```
import numpy as np
from sklearn.metrics import f1_score

#define array of actual; disese(1) occurs 20 times, no-disease(0) occurs twice, disease(1) occurs 45 times, no-disease(0) 15 times
actual = np.repeat([1, 0, 1, 0], repeats=[20, 2, 45, 15])

#define array of predicted; test-positive(1) occurs 27 times, test-negative(0) occurs 60 times
pred = np.repeat([1, 0], repeats=[22, 60])


#calculate f1-score
f1_score(actual, pred)
```

```
actual
```

```
pred
```

Saved successfully!