Code :

```python
import numpy as np
import matplotlib.pyplot as plt


class ART1:
    def __init__(self, input_size, vigilance=0.75):
        self.input_size = input_size
        self.vigilance = vigilance
        self.weights = []

    def match(self, pattern, weight):
        intersection = np.minimum(pattern, weight)
        return np.sum(intersection) / np.sum(pattern) >= self.vigilance

    def train(self, patterns):
        labels = []
        for pattern in patterns:
            matched = False
            for i, weight in enumerate(self.weights):
                if self.match(pattern, weight):
                    self.weights[i] = np.minimum(pattern, weight)
                    labels.append(i)
                    matched = True
                    break
            if not matched:
                self.weights.append(pattern.copy())
                labels.append(len(self.weights) - 1)
        return labels


patterns = np.array([
    [1, 1, 0, 0, 1, 0],
```

```python
    [1, 1, 0, 0, 1, 0],

    [0, 0, 1, 1, 0, 1],

    [1, 0, 1, 0, 1, 0],

])


art = ART1(input_size=6, vigilance=0.8)

labels = art.train(patterns)


for i, pattern in enumerate(patterns):

    print(f"Input {i+1}: {pattern} → Cluster: {labels[i]}")
```

Output :

Input 1: [1 1 0 0 1 0] → Cluster: 0

Input 2: [1 1 0 0 1 0] → Cluster: 0

Input 3: [0 0 1 1 0 1] → Cluster: 1

Input 4: [1 0 1 0 1 0] → Cluster: 2