Without oversampling

with oversampling

Class p1:
Precision: 0.7997847147470398
Recall: 0.7512639029322548
F1 Score: 0.7747653806047967

Class p2:
Precision: 0.7891237640640982
Recall: 0.9110411336351112
F1 Score: 0.8457111537407509

Class p3:
Precision: 0.41651376146788993
Recall: 0.17448116833205227
F1 Score: 0.24593716143011918

Class p4:
Precision: 0.6129629629629629
Recall: 0.6310772163965681
F1 Score: 0.6218882104274307

Class p1:
Precision: 0.7739043824701195
Recall: 0.7856420626895855
F1 Score: 0.7797290516808831

Class p2:
Precision: 0.8011727078891258
Recall: 0.8874237354851408
F1 Score: 0.8420954337473153

Class p3:
Precision: 0.39514978601997147
Recall: 0.212913143735588
F1 Score: 0.27672327672327673

Class p4:
Precision: 0.6182152713891444
Recall: 0.6406101048617732
F1 Score: 0.6292134831460674