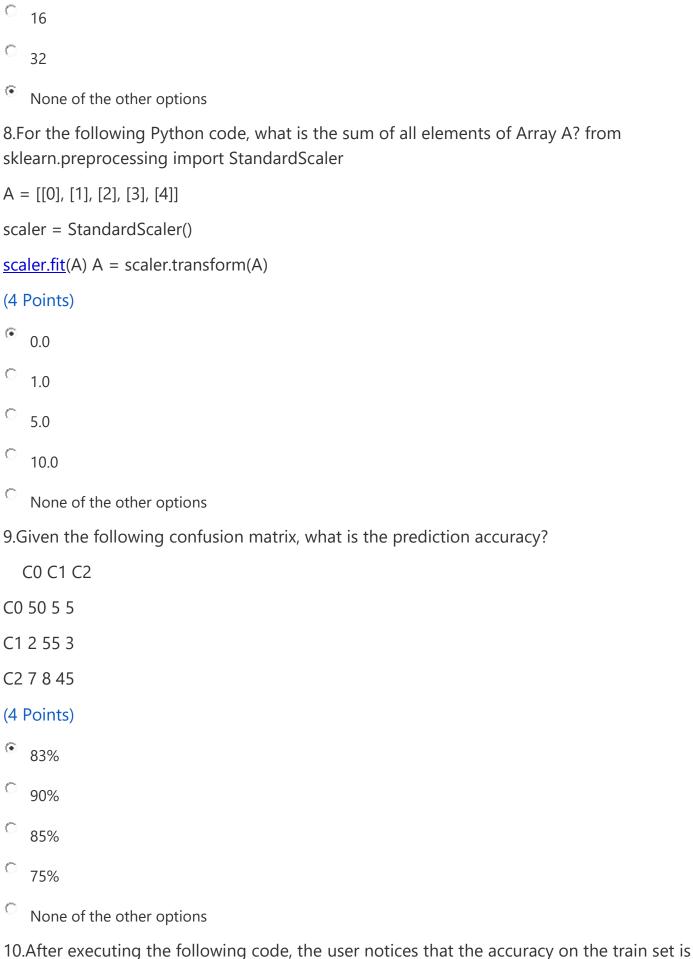
5. When a machine learning model gives good accuracy on the train set and bad accuracy on the test set, we say that the model is: (4 Points) Over-fitting Under-fitting Needs more data Needs more representative data None of the other options 6. What is the output of the following Python code? L = []for i in range(10): L.append(i%2) print (sum(L)//2) (4 Points) 2 2.5 3 None of the other options 7. What is the sum of Array A elements after executing the following Python Code: import numpy as np A = np.ones((4,4))A *= 2A[0, :] *= 0(4 Points)

° 2



10.After executing the following code, the user notices that the accuracy on the train set is 100% and 60% on the test set. Which one of the following lines could work as a solution for this problem?

```
tree_clf = DecisionTreeClassifier(max_depth=6)
tree_clf.fit(X, y)
(4 Points)
   tree clf = DecisionTreeClassifier(max depth=None)
   tree clf = DecisionTreeClassifier(min samples split=2, max depth=6)
   tree_clf = DecisionTreeClassifier(max_depth=4)
   tree clf = DecisionTreeClassifier(max depth=8)
   None of the other options
11. How many trainable parameters does the following model has?
model = keras.models.Sequential()
model.add(keras.layers.Dense(100, activation="relu", input_shape=[10]))
model.add(keras.layers.Dense(100, activation="relu"))
model.add(keras.layers.Dense(10, activation="softmax"))
(4 Points)
   12,210
   12,000
   12,200
   12,100
   None of the other options
12. When training a model using the following code, the training stops at the end of Epoch
95. Which epoch has the best validation loss?
checkpoint_cb = keras.callbacks.ModelCheckpoint("my_keras_model.h5",
save_best_only=True)
early_stopping_cb = keras.callbacks.EarlyStopping(patience=5, restore_best_weights=True)
history = model.fit(X_train, y_train, epochs=100, validation_data=(X_valid, y_valid),
callbacks=[checkpoint_cb, early_stopping_cb])
(4 Points)
   90
```

```
95
   100
   105
   None of the other options
13. How many training iterations are conducting in the following tuning experiment?
from sklearn import svm, datasets
from sklearn.model_selection import GridSearchCV
iris = datasets.load iris()
parameters = {'kernel':('linear', 'rbf'), 'C':[1, 5, 10]}
svc = svm.SVC() clf = GridSearchCV(svc, parameters, cv=3)
clf.fit(iris.data, iris.target)
(4 Points)
   18
   5
   15
   None of the other options
14. How many trainable parameters are included in the following three layers?
[keras.layers.Conv2D(64, 7, activation="relu", padding="same", input_shape=[28, 28, 1]),
keras.layers.MaxPooling2D(2),
keras.layers.Conv2D(128, 3, activation="relu", padding="same")]
(4 Points)
   77,056
   76,864
   77,058
   76,866
   None of the other options
```