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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Python for Data Science (course)



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Course
outline

About NPTEL
()

How does an
NPTEL online
course work?
()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 3 : Assignment 3

The due date for submitting this assignment has passed.

Due on 2025-02-12, 23:59 IST.

Assignment submitted on 2025-02-10, 11:31 IST

1) Which of the following is the correct approach to fill missing values in case of categorical variable?

1 point

- ☐ Mean
- ☐ median
- ☒ Mode
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Mode

Assume a pandas dataframe df_cars which when printed is as shown below. Based on this information, answer questions 2 and 3.



● Reading data
(unit?
unit=41&lesson
=42)

● Pandas
Dataframes I
(unit?
unit=41&lesson
=43)

● Pandas
Dataframes II
(unit?
unit=41&lesson
=44)

● Pandas
Dataframes III
(unit?
unit=41&lesson
=45)

● Control
structures &
Functions
(unit?
unit=41&lesson
=46)

● Exploratory
data analysis
(unit?
unit=41&lesson
=47)

● Data
Visualization-
Part I (unit?
unit=41&lesson
=48)

● Data
Visualization-
Part II (unit?
unit=41&lesson
=49)

● Dealing with
missing data
(unit?
unit=41&lesson
=50)

● Datasets (unit?
unit=41&lesson

	Car name	Type	Brand	Price (in lakhs)
0	A2	Sedan	ASP	15
1	C3	SUV	TRE	20
2	D2	Hatchback	ASP	14
3	A3	Sedan	TOY	13
4	C6	MUV	TOY	18

2) Of the following set of statements, which of them can be used to extract the column **Type** as a separate dataframe? **1 point**

- ☒ `df_cars[['Type']]`
☐ `df_cars.iloc[:, 1]`
☒ `df_cars.loc[:, ['Type']]`
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

`df_cars[['Type']]`

`df_cars.loc[:, ['Type']]`

3) The method `df_cars.describe()` will give description of which of the following column? **1 point**

- ☐ Car name
☐ Brand
☒ Price (in lakhs)
☐ All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

`Price (in lakhs)`

4) Which pandas function is used to stack the dataframes vertically? **1 point**

- ☐ `pd.merge()`
☒ `pd.concat()`
☐ `join()`
☐ None of the above

Yes, the answer is correct.



=51)

● Week 3:
Lecture slides
(unit?
unit=41&lesson
=52)

● Week 3 - FAQs
(unit?
unit=41&lesson
=53)

● Week 3
Feedback Form
: Python for
Data Science
(unit?
unit=41&lesson
=115)

● Practice: Week
3: Practice
Assignment 3
(assessment?
name=158)

● Quiz: Week 3 :
Assignment 3
(assessment?
name=162)

Week 4 ()

Supporting
material for
Week 4 ()

Download
Videos ()

Books ()

Text
Transcripts ()

Problem
Solving
Session - Jan
2025 ()

Score: 1

Accepted Answers:
`pd.concat()`

5) Which of the following are libraries in Python?

1 point

- ☐ Pandas
☐ Matplotlib
☐ NumPy
☒ All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:
All of the above

Read the 'flavors_of_cocoa.csv' file as a dataframe 'df_cocoa' and answer questions 6-9. The description of features/variables is given below:

Variable	Description
ID	Serial no.
Company	Name of a manufacturing company
Bean Origin	Place of origin of cocoa bean
Review Date	Year in which chocolates were rated
Cocoa percent	Percentage of cocoa in chocolate
Company Location	Location of a manufacturing company
Rating	Rating of chocolates

6) Which of the following variable have null values?

1 point

- ☐ ID
☐ Company
☒ Review Date
☐ Rating

Yes, the answer is correct.

Score: 1

Accepted Answers:
Review Date

7) Which of the following countries have maximum locations of cocoa manufacturing companies?

1 point

- ☐ U.K.
☒ U.S.A.
☐ Canada
☐ France



Yes, the answer is correct.

Score: 1

Accepted Answers:

U.S.A.

8) After checking the data summary, which feature requires a data conversion considering **1 point** the data values held?

- ☐ Rating
- ☒ Review date
- ☐ Company
- ☐ Bean origin

Yes, the answer is correct.

Score: 1

Accepted Answers:

Review date

9) What is the maximum rating of chocolates?

1 point

- ☐ 1.00
- ☒ 5.00
- ☐ 3.18
- ☐ 4.00

Yes, the answer is correct.

Score: 1

Accepted Answers:

5.00

10) What will be the output of the following code?

1 point

```
import numpy as np
B = [True, 2, 3.0, np.nan, "False"]
[type(i) for i in B]
```

- ☒ [bool, int, float, float, str]
- ☐ [str, int, float, float, str]
- ☐ [bool, int, float, int, str]
- ☐ [bool, int, int, float, str]

Yes, the answer is correct.

Score: 1

Accepted Answers:

[bool, int, float, float, str]

11) What does **df.info()** provide?

1 point

- ☒ Summary of the DataFrame, including the number of non-null entries.
- ☐ The first 5 rows of the DataFrame
- ☐ The data types of the columns
- ☐ The correlation matrix of the DataFrame

Yes, the answer is correct.

Score: 1

Accepted Answers:

Summary of the DataFrame, including the number of non-null entries.

12) What will be the output of the following code?

1 point

```
import numpy as np
arr = np.array([1, 2, 3, 4, 5])
print(arr[::2])
```

- ☐ [1, 2]
- ☒ [1, 3, 5]
- ☐ [1, 2, 3, 4, 5]
- ☐ [5, 4, 3, 2, 1]

Yes, the answer is correct.

Score: 1

Accepted Answers:

[1, 3, 5]

