AISSCE PRACTICAL EXAMINATION – 2020

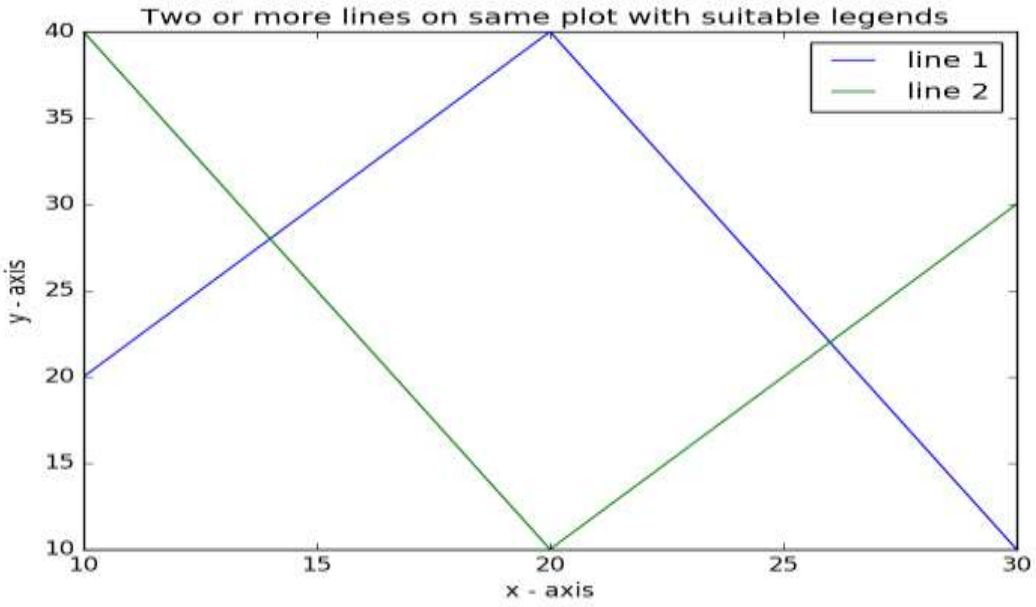
SUBJECT: INFORMATIC PRACTICES NEW (065) LANGUAGE : PYTHON

TIME: 3 HOUR School Code: 14159 MAX. MARKS: 30

Question-1 **[07 Marks]**

(A)

Write a Python program to plot two or more lines on same plot with suitable legends of each line. The code snippet gives the output shown in the following screenshot:



OR

Write a Pandas program to select the rows where the number of attempts in the examination is greater than 2.

Sample DataFrame:

exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'],
'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

(B) **[03 Marks]**

Write python code to establish connection between python and SQL and also write the code for passing SQL query to display the records of players other than Cricket or in python IDLE. Details of connection is as below.

Database: Education, host=localhost, user=root password=practical
Table name=player.

StudentNo	Class	Name	Game	Grade
10	7	Tina	Cricket	B
11	8	Kamal	Tennis	A
12	7	Divya	Cricket	B
13	7	Vimal	Tennis	C
14	9	Pooja	Basketball	A
15	10	Shourya	Cricket	A

Question 2. Report File + viva **(7+2=9 Marks)**

Question 3. Project + viva **(8+3=11 Marks)**

PRACTICAL SOLUTION FOR IP

Question-1(A)

```
import matplotlib.pyplot as plt
# line 1 points
x1 = [10,20,30]
y1 = [20,40,10]
# plotting the line 1 points
plt.plot(x1, y1, label = "line 1",color="blue")

# line 2 points
x2 = [10,20,30]
y2 = [40,10,30]
# plotting the line 2 points
plt.plot(x2, y2, label = "line 2", color="green")
plt.xlabel('x - axis')

# Set the y axis label of the current axis.
plt.ylabel('y - axis')
# Set a title of the current axes.
plt.title('Two or more lines on same plot with suitable legends ')
# show a legend on the plot
plt.legend(loc="upper right")
# Display a figure.
plt.show()
```

Question-1(A)

```
import pandas as pd
import numpy as np

exam_data  = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin',
'Jonas'],
        'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
        'attempts' : [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
        'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

df = pd.DataFrame(exam_data , index=labels)
print("Number of attempts in the examination is greater than 2:")
print(df[df['attempts'] > 2])
```

output:

Number of attempts in the examination is greater than 2:

	attempts	name	qualify	score
b	3	Dima	no	9.0
d	3	James	no	NaN
f	3	Michael	yes	20.0

Question-1, Part-B

```
#Establish connection between Python and SQL
def connection():
        import mysql.connector as cnt

        mydb=cnt.connect(
                host="localhost",
                user="root",
                password="practical",
                database="Education"
                )

        mycursor=mydb.cursor()

        if mydb.is_connected():
                print("Connection Successful")
        else:
                print("Connection Failed")

# Code to pass SQL Query and display result of table: Player
        mycursor.execute("select * from Player where NOT game=”Cricket")
        for rec in mycursor:
                print(rec)
        print(mycursor.rowcount," Rows Selected")
```

Output:

StudentNo	Class	Name	Game	Grade
11	8	Kamal	Tennis	A
13	7	Vimal	Tennis	C
14	9	Pooja	Basketball	A