A. SET1

Write a program with separate user defined functions to : " Push the keys (name of the student) of the dictionary into a stack, where the corresponding value (marks) is greater than 75. E.g: R={"OM":76, "JAI" :45, "BOB":89, "ALI":65, "ANU":90, "TOM":82) SET 2: " Pop and display the content of the stack.

```
D={"OM":76, "JAI" :45, "BOB":89, "ALI":65, "ANU":90, "TOM":82}
STACK=[]
def PUSH():
    for x in D:
        if D[x]>75:
            STACK.append(x)
    print(STACK)
PUSH()
def POP():
    while STACK:
        if len(STACK)==0:
            print('STACK UNDERFLOW')
        else:
            print(STACK.pop(),end=' ')
POP()
```

SET2

Write a program to read the content of a text file Mytext.txt and copy all the lines containing in/it to a new file Newtext.TXT (ignore case sensitivity).

```
def COPY():
    ND=[]
    with open('Mytext.txt') as F1:
        a=F1.readlines()
        for x in a:
            if 'IN' in x.upper().split() or 'IT' in x.upper().split():
                ND.append(x)
    with open('NewTextFile.txt','w') as F2:
        F2.writelines(ND)
        print('done')
```

COPY()

SET3

Write a program which reads the content of a CSV file STUDENT.cSV containing records of the type [AdmNo, SName, Percent, Stream].The program should search and display the records of all those students who scored more than 90% marks.

```
import csv
def search_students(csv_file):
    with open(csv_file, 'r') as file:
        csv_reader = csv.reader(file)
        for row in csv_reader:
            if row[2] > 90:
                print(row)
csv_file_name = "STUDENT.csv"
search_students(csv_file_name)
```

SET 4

Write a program which reads the content of a binary file BOOK.bin containing records of the type [BNO, BNAME, AUTHOR, PRICE, STOCK].The program should search and display the records of a particular author entered by the user.

```
import pickle as p
def FIND(A):
    with open('BOOK.dat','rb') as F:
        a=' '
        try:
            while a:
                a=p.load(F)
                if a[2] == A:
                    print(a)
        except EOFError:
            print('End of File Detected')

FIND()
```

SET 5

Write program containing a function in Python that takes lower and upper range and returns list of all primes within the range.

```
def PRIME(lower,upper):
    for num in range(lower, upper + 1):
        if num > 1:
            for i in range(2, num):
                if (num % i) == 0:
                    break
            else:
                print(num)
PRIME(0,20)
```

SET6

Write a program to generate list of N random odd numbers within a range. Pass lower range, upper range and value of N to function which returns the required list.

```
import random
def generate_random_odd_numbers(lower, upper, n):
    odd_numbers = []
    while len(odd_numbers) < n:
        random_number = random.randint(lower, upper)
        if random_number % 2 != 0:
            odd_numbers.append(random_number)
    return odd_numbers
random_odd_numbers = generate_random_odd_numbers(1, 100, 5)
print(random_odd_numbers)
```