8      def make_rule(self, new_rule):
9          if new_rule not in self.rules:
10              self.rules.append(new_rule)
11
12     def add_equipment(self, new_equip):
13         if new_equip not in self.equipment:
14             self.equipment.append(new_equip)
15
16     def __str__(self):
17         return "You are about to play the game - {} - with {} players".format(self.title_of_gar
18

```

Incorrect

17. Which of the following functions is least likely to break if there is an error when the program makes a request to "movieexample.org"? Note that we expect a list to be assigned to "py_data", and you can assume that requests.get has been imported.

1 / 1 point

✓ Correct

2 / 2 points

18. Please provide a conditional that would replace None so that the following code successfully iterates through the data stored in the variable "photo_data" and extracts the value from the key "post_id" and stores the value in the variable called 'posts' only if the caption has a hashtag in it (hashtags always start with #).

```
21     "likes": {"count": 1,
22             "users": [...]},
23     "replies": {"count": 2,
24                 "users": [...]}
25             },
26     {"user_id": 887963709525,
27     "post_id": "0083F78HK03P",
28     "contents_": "#relaxing in the garden today!",
29     "likes": {"count": 2,
30               "users": [...]},
31     "replies": {"count": 0,
32                 "users": []}
33             },
34     {"user_id": 489493831182,
35     "post_id": "K9LN457BT598",
36     "contents_": "Does anyone know someone with a 734-###-#### number?",
37     "likes": {"count": 2,
38               "users": [...]},
39     "replies": {"count": 0,
40                 "users": []}
41             },
42     {"user_id": 8173829496,
43     "post_id": "AJY8790KJ752B",
44     "contents_": "Marketplace is busy today, hopefully the deals are good! #crowd",
45     "likes": {"count": 11,
46               "users": [...]},
47     "replies": {"count": 21,
48                 "users": [...]}
49             }
50         }
51
52 posts = []
53 for item in photo_data['resp']:
54     if len([word for word in item["contents_"].split() if word.startswith("#")]) > 0:
55         posts.append(item["post_id"])
```

✓ Correct

1 / 1 point

19. Python Notebook Question: What is the name of the fourth holiday in all_hol? Note that when we say fourth, we mean from the human perspective.

✓ Correct

0 / 1 point

20. Python Notebook Question: What is the output when the fourth holiday is printed? You may copy the output. Note that this is not asking for output that is formatted in the following manner: "<__main__.Holiday object at 0x10878de10>". Instead, we are asking for the output that uses the __str__ method.

✗ Incorrect